# Beltwide Cotton Conferences



January 5-7, 2021 Virtual Live-Stream Event



# **Schedule of Events**



Thanks to Farm Credit, our Final Program Sponsor

	Tuesday, January 5, 2021	
8:00a- 12:05p	Consultants Conference General Session	
8:00a- 5:00p	Technical Conferences Poster Board Session	
1:00p- 3:00p	Cotton Agronomy, Physiology & Soils Conference	
1:00p- 3:00p	Cotton Disease Council - Student Paper Competition	
1:00p- 3:00p	Cotton Economic Outlook Symposium	
1:00p- 3:00p	Cotton Engineering-Systems Conference	
1:00p- 3:00p	Cotton Improvement Conference	
1:00p- 3:00p	Cotton Sustainability Conference	
3:00p- 3:30p	Break- Beltwide Sponsor Advertisements	
3:30p- 5:00p	Cotton Agronomy, Physiology & Soils Conference	
3:30p- 5:00p	Cotton Disease Council	
3:30p- 5:00p	Cotton Economics and Marketing Conference	
3:30p- 5:00p	Cotton Engineering-Systems Conference	
3:30p- 5:00p	Cotton Improvement Conference	
3:30p- 5:00p	Cotton Sustainability Conference	
Wednesday, January 6, 2021		
8:00a- 5:00p	Technical Conferences Poster Board Session	
8:00a- 10:00a	Cotton Agronomy, Physiology & Soils Conference	
8:00a- 10:00a	Cotton Disease Council	
8:00a- 10:00a	Cotton Improvement Conference	
8:30a- 10:00a	Cotton Sustainability Conference	
8:30a- 10:00a	Cotton Weed Science Research Conference	
10:00a- 10:30a	Break- Beltwide Sponsor Advertisements	
10:30a- 11:45a	Cotton Disease Council	
10:30a- 12:00p	Cotton Agronomy, Physiology & Soils Conference	
10:30a- 12:00p	Cotton Economics and Marketing Conference	
10:30a- 12:00p	Cotton Engineering-Systems Conference	
10:30a- 12:00p	Cotton Improvement Conference	
10:30a- 12:00p	Cotton Weed Science Research Conference	
10:30a- 12:00p	Cotton Sustainability Conference	
1:00p- 2:00p	Cotton Disease Council	
1:00p- 3:00p	Cotton Agronomy, Physiology & Soils Conference	
1:00p- 3:00p	Cotton Ginning Conference	
1:00p- 3:00p	Cotton Improvement Conference	

# **Schedule of Events**

1:00p- 3:00p	Cotton Insect Research & Control Conference
1:00p- 3:00p	Cotton Quality Measurements Conference
1:00p- 3:00p	Cotton Sustainability Conference
1:00p- 3:00p	Cotton Weed Science Research Conference
1:30p- 3:00p	Cotton Economics and Marketing Conference
2:00p- 3:00p	Cotton Disease Council - Busisness Meeting
3:00p- 3:30p	Break- Beltwide Sponsor Advertisements
3:30p- 5:00p	Cotton Agronomy, Physiology & Soils Conference
3:30p- 5:00p	Cotton Improvement Conference
3:30p- 5:00p	Cotton Insect Research & Control Conference
3:30p- 5:00p	Cotton Sustainability Conference
3:30p- 5:15p	Cotton Ginning Conference
	Thursday, January 7, 2021
8:00a- 5:00p	Technical Conferences Poster Board Session
8:00a- 10:00a	Cotton Agronomy, Physiology & Soils Conference
8:00a- 10:00a	Cotton Ginning Conference
8:30a- 10:00a	Cotton Sustainability Conference
9:00a- 12:00p	Cotton Insect Research & Control Conference
10:00a- 10:30a	Break- Beltwide Sponsor Advertisements
10:30a- 12:00p	Cotton Agronomy, Physiology & Soils Conference
10:30a- 12:00p	Cotton Sustainability Conference
1:00p- 2:45p	Cotton Insect Research & Control Conference
3:00p- 3:30p	Break- Beltwide Sponsor Advertisements
3:00p- 5:00p	Cotton Insect Research and Control Conference Business Meeting and Awards

# **CEU Information**

BWCC attendees are encouraged to seek CEU credits from the appropriate agency based on an individual's level of participation in BWCC programs.

The CEU application process is now tailored to the CEU requirements of each certifying entity (state regulatory authority or association certifier). Until recently, the application process across entities was relatively uniform. However, application processes have diverged to the extent that it is no longer feasible for BWCC staff to provide blanket CEU application services. BWCC staff will submit the final BWCC program to those states and agencies listed below that may accept the BWCC Technical Conferences program for CEU evaluation. It is up to individuals to submit their application to their desired accreditation authority.

#### Accrediting Group or State

Certified Crop Adviser (CCA) Program American Society of Agronomy (Soil Science Society of America), 5585 Guilford Road, Madison, WI 53711-5801 (National) Certification Representative--Certification Programs; Phone: 608-268-4953; Fax: 608-273-2081; Toll Free Number: 866-359-9161; Email: ledwardson@sciencesocieties.org

Alabama Department of Agriculture & Industries, Pesticide Management ~ Certification Unit; 1445 Federal Drive, Montgomery, AL 36107; Phone: 334-240-7240; Fax: 334-240-7168;

Email: Barbara.gates@agi.alabama.gov

Arizona Department of Agriculture, Office of Pest Management; 1688 West Adams, Phoenix, AZ 85007; Phone: 602-255-3662; Email: rwalker@azda.gov

**Arkansas** Charles E. Denver, Denver Crop Consultants; P.O. Box 304, Watson, AR 71674; Phone: 870-866-2335; Fax: 870-644-3254; Email: cdagri@hotmail.com

**California** Department of Pesticide Regulation; P. O. Box 1379, Sacramento, CA 95812; Phone: 916-445-3914; Fax: 916-928-0705; Email: info4ce@cecpm.com

**Georgia** Department of Agriculture; 19 Martin Luther King, Jr. Dr., Room 410, Atlanta, GA 30334; Phone: 404-656-4960; Fax: 404-657-8378; Email: Adrean.Rhodes@agr.georgia.gov

Louisiana Department of Agriculture & Forestry, Office of Agricultural & Environmental Sciences; 5825 Florida Blvd. Ste. 3003, Baton Rouge, LA 70806-4259; Phone: 225-925-3763; Fax: 225-237-5725; Email: kevin\_w@ldaf.state.la.us; Web: www.ldaf.state.la.us

Mississippi Department of Agriculture & Commerce, Bureau of Plant Industry, Pest Control Section; P.O. Box 5207, Mississippi State, MS 39762; Phone: 662-325-0522 or 662-325-7766; FAX: 662-325-0397; Email: russellk@mdac.ms.gov (or) AnnaA@mdac.ms.gov

New Mexico Department of Agriculture, Cert. & Training Specialist; 190 S. Espina, MSC 3AQ, Box 30005, Las Cruces, NM 88003-8005; Phone: 575-646-4837; FAX: 575-646-1540; Email: pesticides@nmda.nmsu.edu

North Carolina Pesticide Section, NCDA & CS; 1090 Mail Service Center, Raleigh, NC 27699-1090; Phone: 919-857-4133; FAX: 919-733-9796; Email: John.Feagans@ncagr.gov **Oklahoma** Pesticide Certification & Training Administrator, Agriculture, Food and Forestry, Consumer Protection Services; 2800 N. Lincoln Blvd., Oklahoma City, OK 73105; Phone: 405-522-5993; Fax: 405-522-5986; Email: ryan.williams@ag.ok.gov

South Carolina Special Programs Manager/Recertification Manager Department of Pesticide Regulation Division of Regulatory & Public Service Programs 511 Westinghouse Road, Pendleton, SC 29670; Phone: 864-646-2150; Fax: 864-646-2179; Email: thghslr@clemson.edu

Tennessee Department of Agriculture, Ellington Ag. Center, Regulatory Services;

440 Hogan Road, Melrose Station, Nashville, TN 37204; Phone: 615-837-5310; Fax: 615-837-5012; Email: mary.borthick@tn.gov

Texas Department of Agriculture, Coordinator for Pesticide Certification and Compliance; P.O. Box 12847, Austin, TX 78711; Phone: 512-463-7692 or 800-835-5832; Fax: 888-216-9865; (CEU inquiries) Email: recertcourses@texasagriculture.gov; Phone: 512-463-8713

# Cotton Consultants Conference

#### CONSULTANTS CONFERENCE GENERAL SESSION 8:00 AM-12:05 PM

8:00 AM Introduction and Acknowledgements Hank Jones, Chairman Consultants Conference, Winnsboro, LA

8:05 AM Sponsor Message from Bayer David W Albers, Bayer Crop Science, St. Louis, MO

8:10 AM Sponsor Message from Phytogen Joel C Faircloth, PhytoGen Seed Company, LLC, Clemmons, NC

8:15 AM Sponsor Message from FMC Eric Castner, FMC, Pauls Valley, OK

8:20 AM Sponsor Message from Syngenta Jeff Mink, Syngenta, Collierville, TN

8:25 AM Sponsor Message from BASF Steve Nichols, BASF, Lubbock, TX

8:30 AM Weather Forecasting Eric Snodgrass, Nutrien Ag Solutions, Champaign, IL

9:15 AM Physiological Aspects of Cotton Fruit Shed John L. Snider, University of Georgia, Tifton, GA

10:00 AM Break - Beltwide Sponsor Advertisements

10:30 AM Update on EPA's Pesticide Program Activities Michael L. Goodis, P.E., U.S. Environmental Protection Agency, Washington, DC

11:10 AM Bt Resistance Management Panel (A) Rogers Leonard, Louisiana State University Ag Center, Baton Rouge, LA

11:26 AM Bt Resistance Management Panel (B) David Kerns, Texas A&M University, College Station, TX

11:43 AM Bt Resistance Management Panel (C) Jeff Gore, Mississippi State University, Stoneville, MS

12:00 PM Closing Remarks Hank Jones, Chairman Consultants Conference, Winnsboro, LA

# Cotton Agronomy, Physiology & Soil Conference

COTTON AGRONOMY, PHYSIOLOGY & SOILS -TUESDAY EARLY AFTERNOON

1:00 PM-3:00 PM

1:00 PM Evaluation of Cotton Nutrient Content Under Various Soil-Applied Fertility Programs

**Andrea J Althoff**<sup>1</sup>, Bradley R. Wilson<sup>1</sup>, Cayden B. Catlin<sup>1</sup>, Brian Arnall<sup>1</sup>, Katie L. Lewis<sup>2</sup> and Seth A. Byrd<sup>1</sup>, (1)Oklahoma State University, Stillwater, OK, (2) Texas A&M AgriLife Research Center, Lubbock, TX

### 1:15 PM Agronomic Effects of Various Small Grain Cover Crops on Dryland Cotton Production in Oklahoma

**Bradley R. Wilson**<sup>1</sup>, Cayden B. Catlin<sup>1</sup>, Andrea J Althoff<sup>1</sup>, Jason Warren<sup>1</sup>, Bobby Weidenmaier<sup>2</sup> and Seth A. Byrd<sup>1</sup>, (1)Oklahoma State University, Stillwater, OK, (2)Oklahoma State University, Fort Cobb, OK

#### 1:30 PM Impact of Row Spacing and Variety on Cotton Fruit Distribution and Yield

Steven D. Hall<sup>1</sup>, Darrin M. Dodds<sup>1</sup>, Brian K. Pieralisi<sup>2</sup>, Bradley Norris<sup>1</sup>, William J Rutland<sup>1</sup>, Jacob P. McNeal<sup>1</sup> and John J. Williams<sup>1</sup>, (1)Mississippi State University, Mississippi State, MS, (2)Mississippi State University, Starkville, MS

### 1:45 PM A New Technique for Informing the Cotton Replanting Decision

**Enrique Martinez**, North Carolina State University, Raleigh, NC, Jason K Ward, NC State University, Raleigh, NC and Guy D. Collins, NC State University, Rocky Mount, NC

### 2:00 PM The Effects of Residual Herbicide Injury and Seed Quality on Cotton Growth, Development, and Yield

**Mitchell K Williams**<sup>1</sup>, Keith L. Edmisten<sup>2</sup>, Guy D. Collins<sup>3</sup>, Lori Unruh Snyder<sup>2</sup>, Charlie Cahoon<sup>2</sup>, Emily H Griffith<sup>2</sup>, Phillip S. Lassiter<sup>2</sup> and Ethan R Foote<sup>2</sup>, (1) North Carolina State University, Sanford, NC, (2)North Carolina State University, Raleigh, NC, (3)North Carolina State University, Rocky Mount, NC

#### 2:15 PM Cover Crop Management to Optimize Yield of Texas High Plains Cotton

**C.D. Ray White**, Texas A&M AgriLife Research, Lubbock, TX, Katie L. Lewis, Texas A&M AgriLife Research and Extension Center, Lubbock, TX and J. Wayne Keeling, Texas A&M AgriLife Research Center, Lubbock, TX

#### 2:30 PM Tracking Maturity Rates in Cotton Subjected to Different Nitrogen Treatments Using Multi-Spectral Aerial Imagery: Predicting Yield and Time of Harvest

Vaishali Swaminathan<sup>1</sup>, J. Alex Thomasson<sup>2</sup>, Nithya Rajan<sup>1</sup>, Amrit Shrestha<sup>1</sup>, Jeff Siegfried<sup>1</sup>, Xiongzhe Han<sup>3</sup> and Karem Meza Capcha<sup>1</sup>, (1)Texas A&M University, College Station, TX, (2)Mississippi State University, Starkville, MS, (3)Kangwon National University, Chuncheon, Korea, Republic of (South)

#### COTTON AGRONOMY, PHYSIOLOGY & SOILS -TUESDAY LATE AFTERNOON

#### 3:30 PM-5:00 PM

#### 3:30 PM Nitrogen Dynamics Following Cover Crops in Texas High Plains Cotton

Joseph Alan Burke, Texas A&M University, College Station, TX, Katie L. Lewis, Texas A&M AgriLife Research and Extension Center, Lubbock, TX and Jamie Foster, Texas A&M AgriLife Research, Corpus Christi, TX

### 3:45 PM Change in the Nutrient Acquisition and Root Characteristics over 70 Years of Breeding in Cotton

Jagdeep Singh, Audrey V. Gamble, Jenny Koebernick, Steve M Brown and Alvaro Sanz-Saez, Auburn University, Auburn, AL

### 4:00 PM Spatial and Temporal Dynamics of Soil Nitrogen in Dryland Cotton in the Southern High Plains

**Haibin Gu**<sup>1</sup>, Wenxuan Guo<sup>1</sup>, Glen Ritchie<sup>1</sup>, Katie L. Lewis<sup>2</sup>, Sanjit Deb<sup>1</sup> and Chenggang Wang<sup>3</sup>, (1)Department of Plant & Soil Science, Texas Tech University, Lubbock, TX, (2)Texas A&M AgriLife Research and Extension Center, Lubbock, TX, (3)Department of Agricultural and Applied Economics, Texas Tech University, Lubbock, TX

#### 4:15 PM Do Nitrogen and Calcium Play Nice in Cotton?

**Amee Bumguardner**, Texas Tech University, Lubbock, TX, Texas A&M AgriLife Research, Lubbock, TX, Katie L. Lewis, Texas A&M AgriLife Research and Extension Center, Lubbock, TX, Glen Ritchie, Texas Tech University, Lubbock, TX and Trey Cutts, Yara North America, Inc., Tampa, FL

# **Cotton Disease Council**

#### **COTTON DISEASE COUNCIL - STUDENT PAPER COMPETITION**

#### 1:00 PM-3:00 PM

1:00 PM Fungicide Sensitivity and Screening of Target Spot in Tennessee Cotton

Ty Smith and Heather M Kelly, University of Tennessee, Jackson, TN

1:15 PM Characterization of Seeding Wilting Symptoms Associated with Cotton Leafroll Dwarf Virus (CLRDV) Divya Bhanu Sharma, University of Georgia, Tifton, GA

1:30 PM The Influence of Root Knot Nematodes and Cirdv on Commercial Cotton Varieties in South, AL

**Drew Schrimsher**<sup>1</sup>, Kathy Lawrence<sup>2</sup>, Judith K Brown<sup>3</sup>, Kara Gordon<sup>2</sup> and Ashton Kate Turner<sup>4</sup>, (1)Agri-AFC, LLC, Decatur, AL, (2)Auburn University, Auburn University, AL, (3)University of Arizona, Tucson, AZ, (4)Auburn University, Auburn, AL

#### 1:45 PM Design and Implementation of a Robust Metric to Quantify Soilborne Fusarium Oxysporum f. Sp. Vasinfectum Race 4 Inoculum Density

**Roy Davis**, Thomas Isakeit and Thomas M. Chappell, Texas A&M University, College Station, TX

### 2:00 PM Screening Commercial Cotton Varieties for Fusarium Wilt and Root-Knot Nematode Resistance

Jessica Dotray<sup>1</sup>, Cecilia Monclova-Santana<sup>2</sup>, Terry A. Wheeler<sup>3</sup>, Jennifer Chagoya<sup>4</sup> and Jonathan Shockey<sup>4</sup>, (1)Texas Tech University, Lubbock, TX, (2) Texas A&M AgriLife Extension, Lubbock, TX, (3)Texas A&M AgriLife Research, Lubbock, TX, (4)Texas A&M AgriLife Extension Service, Lubbock, TX

#### 2:15 PM Augmented Fertilizer and Nematicide Combinations Applied on Upland Cotton to Increase Yield in Rotylenchulus Reniformis and Meloidogyne Incognita Populated Fields.

**Kara Gordon**<sup>1</sup>, Kathy Lawrence<sup>1</sup>, Brad Meyer<sup>2</sup> and Drew Schrimcher<sup>3</sup>, (1) Auburn University, Auburn University, AL, (2)GreenPoint Ag, Decatur, AL, (3) GreenPoint Ag, Slocomb, AL

#### 2:30 PM Evaluation of Root Knot and Reniform Nematode Resistant Phytogen Cotton Cultivars with Supplemental Corteva Agriscience Nematicides

Ashton Kate Turner<sup>1</sup>, Kathy Lawrence<sup>1</sup> and John Richburg<sup>2</sup>, (1)Auburn University, Auburn, AL, (2)Corteva Agriscience, Headland, AL

#### 2:45 PM An Assessment of Small Grain Cover Crops as Potential Rotation Crops for Root-Knot and Reniform Nematode Infested Alabama Cotton Fields

Sloane McPeak, Auburn University, Auburn, AL, Kathy Lawrence, Auburn University, Auburn University, AL and Dustin Herb, OreGro Seeds Inc., Albany, OR

#### COTTON DISEASE COUNCIL - TUESDAY LATE AFTERNOON 3:45 PM-5:00 PM

3:45 PM Variety Response to Verticillium Wilt and Bacterial Blight in the Southern High Plains of Texas

Terry A. Wheeler, Texas A&M AgriLife Research, Lubbock, TX and Jane K Dever, Texas A&M AgriLife Research and Extension Center, Lubbock, TX

4:00 PM Understanding the Genomic Diversity and Pathogenicity of Cotton Fusarium Wilt

Libo Shan, Texas A&M University, College Station, TX

4:15 PM FOV4 Inoculum Density Dynamics and Year-to-Year Variation in Fusarium Wilt Risk

Thomas M. Chappell, Thomas Isakeit and Roy Davis, Texas A&M University, College Station, TX

4:30 PM FOV4 and Fusaria Causing Symptoms in Cotton Cecilia Monclova-Santana, Texas A&M AgriLife Extension, Lubbock, TX

# **Cotton Economics and Marketing Conference**

#### COTTON ECONOMIC OUTLOOK SYMPOSIUM

#### 1:00 PM-3:00 PM

1:00 PM Cotton Marketer of the Year Award O.A. Cleveland, Mississippi State University, Mississippi State, MS

**1:30 PM Update on U.S. Ag Policy Bart L. Fischer**, Texas A & M University, College Station, TX

2:00 PM U.S. Cotton Market Outlook Jody Campiche, National Cotton Council of America, Cordova, TN

2:30 PM International Cotton Outlook Stephen MacDonald, USDA-OCE, Washington, DC

#### COTTON ECONOMICS AND MARKETING - TUESDAY LATE AFTERNOON 3:30 PM-5:00 PM

3:30 PM COVID & Cotton Supply Chains Jon Devine, Cotton Incorporated, Cary, NC

3:50 PM A Tarrifying Thought: Imposing Tariffs on U.S. Apparel Imports from China

**Bing Liu**<sup>1</sup>, Darren Hudson<sup>1</sup> and Jon Devine<sup>2</sup>, (1)Texas Tech University, Lubbock, TX, (2)Cotton Incorporated, Cary, NC

### 4:10 PM COVID-19 and Cotton Demand in China: Implications for U.S. Exports

**Andrew Muhammad**<sup>1</sup>, Aaron Smith<sup>1</sup> and Edward Yu<sup>2</sup>, (1)University of Tennessee, Knoxville, TN, (2)UTIA, Knoxville, TN

#### 4:30 PM Economic Impacts of the COVID19 Pandemic on Tennessee Cotton Producers and Rural Economies

Aaron Smith, Burt English, Jamey Menard, David Hughes and Kim Jensen, University of Tennessee, Knoxville, TN

# Cotton Engineering-Systems Conference

#### COTTON ENGINEERING-SYSTEMS - TUESDAY EARLY AFTERNOON 1:00 PM-3:00 PM

#### 1:00 PM Introductory Remarks

### 1:15 PM Using Information from the John Deere Cotton HID System to Aid in Making Production Decisions

Luke McLeod Fuhrer<sup>1</sup>, Wesley M Porter<sup>1</sup>, Edward M. Barnes<sup>2</sup>, Simerjeet Virk<sup>1</sup>, Glen C. Rains<sup>1</sup>, John L. Snider<sup>1</sup>, Amanda R Smith<sup>3</sup>, Yangxuan Liu<sup>3</sup> and Chaz Holt<sup>4</sup>, (1)University of Georgia, Tifton, GA, (2)Cotton Incorporated, Cary, NC, (3)Extension Economists, Department of Agricultural & Applied Economics, Tifton, GA, (4)Quail Forever, St. Paul, MN

#### 1:30 PM Real-Time Calibrated Cotton Yield Monitor

Jianing He, Texas A&M University, College Station Texas, TX

#### 1:45 PM Design and Test Different End Effectors for Robotic Cotton Harvesting

Hussein Gharakhani, Texas A&M University, College Station, TX and J. Alex Thomasson, Mississippi State University, Starkville, MS

#### 2:00 PM Variability in Non-Fiber Materials Assessed Using Cotton Fiber Quality Mapping

Lucas Mitchell<sup>1</sup>, Jason K Ward<sup>1</sup> and Edward M. Barnes<sup>2</sup>, (1)NC State University, Raleigh, NC, (2)Cotton Incorporated, Cary, NC

#### 2:15 PM Real-Time Weed Detection and Removal Using Deep Learning and Laser

Canicius Mwitta and Glen C. Rains, University of Georgia, Tifton, GA

### 2:30 PM UAS Multispectral Image Based Detection of 2,4-D Injury in Cotton

**Ubaldo Torres**, Texas Tech University, Lubbock, TX, Peter A. Dotray, Texas Tech University, Texas A&M AgriLife Research and Extension Service, Lubbock, TX, Kyle Russell, Texas A&M AgriLife Research, Lubbock, TX, Wenxuan Guo, Texas Tech University, Lubbock, TX, Department of Plant & Soil Science, Texas Tech University, Lubbock, TX and Murilo Maeda, Texas A&M AgriLife Extension, Lubbock, TX

#### 2:45 PM Variety Trial Validation: A Framework to Incorporate on-Farm Data

**Raul Sebastian**<sup>1</sup>, Robert G. Hardin<sup>1</sup>, Edward M. Barnes<sup>2</sup>, Jason K Ward<sup>3</sup>, Wesley M Porter<sup>4</sup>, Michael T. Plumblee<sup>5</sup> and John D. Wanjura<sup>6</sup>, (1)Texas A&M University, College Station, TX, (2)Cotton Incorporated, Cary, NC, (3)NC State University, Raleigh, NC, (4)University of Georgia, Tifton, GA, (5)Clemson University, Blackville, SC, (6)USDA-ARS Cotton Production and Processing Research Unit, Lubbock, TX

#### COTTON ENGINEERING-SYSTEMS - TUESDAY LATE AFTERNOON 3:30 PM-5:00 PM

#### 3:30 PM Opportunities for Robotic Systems and Automation in Cotton Production

Edward M. Barnes<sup>1</sup>, Gaylon Morgan<sup>1</sup>, Kater Hake<sup>1</sup>, Jon Devine<sup>1</sup>, Ryan W Kurtz<sup>1</sup>, Terry W Griffin<sup>2</sup>, Gregory Ibendahl<sup>2</sup>, Ajay Sharda<sup>2</sup>, Glen C. Rains<sup>3</sup>, John L. Snider<sup>3</sup>, Joe Mari J. Maja<sup>4</sup>, James A. Griffin<sup>5</sup>, Robert G. Hardin<sup>6</sup>, Emi Kimura<sup>7</sup>, J. Alex Thomasson<sup>8</sup>, Hussein Gharakhani<sup>6</sup>, Yuzhen Lu<sup>9</sup>, Tyson B Raper<sup>10</sup>, Sierra Young<sup>11</sup>, Kadeghe Goodluck Fue<sup>11</sup>, Mathew G. Pelletier<sup>12</sup>, John D Wanjura<sup>12</sup> and Greg A. Holt<sup>12</sup>, (1)Cotton Incorporated, Cary, NC, (2)Kansas State University, Manhattan, KS, (3)University of Georgia, Tifton, GA, (4)Clemson University, Blackville, SC, (5)Texas A&M Cotton Extension, College Station, TX, (6)Texas A&M University, College Station, TX, (7)Texas A&M AgriLife Research and Extension Service, Vernon, TX, (8)Mississippi State University, Starkville, MS, (9)Mississippi State University, Mississippi State University, Starkville, MS, (9)Mississippi State University of Tennessee, Jackson, TN, (11)North Carolina State University, Raleigh, NC, (12) USDA-ARS Cotton Production and Processing Research Unit, Lubbock, TX

#### 3:45 PM Mobile Robot Weeder and Harvester Prototype for Cotton Production

Joe Mari J. Maja<sup>1</sup>, Matthew Cutulle<sup>2</sup>, Jake Enloe<sup>3</sup>, Jakob Weber<sup>3</sup> and Edward M. Barnes<sup>4</sup>, (1)Clemson University, Blackville, SC, (2)Clemson University, Charleston, SC, (3)Clemson University, Clemson, SC, (4)Cotton Incorporated, Cary, NC

#### 4:00 PM Modern Geospatial Technologies for Cotton Irrigation Management

**Kelly Ř. Thorp**<sup>1</sup>, Diaa Elshikha<sup>1</sup>, Duke Pauli<sup>2</sup> and Pedro Andrade-Sanchez<sup>3</sup>, (1) USDA-ARS, Maricopa, AZ, (2)University of Arizona, Tucson, AZ, (3)University of Arizona, Maricopa, AZ

#### 4:15 PM On-Farm Demonstration of Sensor-Based Irrigation Scheduling in South Carolina

**Jose Payero**<sup>1</sup>, Bayleah Cooper<sup>1</sup>, Rebecca Hitchcock Davis<sup>2</sup>, Jonathan K Croft<sup>3</sup>, Nathan B Smith<sup>4</sup> and Michael W. Marshall<sup>5</sup>, (1)Clemson University, Blackville, SC, (2)Clemson University, Bamberg, SC, (3)Clemson University, Orangeburg, SC, (4)Clemson University, Columbia, SC, (5)Clemson University - Edisto REC, Blackville, SC

### Cotton Improvement Conference

#### COTTON IMPROVEMENT - TUESDAY EARLY AFTERNOON 1:00 PM-3:00 PM

#### 1:00 PM Welcoming Remarks

#### 1:05 PM The Mystery Solved: A-Genome Origin of Cultivated Diploid and Tetraploid Cottons John Z Yu, USDA-ARS, College Station, TX

### 1:20 PM Cottongen: A Central Data Repository and Analysis Resource for Cotton Community

Jing Yu<sup>1</sup>, Don Jones<sup>2</sup> and Dorrie Main<sup>1</sup>, (1)Washington State University, Pullman, WA, (2)Cotton Incorporated, Cary, NC

#### 1:35 PM Partnerships for Data Innovation (PDI) Cotton

Christopher D. Delhom<sup>1</sup>, **Mauricio Ulloa**<sup>2</sup>, James R. Mahan<sup>3</sup>, Edward M. Barnes<sup>4</sup>, Ryan W Kurtz<sup>4</sup>, Gaylon Morgan<sup>4</sup>, Tina Gray Teague<sup>5</sup>, Lindsey Messinger<sup>6</sup>, Grant Zoch<sup>6</sup>, Bruce Vandenberg<sup>6</sup> and Michael D. Buser<sup>7</sup>, (1) USDA-ARS, New Orleans, LA, (2)USDA-ARS, PA, CSRL, Plant Stress and Germplasm Development Research, Lubbock, TX, (3)USDA/ARS, Lubbock, TX, (4)Cotton Incorporated, Cary, NC, (5)Ark State Univ / Univ Ark Agri Exp Sta, State University, AR, (6)USDA-ARS, Fort Collins, CO, (7)USDA Agricultural Research Service, Beltsville, MD

1:50 PM Development of Core Collections to Better Utilize Available Diversity within the U.S. National Cotton Germplasm Collection Lori Hinze and James Frelichowski, USDA-ARS, College Station, TX

**2:05 PM** Status of the National Cotton Germplasm Collection James Frelichowski<sup>1</sup>, Janna Love<sup>1</sup>, Lori Hinze<sup>1</sup>, Joshua Udall<sup>1</sup>, Don Jones<sup>2</sup> and Jodi Scheffler<sup>3</sup>, (1)USDA-ARS, College Station, TX, (2)Cotton Incorporated, Cary, NC, (3)USDA ARS, Stoneville, MS

2:20 PM Development of a Cotton Yield Component Index Fred M. Bourland<sup>1</sup>, Don Jones<sup>2</sup> and Edward M. Barnes<sup>2</sup>, (1)University of Arkansas-NEREC, Keiser, AR, (2)Cotton Incorporated, Cary, NC

#### 2:45 PM Discussion

#### COTTON IMPROVEMENT - TUESDAY LATE AFTERNOON 3:30 PM-5:00 PM

#### 3:30 PM Deltapine Class of 21 Cotton Varieties

David W Albers, Bayer Crop Science, St. Louis, MO, Keylon Gholston, Bayer Crop Science, Baldwyn, MS, Darren Jones, Bayer Crop Science, Lubbock, TX and Dawn Fraser, Bayer Crop Science, Mount Olive, NC

**3:45 PM** Latest Nexgen Varieties for 2021 Douglas J. Jost, Americot, Garden City, TX

4:00 PM Dyna-Gro Varieties for 2021 Frank Groves, Nutrien, Little Rock, AR

4:15 PM New Variety Offerings from BASF for 2021 Cody W Mull, BASF, Idalou, TX

4:30 PM New Variety Advancments from BASF for 2021

4:45 PM Discussion

# Sustainability

#### COTTON SUSTAINABILITY - TUESDAY EARLY AFTERNOON

1:00 PM-3:00 PM

1:00 PM Opportunities for Soil Health and Regenerative Agriculture in Cotton

Cristine Morgan, Soil Health Institute, Morrisville, NC

#### 1:30 PM Building Microbial Diversity in Semi-Arid Cotton Production Systems for Soil Health - What Is Achievable? John Zak, Texas Tech University, Lubbock, TX

#### 2:00 PM Impact of Conservation Management Practices on Soil Health in Cotton-Based Cropping Systems

Sindhu Jagadamma<sup>1</sup>, Lori Duncan<sup>1</sup> and Tyson B Raper<sup>2</sup>, (1)University of Tennessee, Knoxville, TN, (2)University of Tennessee, Jackson, TN

### 2:15 PM Conservation Management Practices for Reducing Sediment Losses in Arkansas Cotton

Arlene Adviento AdvientoBorbe, DWMRU USDA-ARS, State University, AR, Benjamin M Levenbach, Arkansas State University, Jonesboro, AR, Richard Woodruff, University of Arkansas, University Park, AR, Tina Gray Teague, Ark State Univ / Univ Ark Agri Exp Sta, State University, AR and Michele L. Reba, USDA-ARS, Jonesboro, AR

### 2:30 PM Soil Health - Grower Panel Discussion Gaylon Morgan, Cotton Incorporated, Cary, NC

#### COTTON SUSTAINABILITY - TUESDAY LATE AFTERNOON 3:30 PM-5:00 PM

3:30 PM Increasing Soil Health Building Practices through Smartphone Apps Kater Hake, Cotton Incorporated, Cary, NC

4:00 PM Lessons Learned from 40 Years of Increasing the Water Productivity of U.S. Cotton

Edward M. Barnes, Cotton Incorporated, Cary, NC

4:30 PM U.S. Cotton NASS Pesticide and Fertilizer Trends Steven Pires, Cotton Incorporated, Cary, NC

# Cotton Agronomy, Physiology & Soil Conference

#### COTTON AGRONOMY, PHYSIOLOGY & SOILS -WEDNESDAY EARLY MORNING

#### 8:00 AM-10:00 AM

### 8:00 AM The Influence of Application Timing on Harvest Aid Efficacy and Fiber Quality

**Cayden B. Catlin**<sup>1</sup>, Wade Young<sup>1</sup>, Bradley R. Wilson<sup>1</sup>, Andrea J Althoff<sup>1</sup>, John M Long<sup>1</sup>, Hailin Zhang<sup>1</sup>, Bobby Weidenmaier<sup>2</sup> and Seth A. Byrd<sup>1</sup>, (1)Oklahoma State University, Stillwater, OK, (2)Oklahoma State University, Fort Cobb, OK

### 8:15 AM Herbicide Drift Injury Mapping and Yield Loss Prediction in Cotton Using Remote Sensing Tools

**Bishwa Sapkota**<sup>1</sup>, Zachary Howard<sup>1</sup>, Scott Nolte<sup>1</sup>, Nithya Rajan<sup>1</sup>, Peter A. Dotray<sup>2</sup>, Gaylon Morgan<sup>3</sup> and Muthukumar V Bagavathiannan<sup>1</sup>, (1)Texas A&M University, College Station, TX, (2)Texas Tech University, Texas A&M AgriLife Research and Extension Service, Lubbock, TX, (3)Cotton Incorporated, Cary, NC

### 8:30 AM Cotton Defoliation as Affected by Droplet Size and Carrier Volume

Jacob P. McNeal<sup>1</sup>, Darrin M. Dodds<sup>1</sup>, Brian K. Pieralisi<sup>2</sup>, Greg R. Kruger<sup>3</sup>, Bradley Norris<sup>1</sup>, John J. Williams<sup>1</sup>, William J Rutland<sup>1</sup> and Steven D. Hall<sup>1</sup>, (1)Mississippi State University, Mississippi State, MS, (2)Mississippi State University, Starkville, MS, (3)University of Nebraska - Lincoln, North Platte, NE

8:45 AM Vegetation Indices to Quantify in-Field Cotton Yield Variability Jeff Siegfried<sup>1</sup>, Nithya Rajan<sup>1</sup>, Curtis B. Adams<sup>2</sup>, Steve Hague<sup>1</sup>, Robert G. Hardin<sup>1</sup> and Ronnie Schnell<sup>3</sup>, (1)Texas A&M University, College Station, TX, (2)Texas A&M AgriLife Research, Vernon, TX, (3)Texas A&M AgriLife Extension Service, College Station, TX

### 9:00 AM Assessment of Auxin-Injured Cotton Using Vegetative Indices to Predict Yield Penalties

Savana D Denton<sup>1</sup>, Tyson B Raper<sup>1</sup>, Darrin M. Dodds<sup>2</sup>, Chris L Main<sup>3</sup> and Freeman Brown<sup>1</sup>, (1)University of Tennessee, Jackson, TN, (2)Mississippi State University, Mississippi State, MS, (3)PhytoGen, Medina, TN

#### COTTON AGRONOMY, PHYSIOLOGY & SOILS -WEDNESDAY LATE MORNING

#### 10:30 AM-12:00 PM

10:30 AM Effect of Planting Date, Seeding Rate, and Seed Size on Cotton Growth and Yield

Matthew D Inman, Clemson University, Florence, SC

### 10:45 AM Planting Date Effects on Cotton Lint Yield and Fiber Quality in the U.S. Southern High Plains

**Steven A Mauget**, USDA-ARS, Lubbock, TX, Mauricio Ulloa, USDA-ARS, PA, CSRL, Plant Stress and Germplasm Development Research, Lubbock, TX and Jane K Dever, Texas A&M AgriLife Research and Extension Center, Lubbock, TX

### 11:00 AM A Beltwide Seed Quality Survey; An Extension Cotton Specialists Project

Murilo Maeda<sup>1</sup>, Steve M Brown<sup>2</sup>, Seth A. Byrd<sup>3</sup>, D. Scott Carlson<sup>4</sup>, Kent Chapman<sup>5</sup>, Guy D. Collins<sup>6</sup>, Keith Edmisten<sup>7</sup>, Phillip Edwards<sup>8</sup>, Hunter Frame<sup>9</sup>, Guy Hancock<sup>10</sup>, Michael A. Jones<sup>11</sup>, Jeremy M. Kichler<sup>12</sup>, Benjamin M. McKnight<sup>13</sup> Calvin D Meeks<sup>14</sup>, Gaylon Morgan<sup>15</sup>, Randy Norton<sup>16</sup>, Brian K. Pieralisi<sup>17</sup>, Tucker Price<sup>10</sup>, Tyson B Raper<sup>18</sup>, Bill Robertson<sup>19</sup>, Tyler Sandlin<sup>20</sup>, John L. Snider<sup>21</sup>, Lori Unruh Snyder<sup>7</sup> and David L. Wright<sup>22</sup>, (1)Texas A&M AgriLife Extension, Lubbock, TX, (2)Auburn University, Auburn, AL, (3)Oklahoma State University, Stillwater, OK, (4)University of Georgia Cooperative Extension, Sylvester, GA, (5)University of North Texas, Denton, TX, (6)North Carolina State University, Rocky Mount, NC, (7)North Carolina State University, Raleigh, NC, (8) University of Georgia Cooperative Extension, Ocilla, GA, (9) Virginia Polytechnic Institute & State University, Blacksburg, VA, (10)University of Georgia, Athens, GA, (11)Clemson University, Florence, SC, (12)University of Georgia Cooperative Extension, Moultrie, GA, (13)Texas A&M University, College Station, TX, (14)University of Missouri, Portageville, MO, (15)Cotton Incorporated, Cary, NC, (16)University of Arizona, Safford, AZ, (17)Mississippi State University, Starkville, MS, (18)University of Tennessee, Jackson, TN, (19) University of Arkansas, Newport, AR, (20)Auburn University, Belle Mina, AL, (21)University of Georgia, Tifton, GA, (22)University of Florida, Quincy, FL

11:15 AM A Beltwide Evaluation of Cotton Seed Quality Parameters Lori Unruh Snyder<sup>1</sup>, Steven M Brown<sup>2</sup>, Seth A. Byrd<sup>3</sup>, Kent D. Chapman<sup>4</sup>, Guy D. Collins<sup>5</sup>, Michael K. Dowd<sup>6</sup>, Keith Edmisten<sup>1</sup>, Hunter Frame<sup>7</sup>, Michael A. Jones<sup>8</sup>, Murilo Maeda<sup>9</sup>, Ben McKnight<sup>10</sup>, Calvin D Meeks<sup>11</sup>, Gaylon Morgan<sup>12</sup>, Randy Norton<sup>13</sup>, Brian K. Pieralisi<sup>14</sup>, Tyson B Raper<sup>15</sup>, Bill Robertson<sup>16</sup>, Tyler Sandlin<sup>17</sup>, John L. Snider<sup>18</sup> and David L. Wright<sup>19</sup>, (1)North Carolina State University, Raleigh, NC, (2)Auburn University, Auburn, AL, (3)Oklahoma State University, Stillwater, OK, (4)University of North Texas, Denton, TX, (5)North Carolina State University, Rocky Mount, NC, (6)USDA-ARS Southern Regional Research Center, New Orleans, LA, (7) Virginia Polytechnic Institute & State University, Blacksburg, VA, (8)Clemson University, Florence, SC, (9)Texas A&M AgriLife Extension, Lubbock, TX, (10)Texas A&M University, College Station, TX, (11)University of Missouri, Portageville, MO, (12)Cotton Incorporated, Cary, NC, (13)University of Arizona, Safford, AZ, (14)Mississippi State University, Starkville, MS, (15)University of Tennessee, Jackson, TN, (16)University of Arkansas, Newport, AR, (17)Auburn University, Belle Mina, AL, (18)University of Georgia, Tifton, GA, (19)University of Florida, Quincy, FL

#### 11:30 AM Leaf Osmotic Potential and Morphological Traits of 43 Cotton Varieties Growing in a Rainfall Gradient from Southwest to Central Texas

Xuejun Dong, Texas A&M AgriLife Research, Uvalde, TX and Dale A. Mott, Texas A&M AgriLife Extension Service, College Station, TX

11:45 AM Preliminary Results of an on-Farm Irrigation Scheduling Demonstration Using Canopy Temperature and Soil Probes James R. Mahan, USDA/ARS, Lubbock, TX and Paxton Payton, United States Department of Agriculture, Lubbock, TX

#### COTTON AGRONOMY, PHYSIOLOGY & SOILS -WEDNESDAY EARLY AFTERNOON

#### 1:00 PM-3:00 PM

#### 1:00 PM Effects of Cultivar, Irrigation Management, and PGR Strategy on Cotton Yield and Maturity

John L. Snider<sup>1</sup>, George Vellid<sup>1</sup>s<sup>1</sup>, Alessandro Ermanis<sup>2</sup>, Lorena N. Lacerda<sup>1</sup>, Yafit Cohen<sup>3</sup> and Guy D. Collins<sup>4</sup>, (1)University of Georgia, Tifton, GA, (2) University of Padova, Legnaro, Italy, (3)Agricultural Research Organization (ARO), Bet-Dagan, Israel, (4)North Carolina State University, Rocky Mount, NC

#### 1:15 PM Impacts of Moderate Deficit Irrigation on Pima Versus Upland Cotton Varieties

**Robert B Hutmacher**, University of California Cooperative Extension, Five Points, CA, Mark Keeley, University of California Cooperative Extension, Shafter, CA and Jorge Angeles, University of CA Plant Sci Dept, Five Points, CA

#### 1:30 PM Estimating Cotton Stand Count Using UAV-Based Imagery

Ahmed Harb Rabia, Department of Plant & Soil Science, Texas Tech University, Lubbock, TX, Department of Natural Resources & Agricultural Engineering, Faculty of Agriculture, Damanhour University, Damanhour, Egypt, Zhe Lin, Texas Tech University, Department of Plant and Soil Science, Lubbock, TX and Wenxuan Guo, Department of Plant & Soil Science, Texas Tech University, Lubbock, TX, Texas Tech University, Lubbock, TX

### 1:45 PM Predicting Optimal Nitrogen Rate Using NDVI and Uav's in the Upper Southeast Coastal Plain

Hunter Frame, Virginia Tech Tidewater Agricultural Extension Center, Suffolk, VA

#### 2:00 PM Cotton Stand Count with UAS Imagery Using Image Processing Tools and Deep Learning Algorithm

**Zhe Lin**<sup>1</sup>, Wenxuan Guo<sup>2</sup> and Ahmed Harb Rabia<sup>1</sup>, (1)Department of Plant & Soil Science, Texas Tech University, Lubbock, TX, (2)Department of Plant & Soil Science, Texas Tech University, Lubbock, TX, Texas Tech University, Lubbock, TX

#### 2:15 PM Estimating the Time and Rate of Harvest Aid Chemicals Using an Unmanned Aircraft System

Juan Landivar, Texas A&M AgriLife Research, Corpus Christi, TX, Murilo Maeda, Texas A&M AgriLife Extension, Lubbock, TX, Anjin Chang, Texas A&M University - Corpus Christi, Corpus Christi, TX, Jinha Jung, Purdue University, West Lafayette, IN, Josh McGinty, Texas A&M AgriLife Extension Service, Corpus Christi, TX and Craig Bednarz, Texas A&M AgriLife Research and West Texas A&M University, Canyon, TX

#### 2:30 PM Unmanned Aerial System (UAS)-Based Plant Stand Monitoring for FOV4 Resistance Evaluation

Jinha Jung<sup>1</sup>, Juan Landivar<sup>2</sup>, Anjin Chang<sup>3</sup>, Jane K Dever<sup>4</sup>, John Zwonitzer<sup>4</sup>, Andrea Maeda<sup>4</sup> and Murilo Maeda<sup>5</sup>, (1)Purdue University, West Lafayette, IN, (2)Texas A&M AgriLife Research, Corpus Christi, TX, (3)Texas A&M University - Corpus Christi, Corpus Christi, TX, (4)Texas A&M AgriLife Research, Lubbock, TX, (5)Texas A&M AgriLife Extension, Lubbock, TX

#### 2:45 PM Partnerships for Data Innovation (PDI) Cotton - Opportunities for Agronomic and Variety Data Aggregation and Visualization

Gaylon Morgan<sup>1</sup>, Edward M. Barnes<sup>1</sup>, Ryan W Kurtz<sup>1</sup>, Tina Gray Teague<sup>2</sup>, Christopher D. Delhom<sup>3</sup>, Lindsey Messinger<sup>4</sup>, Grant Zoch<sup>4</sup>, Michael D. Buser<sup>5</sup>, James R. Mahan<sup>6</sup> and Bruce Vandenberg<sup>4</sup>, (1)Cotton Incorporated, Cary, NC, (2)Ark State Univ / Univ Ark Agri Exp Sta, State University, AR, (3)USDA-ARS, New Orleans, LA, (4)USDA-ARS, Fort Collins, CO, (5)USDA Agricultural Research Service, Beltsville, MD, (6)USDA/ARS, Lubbock, TX

#### COTTON AGRONOMY, PHYSIOLOGY & SOILS -WEDNESDAY LATE AFTERNOON 3:30 PM-5:00 PM

#### 3:30 PM The Effect of Gin Sampling Frequency on Cotton Variety Trial Results

**Guy D. Collins**<sup>1</sup>, Keith L. Edmisten<sup>2</sup>, Charlie Cahoon<sup>2</sup>, Mitch K Williams<sup>3</sup> and Lori Unruh Snyder<sup>2</sup>, (1)NC State University, Rocky Mount, NC, (2)North Carolina State University, Raleigh, NC, (3)North Carolina State University, Sanford, NC

#### 3:45 PM Evaluation of STO-1106 to Reduce Heat Stress Related Fruiting Structure Loss

**Michael D. Rethwisch**<sup>1</sup>, Kassandra W. Allan<sup>1</sup>, Aaron Palmer<sup>2</sup> and Grant Chaffin<sup>3</sup>, (1)University of California Cooperative Extension, Blythe, CA, (2) Bryce Farms, Blythe, CA, (3)Chaffin Farms, Blythe, CA

#### 4:00 PM Stalk Application as an Alternative Method of Applying Cotton Harvest Aids

**Josh McGinty**<sup>1</sup>, Gaylon Morgan<sup>2</sup> and Clinton Livingston<sup>1</sup>, (1)Texas A&M AgriLife Extension Service, Corpus Christi, TX, (2)Cotton Incorporated, Cary, NC

### 4:15 PM Evaluation of Stalk Destruction Programs for 2,4-D Tolerant Cotton in South Texas

Benjamin M. McKnight, Texas A&M University, College Station, TX, Josh McGinty, Texas A&M AgriLife Extension Service, Corpus Christi, TX, Danielle Sekula, Texas A&M AgriLife Extension Service, Weslaco, TX, Dale A. Mott, Texas A&M AgriLife Extension Service, College Station, TX and Gaylon Morgan, Cotton Incorporated, Cary, NC

#### 4:30 PM Effect of P and K Application Rate on Cotton Nutrient Removal Rates

Morteza Mozaffari, Northeast Research and Education Center -University of Arkansas of AR of Arkansas, Keiser, AR

### 4:45 PM Effect of Timing and Rate of Application of Urea and ESN on Cotton

Morteza Mozaffari, Northeast Research and Education Center -University of Arkansas of AR of Arkansas, Keiser, AR

# **Cotton Disease Council**

#### COTTON DISEASE COUNCIL - WEDNESDAY EARLY MORNING

#### 8:00 AM-10:00 AM

8:00 AM Root-Knot Nematodes Interact with Fov Race 4 and Increase Disease Severity in Three Cotton Varieties in Growth Chamber Assays Tanya A Wagner<sup>1</sup>, Shayla M Davie<sup>1</sup>, Clint W Magill<sup>2</sup> and Jinggao Liu<sup>3</sup>, (1) USDA-ARS-ICCDRU, College Station, TX, (2)Texas A&M University, College Station, TX, (3)USDA-ARS ICCDRU, College Station, TX

# 8:15 AM Cropping System Effects on Cotton Variety Performance in the Presence of Root-Knot Nematodes in the Southern High Plains of Texas

**Clay M Braden**<sup>1</sup>, Donna M McCallister<sup>1</sup>, J. Wayne Keeling<sup>2</sup>, Will Keeling<sup>3</sup> and Katie L. Lewis<sup>4</sup>, (1)Texas Tech University, Lubbock, TX, (2)Texas A&M AgriLife Research Center, Lubbock, TX, (3)Texas A&M AgriLife Extension, Lubbock, TX, (4)Texas A&M AgriLife Research and Extension Center, Lubbock, TX

8:30 AM Development of Management Strategies to Reduce Meloidogyne Enterolobii Impacts in Cotton Lindsey D. Thiessen, NC State University, Raleigh, NC

8:45 AM Field-Level Nematode Damage Phenotyping in Row Crop Production Using Aerial Visual and Multi-Spectral Imagery Chang Liu<sup>1</sup>, Ian Small<sup>2</sup>, Rebecca Barocco<sup>2</sup>, David L. Wright<sup>2</sup>, James Clohessy<sup>2</sup> and Zane J. Grabau<sup>1</sup>, (1)University of Florida, Gainesville, FL, (2) University of Florida, Quincy, FL 9:00 AM Beltwide Nematode Research and Education Committee: Field Performance of Seed- and Soil-Applied Nematicides, 2020 Travis R. Faske, University of Arkansas Division of Agriculture, Lonoke, AR, Thomas W. Allen, Mississippi State University, Delta Research and Extension Center, Stoneville, MS, Zane J. Grabau, University of Florida, Gainesville, FL, J. Hu, University of Arizona, Solomon, AZ, Robert Kemerait, University of Georgia, Tifton, GA, David B. Langston, Virginia Tech, Suffolk, VA, Kathy Lawrence, Auburn University, Auburn, AL, John Mueller, Clemson University, Blackville, SC, Paul Price, Louisiana State University, Winnsboro, LA, Lindsey D. Thiessen, NC State University, Raleigh, NC, Terry A. Wheeler, Texas A&M AgriLife Research, Lubbock, TX and Tessie H. Wilkerson, Mississippi State University, Stoneville, MS

#### COTTON DISEASE COUNCIL - WEDNESDAY LATE MORNING 10:30 AM-11:45 AM

### 10:30 AM Status of Virus Diseases Infecting Cotton in the Mid-Southern States

Akhtar Ali, Department of Biological Science, The University of Tulsa, Tulsa, OK

#### 10:45 AM Incidence and Impact of Cotton Leaf Roll Dwarf Virus (CL-RDV) in the USA Cotton Belt

**Marcio Zaccaron**<sup>1</sup>, Jeremy Greene<sup>2</sup>, Austin K. Hagan<sup>1</sup>, Amanda Smitherman<sup>3</sup>, Thomas W. Allen<sup>4</sup>, Jenny Koebernick<sup>1</sup>, Alana Lynn Jacobson<sup>1</sup>, Kira L. Bowen<sup>1</sup>, Travis R. Faske<sup>5</sup>, Paul Price<sup>6</sup>, Ian Small<sup>7</sup>, Michael J. Mulvaney<sup>8</sup>, Robert Kemerait<sup>9</sup>, Anders S. Huseth<sup>10</sup>, Heather M Kelly<sup>11</sup>, David Kerns<sup>12</sup>, Sally Taylor<sup>13</sup> and Hehe Wang<sup>2</sup>, (1)Auburn University, Auburn, AL, (2)Clemson University, Blackville, SC, (3)Auburn University, auburn, AL, (4)Mississippi State University, Delta Research and Extension Center, Stoneville, MS, (5)University of Arkansas Division of Agriculture, Lonoke, AR, (6)Louisiana State University, Winnsboro, LA, (7)University of Florida, Quincy, FL, (8)University of Florida, Jay, FL, (9)University of Georgia, Tifton, GA, (10)North Carolina State University, Raleigh, NC, (11)University of Tennessee, Jackson, TN, (12)Texas A&M University, College Station, TX, (13)Virginia Tech University, Suffolk, VA

### 11:00 AM Occurrence of Cotton Leafroll Dwarf Disease as Impacted by Cotton Cultivar and Planting Date in Alabama

**Amanda L Strayer-Scherer**<sup>1</sup>, Austin K Hagan<sup>1</sup>, Katherine Burch<sup>1</sup>, Kassie Conner<sup>1</sup>, Steven M Brown<sup>1</sup>, Marcio Zaccaron<sup>1</sup>, Jenny Koebernick<sup>1</sup>, H. Brad Miller<sup>2</sup> and Don Moore<sup>3</sup>, (1)Auburn University, Auburn, AL, (2)Brewton Agricultural Research Unit, Brewton, AL, (3)Prattville Agricultural Research Unit, Prattville, AL

#### 11:15 AM Assessment of Yield Loss Attributed to Cotton Leafroll Dwarf Disease in Alabama Cotton.

Austin K Hagan<sup>1</sup>, Amanda Strayer-Scherer<sup>1</sup>, Katherine Burch<sup>1</sup>, Kassie Conner<sup>1</sup>, H. Brad Miller<sup>2</sup>, Clint Mclemoyl<sup>3</sup> and Jason Burkett<sup>4</sup>, (1)Auburn University, Auburn, AL, (2)Brewton Agricultural Research Unit, Brewton, AL, (3) Sand Mountain Research and Extension Center, Crossville, AL, (4)E. V. Smith Research Center, Tallassee, AL

### 11:30 AM Study of Cotton Leafroll Dwarf Virus in Mississippi: State of the Art (2020)

Nina Aboughanem<sup>1</sup>, Thomas W. Allen<sup>1</sup>, Tessie H. Wilkerson<sup>1</sup>, Jodi Scheffler<sup>2</sup> and Sead Sabanadzovic<sup>1</sup>, (1)Mississippi State University, Mississippi State, MS, (2)USDA ARS, Stoneville, MS

#### COTTON DISEASE COUNCIL - WEDNESDAY EARLY AFTERNOON 1:00 PM-2:00 PM

#### 1:00 PM Genome Sequence of Cotton Leafroll Dwarf Virus (CLRDV) Infecting Cotton in Georgia, US

**Afsha Tabassum**, Sudeep Bag, Robert Kemerait and Phillip Roberts, University of Georgia, Tifton, GA

#### Wednesday, January 6, 2021

#### 1:15 PM Reverse Transcription Loop-Mediated Isothermal Amplification (RT-LAMP) Assay for Rapid Detection of Cotton Leafroll Dwarf Virus (CLRDV) in Cotton

Bisho Ram Lawaju, Marina Nunes Rondon and Kathy Lawrence, Auburn University, Auburn, AL

### 1:30 PM Rapid Screening for Resistance to Clrdv: Development of an Aphid Assay

Brianna Heilsnis, Jenny Koebernick, Kassie Conner and Alana Lynn Jacobson, Auburn University, Auburn, AL

### 1:45 PM Cotton Yield Response and Target Spot Control with Selected Fungicides

Austin K Hagan<sup>1</sup>, Amanda Strayer-Scherer<sup>1</sup>, Katherine Burch<sup>1</sup> and H. Brad Miller<sup>2</sup>, (1)Auburn University, Auburn, AL, (2)Brewton Agricultural Research Unit, Brewton, AL

> COTTON DISEASE COUNCIL - BUSISNESS MEETING 2:00 PM-3:00 PM

# Cotton Economics and Marketing Conference

#### COTTON ECONOMICS AND MARKETING -WEDNESDAY LATE MORNING

#### 10:30 AM-12:00 PM

10:30 AM Consumers' Willingness to Pay for Ethically Produced Cotton Apparel

Sawssan Boufous, Darren Hudson and Carlos Carpio, Texas Tech University, Lubbock, TX

### 10:50 AM Distributed Ledger Technology for the Cotton Supply Chain, Discussing Forthcoming Literature

Jessica A Richard, Oklahoma State University, Stillwater, OK and Terry W Griffin, Kansas State University, Manhattan, KS

#### 11:10 AM Economic Analysis of High-Speed Roller Ginning Pratima Bhandari, NMSU, Las Cruces, NM, Ram N Acharya, New Mexico State

Pratima Bhandari, NMSU, Las Cruces, NM, Ram N Acharya, New Mexico State University, Las Cruces, NM and Carlos Armijo, USDA/ARS, Las Cruces, NM

#### COTTON ECONOMICS AND MARKETING -WEDNESDAY EARLY AFTERNOON

#### 1:30 PM-3:00 PM

1:30 PM Regional Crop Enterprise and Farm Program Selection on Whole Farm Net Returns Under Risk Michael A. Deliberto and Brian Hilbun, LSU AgCenter, Baton Rouge, LA

#### 1:50 PM Economic and Risk Analysis Comparison of Cotton Tillage Systems with Different Irrigation Levels.

Francisco J Abello, Texas A&M AgriLife Extension Service, Vernon, TX, Paul DeLaune, Texas A&M AgriLife Research, Vernon, TX and Luis A. Ribera, Texas A&M University, College Station, TX

2:10 PM Risk Effects on Optimal Irrigation Strategies and Investment in Irrigation Technology for Cotton Under Climate Change Wen Liu, University of Tennessee, Knoxville, TN

# Cotton Engineering-Systems Conference

#### COTTON ENGINEERING-SYSTEMS - WEDNESDAY LATE MORNING 10:30 AM-12:00 PM

### 10:30 AM Partnerships for Data Innovation (PDI) Cotton - the Potential for Precision Data Collection and Aggregation

Edward M. Barnes<sup>1</sup>, Gaylon Morgan<sup>1</sup>, Ryan W Kurtz<sup>1</sup>, Tina Gray Teague<sup>2</sup>, Christopher D. Delhom<sup>3</sup>, Michael D. Buser<sup>4</sup>, Mauricio Ulloa<sup>5</sup>, James R. Mahan<sup>6</sup>, Bruce Vandenberg<sup>7</sup>, Lindsey Messinger<sup>7</sup> and Grant Zoch<sup>7</sup>, (1)Cotton Incorporated, Cary, NC, (2)Ark State Univ / Univ Ark Agri Exp Sta, State University, AR, (3)USDA-ARS, New Orleans, LA, (4)USDA Agricultural Research Service, Beltsville, MD, (5)USDA-ARS, PA, CSRL, Plant Stress and Germplasm Development Research, Lubbock, TX, (6)USDA/ARS, Lubbock, TX, (7)USDA-ARS, Fort Collins, CO

### 10:45 AM Evaluation of Maggrow Technology for Defoliating Cotton in Mississippi and Georgia

Simerjeet Virk<sup>1</sup>, Brian K. Pieralisi<sup>2</sup>, Wesley M Porter<sup>1</sup>, Jeremy Register<sup>3</sup>, Gaylon Morgan<sup>4</sup> and Edward M. Barnes<sup>4</sup>, (1)University of Georgia, Tifton, GA, (2)Mississippi State University, Starkville, MS, (3)UGA Cooperative Extension, Vienna, GA, (4)Cotton Incorporated, Cary, NC

### 11:00 AM Evaluating Planting Parameters for Fields with Highly Variable Soil Electrical Conductivity

John M Long, Gavin McCullough and Seth A. Byrd, Oklahoma State University, Stillwater, OK

### 11:15 AM Parameters for Drone Detection of Plastic Contamination in Cotton Fields

Cody D. Blake, USDA-ARS Cotton Ginning Research Lab, Stoneville, MS, Christopher D. Delhom, USDA-ARS, New Orleans, LA and Joe W. Thomas, USDA ARS, Stoneville, MS

#### 11:30 AM Using Unmanned Aircraft Systems to Evaluate Application Timing of Harvest Aids in Stripper Cotton

William Wade Young, Cayden B. Catlin, Seth A. Byrd, Ning Wang and John M Long, Oklahoma State University, Stillwater, OK

**11:45 AM** Cotton Irrigation Scheduling Methods: Which Method Is a Best Fit? Wesley M Porter<sup>1</sup>, Calvin Perry<sup>2</sup> and John L. Snider<sup>1</sup>, (1)University of Georgia, Tifton, GA, (2)Superintendent, Stripling Irrigation Research Park, University of Georgia, Camilla, GA

# **Cotton Ginning Conference**

### COTTON GINNING - WEDNESDAY EARLY AFTERNOON

#### 1:00 PM-3:00 PM

#### 1:00 PM Quality of 2020 Cotton Crop

Robbie L Seals, USDA, AMS Cotton and Tobacco Program, Memphis, TN

#### 1:15 PM The Effect of Alternative Lint Cleaning Processes on Fiber Length Uniformity Index

**Carlos B. Armijo**<sup>1</sup>, Christopher D. Delhom<sup>2</sup>, Derek P. Whitelock<sup>1</sup>, Paul A. Funk<sup>1</sup>, John D Wanjura<sup>3</sup>, Gregory A. Holt<sup>3</sup>, Ruixiu Sui<sup>4</sup>, Vikki B. Martin<sup>5</sup>, Neha Kothari<sup>5</sup>, Cody D. Blake<sup>6</sup> and Mathew G. Pelletier<sup>3</sup>, (1)USDA-ARS Southwestern Cotton Ginning Research Laboratory, Mesilla Park, NM, (2)USDA-ARS, New Orleans, LA, (3)USDA-ARS Cotton Production and Processing Research Unit, Lubbock, TX, (4)USDA-ARS, Stoneville, MS, (5)Cotton Incorporated, Cary, NC, (6) USDA-ARS Cotton Ginning Research Lab, Stoneville, MS

#### 1:30 PM The Cost of Ginning Cotton - 2019 Survey Results

**Greg A. Holt**, USDA-ARS Cotton Production and Processing Research Unit, Lubbock, TX, Harrison Ashley, National Cotton Council, Cordova, TN, J. Kelley Green, Texas Cotton Ginners Association, Austin, TX, Dennis S. Findley, Jr., Southeastern Cotton Ginners Association, Dawsonville, GA, Timothy L. Price, Southern Cotton Ginners Association, Memphis, TN and Roger A. Isom, California Cotton Ginners and Growers Association, Fresno, CA

### 1:45 PM Update on Variety and Production Trends Impacting Seed Size

Jane K Dever, Texas A&M AgriLife Research and Extension Center, Lubbock, TX, Carol Mason Kelly, Texas A&M AgriLife Research, Lubbock, TX and Valerie Morgan, Texas, Lubbock, TX

#### 2:00 PM Update on the Cotton Ginning Data Standard

Edward M. Barnes<sup>1</sup>, David Blakemore<sup>2</sup>, Mathew G. Pelletier<sup>3</sup>, John D Wanjura<sup>3</sup>, Greg A. Holt<sup>3</sup>, Harrison Ashley<sup>4</sup>, Robert G. Hardin<sup>5</sup>, Jason K Ward<sup>6</sup>, Christopher D. Delhom<sup>7</sup> and Paul A. Funk<sup>8</sup>, (1)Cotton Incorporated, Cary, NC, (2)Blakemore Cotton & Grain, Campbell, MO, (3)USDA-ARS Cotton Production and Processing Research Unit, Lubbock, TX, (4)National Cotton Council, Cordova, TN, (5)Texas A&M University, College Station, TX, (6)NC State University, Raleigh, NC, (7)USDA-ARS, New Orleans, LA, (8)USDA-ARS Southwestern Cotton Ginning Research Laboratory, Mesilla Park, NM

#### 2:15 PM Plastic Contamination Mitigation Research Update 2020 Mathew G. Pelletier<sup>1</sup>, Greg A. Holt<sup>1</sup>, John D Wanjura<sup>1</sup>, Paul A. Funk<sup>2</sup>, Derek P. Whitelock<sup>2</sup>, Carlos B. Armijo<sup>2</sup>, Gabe J. Sweers<sup>3</sup> and Ross D. Rutherford<sup>4</sup>, (1) USDA-ARS Cotton Production and Processing Research Unit, Lubbock, TX, (2)USDA-ARS Southwestern Cotton Ginning Research Laboratory, Mesilla Park, NM, (3)Bratney Companies, Des Moines, IA, (4)Lummus Ag Technology, Lubbock, TX

### 2:30 PM An Integrated Module Feeder Monitoring System to Mitigate Plastic Contamination

John D Wanjura<sup>1</sup>, Mathew G. Pelletier<sup>1</sup>, Greg A. Holt<sup>1</sup>, Edward M. Barnes<sup>2</sup>, Jeffrey S Wigdahl<sup>3</sup> and Nachem Doron<sup>4</sup>, (1)USDA-ARS Cotton Production and Processing Research Unit, Lubbock, TX, (2)Cotton Incorporated, Cary, NC, (3)John Deere Des Moines Works, Ankeny, IA, (4)Tama Plastic Industry, Kibbutz Mishmar HaEmek, Israel

#### COTTON GINNING - WEDNESDAY LATE AFTERNOON 3:30 PM-5:15 PM

#### 3:30 PM Comparison of the Goldenlion Contamination Cleaner with Standard Seed Cotton Cleaning Machinery

**Derek P. Whitelock**<sup>1</sup>, Carlos B. Armijo<sup>1</sup>, Paul A. Funk<sup>1</sup>, Mathew G. Pelletier<sup>2</sup>, John D Wanjura<sup>2</sup>, Greg A. Holt<sup>2</sup>, Neha Kothari<sup>3</sup> and Vikki B. Martin<sup>3</sup>, (1) USDA-ARS Southwestern Cotton Ginning Research Laboratory, Mesilla Park, NM, (2)USDA-ARS Cotton Production and Processing Research Unit, Lubbock, TX, (3)Cotton Incorporated, Cary, NC

**3:45 PM** Field Evaluation Update on the VIPR<sup>™</sup> System Ross D. Rutherford<sup>1</sup>, David L. Arthur<sup>1</sup>, Gabe J. Sweers<sup>2</sup> and Mark D. Cory<sup>3</sup>, (1)Lummus Ag Technology, Lubbock, TX, (2)Bratney Companies, Des Moines, IA, (3)Lummus Ag Technology, Savannah, GA

**4:00 PM** Potential Textile Testing Methodologies to Support the Development of a Performance Standard for Round Module Wrap. Mary Ankeny<sup>1</sup>, Vikki B. Martin<sup>1</sup>, John D Wanjura<sup>2</sup>, Suzanne Holmes<sup>1</sup>, Matt Farrell<sup>1</sup> and Edward M. Barnes<sup>1</sup>, (1)Cotton Incorporated, Cary, NC, (2)US-DA-ARS Cotton Production and Processing Research Unit, Lubbock, TX

#### 4:15 PM A Status Report on the State of the USDA-ARS Cotton Gin Research Unit (CGRU) at Stoneville, Mississippi

Joe W. Thomas, USDA ARS, Stoneville, MS and Christopher D. Delhom, USDA-ARS, New Orleans, LA

4:30 PM Tama Update Mike Bieber, Tama USA, Boonville, MO

#### 4:45 PM John Deere C690 Calibrations: Round Module Weighing and Moisture Sensor

Christopher Murray, John Deere Des Moines Works, Ankeny, IA

#### 5:00 PM Preliminary Study of the Behavior of Alternative Round Module Wrap Materials

**Christopher D. Delhom**, USDA-ARS, New Orleans, LA, Cody D. Blake, USDA-ARS Cotton Ginning Research Lab, Stoneville, MS, John D Wanjura, USDA-ARS Cotton Production and Processing Research Unit, Lubbock, TX and Joe W. Thomas, USDA ARS, Stoneville, MS

# Cotton Improvement Conference

### COTTON IMPROVEMENT - WEDNESDAY EARLY MORNING

8:00 AM-10:00 AM

8:00 AM Use of the Dominant Male Sterility Gene (Ms $_4$ ) in Cotton Breeding

**Don L Keim**, USDA-ARS, Leland, MS and Jodi Scheffler, USDA ARS, Stoneville, MS

#### 8:15 AM Progress Developing Improved Texas Upland Cotton Germplasm for Improved Yarn Quality

**C. Wayne Smith**<sup>1</sup>, Eric F. Hequet<sup>2</sup>, Brendan Kelly<sup>2</sup>, Steve Hague<sup>1</sup>, Jake Gendron<sup>3</sup> and Alexandra Ullrich<sup>3</sup>, (1)Texas A&M University, College Station, TX, (2)Texas Tech University, Lubbock, TX, (3)Texas A&M University, COLLEGE STATION, TX

#### 8:30 AM Genetic Variation in Seed Size and Fuzz Content in Commercial Cultivars and Breeding Lines of Upland Cotton

**Kyle Moore**<sup>1</sup>, Yi Zhu<sup>1</sup>, Abdelraheem Abdelraheem<sup>1</sup>, Derek P. Whitelock<sup>2</sup>, Carlos B. Armijo<sup>2</sup>, Paul A. Funk<sup>2</sup>, Tom Wedegaertner<sup>3</sup> and Jinfa Zhang<sup>1</sup>, (1) New Mexico State University, Las Cruces, NM, (2)USDA-ARS Southwestern Cotton Ginning Research Laboratory, Mesilla Park, NM, (3)Cotton Incorporated, Cary, NC

### 8:45 AM Effects of Leaf and Bract Pubescence on Fiber Quality of Normal and Okra Leaf Cotton

**Bradley R. Wilson**<sup>1</sup>, Jane K Dever<sup>2</sup>, Carol Mason Kelly<sup>3</sup>, Steve Hague<sup>4</sup> and Seth A. Byrd<sup>1</sup>, (1)Oklahoma State University, Stillwater, OK, (2)Texas A&M AgriLife Research and Extension Center, Lubbock, TX, (3)Texas A&M AgriLife Research, Lubbock, TX, (4)Texas A&M University, College Station, TX

#### 9:00 AM Higher Proportions of Unsaturated Fatty Acids in Seeds Improve Cold Germination Ability in Upland Cotton (Gossypium hirsutum) Mutants

Lakhvir Kaur, Junghyun Shim, Benildo G de los Reyes and Rosalyn B Angeles-Shim, Texas Tech University, Lubbock, TX

### 9:15 AM Utilization of Novel Alleles Found in Obsolete Germplasm for the Improvement of Upland Cotton

Alexandra Ullrich, Texas A&M University, College Station,, TX

### 9:30 AM Identifiying Cotton Germplasm with Resistance to Fusarium Wilt in Georgia

**Edward Beasley**<sup>1</sup>, Nelson Dias Suassuna<sup>2</sup>, Robert Kemerait<sup>1</sup>, B. Todd Campbell<sup>3</sup>, Don Jones<sup>4</sup> and Peng Chee<sup>1</sup>, (1)University of Georgia, Tifton, GA, (2)Brazilian Agricultural Research Corporation - EMBRAPA, Santo Antonio de Goias - GO, Brazil, (3)USDA-ARS, Florence, SC, (4)Cotton Incorporated, Cary, NC

#### 9:45 AM Discussion

#### COTTON IMPROVEMENT - WEDNESDAY LATE MORNING 10:30 AM-12:00 PM

10:30 AM Origin and Worldwide Distribution of Fusarium Race 4 (FOV4) Jim Olvey, O&A Enterprises, Maricopa, AZ

**10:45 AM Fusarium Race 4 (FOV4) Upland Screening and Evaluation Mike Olvey**, O&A Enterprises, Maricopa, AZ

# 11:00 AM Genetic Mapping for Resistance to Fusarium Wilt (Fusarium oxysporum f. sp. vasinfectum) Race 4 in Two Introgressed Populations of Upland Cotton (Gossypium hirsutum)

**Abdelraheem Abdelraheem**<sup>1</sup>, Yi Zhu<sup>1</sup>, Terry Wheeler<sup>2</sup>, Jane K Dever<sup>3</sup>, Jiwen Yu<sup>4</sup>, Youlu Yuan<sup>5</sup>, Shi Yuzhen<sup>6</sup>, Jianjiang Ma<sup>7</sup>, Tom Wedegaertner<sup>8</sup> and Jinfa Zhang<sup>1</sup>, (1)New Mexico State University, Las Cruces, NM, (2)Texas A&M AgriLife Research, Lubbock, TX, (3)Texas A&M AgriLife Research and Extension Center, Lubbock, TX, (4)cotton research center, Jinan, China, (5)Institute of Cotton Research, Chinese Academy of Agricultural Sciences, Anyang, China, (6)State Key Laboratory of Cotton, Anyang, China, (7)State Key Laboratory of cotton Institute of the Chinese Academy of Agricultural Sciences, Anyang, China, Sciences, Anyang, China, (8)Cotton Incorporated, Cary, NC

11:15 AM An in Vitro Co-Culture System and Rapid Differential Responses to Fusarium Oxysporum f.Sp. Vasinfectum Race 4 in Domesticated Cotton Stephen Parris<sup>1</sup>, Jim Olvey<sup>2</sup>, Mike Olvey<sup>2</sup>, Don Jones<sup>3</sup>, Joshua Udall<sup>4</sup> and Christopher Saski<sup>1</sup>, (1)Clemson University, Clemson, SC, (2)O&A Enterprises, Maricopa, AZ, (3)Cotton Incorporated, Cary, NC, (4)USDA-ARS, College Station, TX

#### 11:30 AM Deciphering Genetic Resistance Mechanisms to Fusarium Oxysporum Race 4 in Domesticated Cotton

**Christopher Saski**<sup>1</sup>, Stephen Parris<sup>1</sup>, Jim Olvey<sup>2</sup>, Mike Olvey<sup>2</sup>, Joshua Udall<sup>3</sup> and Don Jones<sup>4</sup>, (1)Clemson University, Clemson, SC, (2)O&A Enterprises, Maricopa, AZ, (3)USDA-ARS, College Station, TX, (4)Cotton Incorporated, Cary, NC

#### 11:45 AM Discussion

#### COTTON IMPROVEMENT - WEDNESDAY EARLY AFTERNOON 1:00 PM-3:00 PM

#### 1:00 PM Comparative Morphological Analysis of Infection Process in Cotton Differing in Resistance to Fusarium Wilt Caused by *Fusarium oxysporum* f. Sp. *Vasinfectum* Race 4

YI Zhu<sup>1</sup>, Abdelraheem Abdelraheem<sup>1</sup>, Peter Cooke<sup>1</sup>, Terry Wheeler<sup>2</sup>, Jane K Dever<sup>3</sup>, Tom Wedegaertner<sup>4</sup> and Jinfa Zhang<sup>1</sup>, (1)New Mexico State University, Las Cruces, NM, (2)Texas A&M AgriLife Research, Lubbock, TX, (3) Texas A&M AgriLife Research and Extension Center, Lubbock, TX, (4)Cotton Incorporated, Cary, NC

#### 1:15 PM Identification of Resistance Sources to Fusarium Wilt (Fusarium oxysporum f. sp. vasinfectum) Race 4 in Gossypium barbadense and Cultivated Diploid Cotton Species

Abdelraheem Abdelraheem<sup>1</sup>, Yi Zhu<sup>1</sup>, Kyle Moore<sup>1</sup>, Jane K Dever<sup>2</sup>, Terry A. Wheeler<sup>3</sup>, Tom Wedegaertner<sup>4</sup> and Jinfa Zhang<sup>1</sup>, (1)New Mexico State University, Las Cruces, NM, (2)Texas A&M AgriLife Research and Extension Center, Lubbock, TX, (3)Texas A&M AgriLife Research, Lubbock, TX, (4)Cotton Incorporated, Cary, NC **1:30 PM** Resistance/Tolerance to Fusarium Wilt Race 4 (FOV4) in Upland (Gossypium hirsutum L.) Cotton for Germplasm Public Release Mauricio Ulloa<sup>1</sup>, Robert B Hutmacher<sup>2</sup>, Philip A. Roberts<sup>3</sup>, Margaret L. Ellis<sup>4</sup>, TariLee Frigulti<sup>5</sup>, Jane K Dever<sup>6</sup>, Terry A. Wheeler<sup>6</sup>, Jinfa Zhang<sup>7</sup>, Steve Hague<sup>8</sup>, Soum Sanogo<sup>7</sup>, Paxton Payton<sup>9</sup> and Robert L. Nichols<sup>10</sup>, (1) USDA-ARS, PA, CSRL, Plant Stress and Germplasm Development Research, Lubbock, TX, (2)University of California Cooperative Extension, Five Points, CA, (3)University of California, Riverside, CA, (4)California State University, Fresno, Fresno, CA, (5)University of California Cooperative Extension, Tulare, CA, (6)Texas A&M AgriLife Research, Lubbock, TX, (7)New Mexico State University, Las Cruces, NM, (8)Texas A&M University, College Station, TX, (9)United States Department of Agriculture, Lubbock, TX, (10)Cotton Incorporated, Cary, NC

1:45 PM Yield of Select Upland Cotton Varieties Grown in Moderate to High Disease Pressure of Fusarium Race 4 (FOV4): 2018 to 2020 David W Albers, Bayer Crop Science, St. Louis, MO and Mike Olvey, O&A Enterprises, Maricopa, AZ

2:00 PM Public Release of Conventional Upland Germplasm Highly Tolerant/Resistant to Fusarum Race 4 By O&A

**Jim Olvey**<sup>1</sup>, Mike Olvey<sup>1</sup>, Don Jones<sup>2</sup> and Geoff Toledo<sup>3</sup>, (1)O&A Enterprises, Maricopa, AZ, (2)Cotton Incorporated, Cary, NC, (3)CCGGA, Fresno, CA

**2:15 PM** A Private/Public Sector Partnership to Address FOV4 Don Jones<sup>1</sup>, Mike Olvey<sup>2</sup> and Jim Olvey<sup>2</sup>, (1)Cotton Incorporated, Cary, NC, (2)O&A Enterprises, Maricopa, AZ

2:30 PM Discussion

#### COTTON IMPROVEMENT - WEDNESDAY LATE AFTERNOON 3:30 PM-5:00 PM

3:30 PM Repeatability of HVI Fibrograms across Multiple Instruments

Addisu Ferede Tesema<sup>1</sup>, Brendan Kelly<sup>2</sup> and Eric F. Hequet<sup>1</sup>, (1)Texas Tech University, Lubbock, TX, (2)Texas Tech University, Lubbock, TX, Texas A&M Agrilife Research, Lubbock, TX

#### 3:45 PM Estimating Short Fiber Content Using the High Volume Instrument

Md Abu Sayeed and Eric F. Hequet, Texas Tech University, Lubbock, TX

4:00 PM Transcriptome Analysis of Gossypium hirsutum Responses to Meloidogyne Incognita during Compatible and Incompatible Interactions

Sameer Khanal<sup>1</sup>, Pawan Kumar<sup>2</sup>, Samantha Jo Wegener<sup>1</sup>, Richard Davis<sup>3</sup>, Robert L. Nichols<sup>4</sup> and Peng Chee<sup>1</sup>, (1)University of Georgia, Tifton, GA, (2) USDA-ARS, Salinas, CA, (3)USDA-ARS, Tifton, GA, (4)Cotton Incorporated, Cary, NC

4:15 PM Concluding Remarks

4:20 PM Business Meeting

# **Cotton Insect Research and Control Conference**

COTTON INSECT RESEARCH & CONTROL CONFERENCE -WEDNESDAY EARLY AFTERNOON

1:00 PM-3:00 PM

1:00 PM Efficacy of Pesticides Used in Cotton When Applied at Specific Droplet Sizes Tyler S. Soignier, Clemson University, Blackville, SC

#### 1:12 PM Evaluation of Moth Trapping Trends in Arkansas

T. Harris<sup>1</sup>, Gus Lorenz<sup>2</sup>, Nick R. Bateman<sup>3</sup>, Benjamin C Thrash<sup>1</sup>, Nichole Taillon<sup>4</sup>, Wes Plummer<sup>5</sup>, Chase A Floyd<sup>1</sup>, Caleb Rice<sup>1</sup>, Garrett Felts<sup>6</sup>, Trevor Newkirk<sup>1</sup>, Adam Whitfield<sup>5</sup> and G. Maris<sup>1</sup>, (1)University of Arkansas, Lonoke, AR, (2)The University of Arkansas, Lonoke, AR, (3)University of Arkansas -RREC, Stuttgart, AR, (4)University of Arkansas CES, Lonoke, AR, (5)UA-CES, Lonoke, AR, (6)University of Arkansas- RREC, Stuttgart, AR

**1:24 PM** Impact of Rainfall on Insecticide Performance in Cotton Sara Barrett<sup>1</sup>, Jeff Gore<sup>2</sup>, Angus Catchot<sup>3</sup>, Don Cook<sup>2</sup> and Whitney Crow<sup>2</sup>, (1) Mississippi State University, Department of Biochemistry, Molecular Biology, Entomology, and Plant Pathology, Starkville, MS, (2)Mississippi State University, Stoneville, MS, (3)Mississippi State University, Mississippi State, MS

**1:36 PM** Monitoring Potential Lambda-Cyhalothrin Resistant Rice Stink Bug, Oebalus Pugnax Populations in Arkansas Rice Production Trevor Newkirk<sup>1</sup>, Nick R. Bateman<sup>2</sup>, Gus Lorenz<sup>3</sup>, Benjamin C Thrash<sup>1</sup>, Neelendra Joshi<sup>4</sup>, Garrett Felts<sup>5</sup>, Nichole Taillon<sup>6</sup>, Wes Plummer<sup>7</sup>, Chase A Floyd<sup>1</sup> and Caleb Rice<sup>1</sup>, (1)University of Arkansas, Lonoke, AR, (2)University of Arkansas - RREC, Stuttgart, AR, (3)The University of Arkansas, Lonoke, AR, (4)University of Arkansas, Fayetteville, AR, (5)University of Arkansas - RREC, Stuttgart, AR, (6) University of Arkansas CES, Lonoke, AR, (7)UA-CES, Lonoke, AR

#### 1:48 PM Impact of Late Season Management Approaches for Tarnished Plant Bug in Mid-South Cotton

**Ryan Mann**<sup>1</sup>, Angus Catchot<sup>1</sup>, Whitney Crow<sup>2</sup>, Jeff Gore<sup>2</sup>, Don Cook<sup>2</sup> and Tyler B Towles<sup>3</sup>, (1)Mississippi State University, Mississippi State, MS, (2) Mississippi State University, Stoneville, MS, (3)LSU AgCenter, Winnsboro, LA

#### 2:00 PM Efficacy of Chinnpv for Control of Soybean Looper, Chrysodeixis Includens, in Arkansas Soybean Production

**Caleb Rice**<sup>1</sup>, Gus Lorenz<sup>2</sup>, Benjamin C Thrash<sup>1</sup>, Nick R. Bateman<sup>3</sup>, Nichole Taillon<sup>4</sup>, Garrett Felts<sup>5</sup>, Wes Plummer<sup>6</sup>, Chase A Floyd<sup>1</sup> and Trevor Newkirk<sup>1</sup>, (1)University of Arkansas, Lonoke, AR, (2)The University of Arkansas, Lonoke, AR, (3)University of Arkansas - RREC, Stuttgart, AR, (4)University of Arkansas CES, Lonoke, AR, (5) University of Arkansas- RREC, Stuttgart, AR, (6)UA-CES, Lonoke, AR

### 2:12 PM Evaluation of Action Thresholds for Bollworm Control in Cotton

**Michael Cade Francis**<sup>1</sup>, Jeff Gore<sup>2</sup>, Angus Catchot<sup>1</sup>, Whitney Crow<sup>2</sup> and Don Cook<sup>2</sup>, (1)Mississippi State University, Mississippi State, MS, (2)Mississippi State University, Stoneville, MS

### 2:24 PM Efficacy of Selected Insecticides for Control of Lepidopteran Pests in Soybeans

**G. Maris**<sup>1</sup>, Gus Lorenz<sup>2</sup>, Nick R. Bateman<sup>3</sup>, Benjamin C Thrash<sup>1</sup>, Nichole Taillon<sup>4</sup>, Wes Plummer<sup>5</sup>, Chase A Floyd<sup>1</sup>, Caleb Rice<sup>1</sup>, Garrett Felts<sup>6</sup>, Trevor Newkirk<sup>1</sup>, Adam Whitfield<sup>5</sup> and T. Harris<sup>1</sup>, (1)University of Arkansas, Lonoke, AR, (2)The University of Arkansas, Lonoke, AR, (3)University of Arkansas -RREC, Stuttgart, AR, (4)University of Arkansas CES, Lonoke, AR, (5)UA-CES, Lonoke, AR, (6)University of Arkansas- RREC, Stuttgart, AR

#### 2:36 PM Determining Chlorantraniliprole Residual Activity Against Bollworm (Helicoverpa Zea) in Cotton

**Jacob Smith**<sup>1</sup>, Whitney Crow<sup>2</sup>, Angus Catchot<sup>1</sup>, Jeff Gore<sup>2</sup> and Don Cook<sup>2</sup>, (1)Mississippi State University, Mississippi State, MS, (2)Mississippi State University, Stoneville, MS

#### 2:48 PM Efficacy of Selected Insecticides for Control of Tarnished Plant Bugs, Lygus Lineolaris, in Arkansas

Adam Whitfield<sup>1</sup>, Gus Lorenz<sup>2</sup>, Nick R. Bateman<sup>3</sup>, Benjamin C Thrash<sup>4</sup>, Nichole Taillon<sup>5</sup>, Wes Plummer<sup>1</sup>, Chase A Floyd<sup>4</sup>, Caleb Rice<sup>4</sup>, Garrett Felts<sup>6</sup>, Trevor Newkirk<sup>4</sup>, T. Harris<sup>4</sup> and G. Maris<sup>4</sup>, (1)UA-CES, Lonoke, AR, (2)The University of Arkansas, Lonoke, AR, (3)University of Arkansas - RREC, Stuttgart, AR, (4) University of Arkansas, Lonoke, AR, (5)University of Arkansas CES, Lonoke, AR, (6)University of Arkansas - RREC, Stuttgart, AR

#### COTTON INSECT RESEARCH & CONTROL CONFERENCE -WEDNESDAY LATE AFTERNOON

#### 3:30 PM-5:00 PM

#### 3:30 PM Differentiation between Tobacco Budworm (Heliothis virescens) and Bollworm (Helicoverpa zea) Eggs at the Organismal Level: New Perspectives

**Roger D. Lawrie**<sup>1</sup>, Kaiying Chen<sup>2</sup>, Jean Marcel Deguenon<sup>1</sup>, Loganathan Ponnusamy<sup>1</sup>, Ryan W Kurtz<sup>3</sup>, DeShae Dillard<sup>4</sup>, Daniela T Pezzini<sup>1</sup>, Dominic Reisig<sup>5</sup>, Nithin M. Ganji<sup>2</sup>, Hannah Burrack<sup>2</sup>, Batool Karim-Delavar<sup>2</sup>, Coby Schal<sup>2</sup>, Rick Santangelo<sup>2</sup> and R. Michael Roe<sup>1</sup>, (1)North Carolina State University, Raleigh, NC, (2)NC State University, Raleigh, NC, (3)Cotton Incorporated, Cary, NC, (4)NC State University, Plymouth, NC, (5)North Carolina State University, Plymouth, NC

#### 3:42 PM Quantifying Imidacloprid Susceptibility in Alabama Populations of Aphis gossypii

**John W. Mahas**<sup>1</sup>, Anders S. Huseth<sup>2</sup> and Alana Lynn Jacobson<sup>1</sup>, (1)Auburn University, Auburn, AL, (2)North Carolina State University, Raleigh, NC

### 3:54 PM Plant-Associated Fungi Effects on Boll Weevil Growth and Survival

Janaina Camara Siqueira da Cunha and Gregory A. Sword, Texas A&M University, College Station, TX

### 4:06 PM Novel Insecticides Support Conservation Biological Control in Cotton

Isadora Bordini<sup>1</sup>, Peter C Ellsworth<sup>1</sup> and Steve Naranjo<sup>2</sup>, (1)University of Arizona, Maricopa, AZ, (2)USDA-ARS, Maricopa, AZ

### 4:18 PM Palmer Amaranth (*Amaranthus palmeri*) and Thrips (*Thrips sp.*) Control with Various Dicamba + Insecticide Tank-Mixes in Cotton

Jacob P. McNeal<sup>1</sup>, Darrin M. Dodds<sup>1</sup>, Brian K. Pieralisi<sup>2</sup>, Jeff Gore<sup>3</sup>, Angus Catchot<sup>1</sup>, Greg R. Kruger<sup>4</sup>, Bradley Norris<sup>1</sup>, John J. Williams<sup>1</sup>, William J Rutland<sup>1</sup> and Steven D. Hall<sup>1</sup>, (1)Mississippi State University, Mississippi State, MS, (2)Mississippi State University, Starkville, MS, (3)Mississippi State University, Stoneville, MS, (4)University of Nebraska - Lincoln, North Platte, NE

### 4:30 PM Frequency of Alleles Confering Resistance to BT Proteins in Helicoverpa Zea in Texas

**Jose Santiago**<sup>1</sup>, Fei Yang<sup>2</sup> and David Kerns<sup>2</sup>, (1)Texas A&M, College Station, TX, (2)Texas A&M University, College Station, TX

#### 4:42 PM Evaluation of Insecticide Seed Treatments in Furrow Irrigated Rice for Control of Rice Billbug, Sphenophorus Pertinax, in Arkansas

**Chase A Floyd**<sup>1</sup>, Gus Lorenz<sup>2</sup>, Nick R. Bateman<sup>3</sup>, Benjamin C Thrash<sup>1</sup>, Nichole Taillon<sup>4</sup>, Garrett Felts<sup>5</sup>, Wes Plummer<sup>6</sup>, Caleb Rice<sup>1</sup> and T. Newkirk<sup>1</sup>, (1) University of Arkansas, Lonoke, AR, (2)The University of Arkansas, Lonoke, AR, (3)University of Arkansas - RREC, Stuttgart, AR, (4)University of Arkansas CES, Lonoke, AR, (5)University of Arkansas- RREC, Stuttgart, AR, (6)UA-CES, Lonoke, AR

# Cotton Quality Measurements Conference

#### COTTON QUALITY MEASUREMENTS -WEDNESDAY EARLY AFTERNOON

#### 1:00 PM-3:00 PM

1:00 PM Introductory Remarks

#### 1:15 PM Partnerships for Data Innovation (PDI) Cotton - Cotton Quality Dashboards

**Christopher D. Delhom**<sup>1</sup>, Holly A King<sup>1</sup>, Neha Kothari<sup>2</sup>, Eric F. Hequet<sup>3</sup>, Carlos B. Armijo<sup>4</sup>, Lindsey Messinger<sup>5</sup>, Grant Zoch<sup>5</sup>, Bruce Vandenberg<sup>5</sup> and Michael D. Buser<sup>6</sup>, (1)USDA-ARS, New Orleans, LA, (2)Cotton Incorporated, Cary, NC, (3)Texas Tech University, Lubbock, TX, (4)USDA-ARS Southwestern Cotton Ginning Research Laboratory, Mesilla Park, NM, (5)USDA-ARS, Fort Collins, CO, (6)USDA Agricultural Research Service, Beltsville, MD

1:30 PM Suitability of US Cotton for Vortex Spinning Eric F. Hequet, Texas Tech University, Lubbock, TX

1:45 PM A Principle Components Study of Yarn Strength in Upland Cotton Alexandra Ullrich, Texas A&M University, COLLEGE STATION, TX

2:00 PM A Comparative Study of the Proposed Mechanisms of Cotton Fiber Yellowing

Michael K. Dowd and Christopher D. Delhom, USDA-ARS, New Orleans, LA

2:15 PM Reliability of Cotton Fiber Length Distributions Measured by Dual-Beard Fibrography and Advanced Fiber Information System Bugao Xu and Jinfeng Zhou, University of North Texas, Denton, TX

2:30 PM Stelometer and High Volume Instrument Strength Measurements of Different Upland Cotton Fibers Yongliang Liu, USDA-ARS, New Orleans, LA

#### 2:45 PM Polymer Blends Involving Cottonseed Protein and Cottonseed Meal

Huai N Cheng<sup>1</sup>, Zhongqi He<sup>1</sup>, Michael K. Dowd<sup>2</sup> and K. Thomas Klasson<sup>1</sup>, (1) USDA Agricultural Research Service, New Orleans, LA, (2)USDA-ARS, New Orleans, LA

# **Cotton Weed Science Research Conference**

#### COTTON WEED SCIENCE RESEARCH - WEDNESDAY EARLY MORNING 8:30 AM-10:00 AM

### 8:30 AM Weed Management and Crop Response Using Isoxaflutole in HPPD Tolerant Cotton

**Delaney C. Foster**<sup>1</sup>, Peter A. Dotray<sup>1</sup>, Corey N. Thompson<sup>2</sup>, Gregory Baldwin<sup>3</sup> and Frederick T. Moore<sup>2</sup>, (1)Texas Tech University, Texas A&M AgriLife Research and Extension Service, Lubbock, TX, (2)BASF, Lubbock, TX, (3)BASF, Durham, NC

### 8:45 AM Tillage, Rotation and Herbicide Input Impact Weed Control in Xtendflex Cotton

Rohith Vulchi<sup>1</sup>, Josh McGinty<sup>2</sup>, Muthu Bagavathiannan<sup>3</sup> and Scott Nolte<sup>3</sup>, (1)Texas A&M University, College Station, College Station, TX, (2)Texas A&M AgriLife Extension Service, Corpus Christi, TX, (3)Texas A&M University, College Station, TX

#### 9:00 AM Economic and Ecological Impact of Integrated Weed Management Strategies on Palmer Amaranth in Cotton

**Rodger B. Farr**<sup>1</sup>, Jason K Norsworthy<sup>1</sup>, Tom Barber<sup>2</sup>, Lawson Priess<sup>1</sup>, Mason Castner<sup>1</sup> and James W Beesinger<sup>1</sup>, (1)University of Arkansas, Fayetteville, AR, (2)University of Arkansas-Extension, Lonoke, AR

#### 9:15 AM Investigating the Numbers: Can We Protect Postemergence Herbicides through a Combination of Preemergence Herbicides, Cover Crops, and Timely Applications?

Taylor M Randell, Jenna C Vance and A. Stanley Culpepper, University of Georgia, Tifton, GA

### 9:30 AM Multiple Exposures of 2,4-D (Enlist One) to Non-Tolerant Cotton

Andrew Cole Blythe<sup>1</sup>, Charlie Cahoon<sup>2</sup>, Larry Steckel<sup>3</sup>, Zack Taylor<sup>4</sup>, Guy D. Collins<sup>5</sup>, W J Everman<sup>4</sup> and Joshua Daniel Joyner<sup>6</sup>, (1)NC State University, Denver, NC, (2)North Carolina State University, Raleigh, NC, (3)University of Tennessee, Jackson, TN, (4)NC State University, Raleigh, NC, (5)North Carolina State University, Rocky Mount, NC, (6)NC State University, Mount Olive, NC

### 9:45 AM Efficacy of Phosphite Fertilization for Weed Suppression in the Ptxd Cotton System

Shilpa Singh<sup>1</sup>, Devendra Pandeya<sup>2</sup>, Keerti Rathore<sup>2</sup>, Kater Hake<sup>3</sup> and Muthukumar V Bagavathiannan<sup>4</sup>, (1)Texas A&M University, College Station, TX, (2)Texas A & M University, College Station, TX, (3)Cotton Incorporated, Cary, NC, (4)Texas A&M University, College Station, TX

#### COTTON WEED SCIENCE RESEARCH - WEDNESDAY LATE MORNING 10:30 AM-12:00 PM

### 10:30 AM 2,4-D Antagonizes Cutleaf Groundcherry (*Physalis Angula-ta* L.) Control by Glyphosate

Joshua Daniel Joyner<sup>1</sup>, Charlie Cahoon<sup>2</sup>, Zack Taylor<sup>3</sup>, W J Everman<sup>3</sup>, Guy D. Collins<sup>4</sup> and Andrew Cole Blythe<sup>5</sup>, (1)NC State University, Mount Olive, NC, (2)North Carolina State University, Raleigh, NC, (3)NC State University, Raleigh, NC, (4)North Carolina State University, Rocky Mount, NC, (5)NC State University, Denver, NC

#### 10:45 AM Does Potassium Borate Reduce Efficacy of Dicamba?

Mason Castner, Jason K Norsworthy, Trenton L Roberts, Rodger B. Farr and Lawson Priess, University of Arkansas, Fayetteville, AR

### 11:00 AM Influence of Palmer Amaranth Size and Nozzle Selection on Glufosinate, Dicamba, and 2,4-D Combinations

James W Beesinger<sup>1</sup>, Jason K. Norsworthy<sup>1</sup>, Thomas R Butts<sup>2</sup> and Leonard B Piveta<sup>1</sup>, (1)University of Arkansas, Fayetteville, AR, (2)University of Arkansas, Lonoke, AR

#### 11:15 AM Cotton Fruiting Response to Low Rates of 2,4-D

Kyle Russell, Texas Tech University, Lubbock, TX, Texas A&M AgriLife Research, Lubbock, TX, Peter A. Dotray, Texas Tech University, Texas A&M AgriLife Research and Extension Service, Lubbock, TX, Irish Lorraine B Pabuayon, Texas Tech University, Lubbock, TX and Glen Ritchie, Department of Plant & Soil Science, Texas Tech University, Lubbock, TX

#### 11:30 AM Effects of Weed Size on Effectiveness of Sequential Applications of Dicamba & Glufosinate

Navdeep Godara, Jason Norsworthy, Lawson Priess, Mason Castner, Rodger B. Farr and Bodie Cotter, University of Arkansas, Fayetteville, AR

#### 11:45 AM Improving Glufosinate By Eliminating Environmental Variability

**Lawson Priess**<sup>1</sup>, Jason K. Norsworthy<sup>1</sup>, Rodger B. Farr<sup>1</sup>, Mason Castner<sup>1</sup>, James W Beesinger<sup>1</sup>, Navdeep Godara<sup>1</sup> and Tom Barber<sup>2</sup>, (1)University of Arkansas, Fayetteville, AR, (2)University of Arkansas-Extension, Lonoke, AR

#### COTTON WEED SCIENCE RESEARCH -WEDNESDAY EARLY AFTERNOON

#### 1:00 PM-3:00 PM

#### 1:00 PM Optimizing Sequential Applications of Dicamba and Glufosinate for the Xtendflex System

Jacob A Fleming<sup>1</sup>, Jason K Norsworthy<sup>1</sup>, Tom Barber<sup>2</sup>, Lawson Priess<sup>1</sup>, Mason Castner<sup>1</sup> and Rodger B. Farr<sup>1</sup>, (1)University of Arkansas, Fayetteville, AR, (2) University of Arkansas-Extension, Lonoke, AR

### 1:15 PM A Beltwide Study to Evaluate Long-Term Impact of Integrated Palmer Amaranth Management Tactics in Cotton

Sarah E. Kezar<sup>1</sup>, Delaney C. Foster<sup>2</sup>, Michael M. Houston<sup>3</sup>, Fernando Oreja<sup>4</sup>, Peter A. Dotray<sup>2</sup>, Jason Norsworthy<sup>3</sup>, Ramon Leon Gonzalez<sup>4</sup>, Gaylon Morgan<sup>5</sup> and Muthukumar V Bagavathiannan<sup>6</sup>, (1)Texas A&M, College Station, TX, (2)Texas Tech University, Texas A&M AgriLife Research and Extension Service, Lubbock, TX, (3)University of Arkansas, Fayetteville, AR, (4)North Carolina State University, Raleigh, NC, (5)Cotton Incorporated, Cary, NC, (6) Texas A&M University, College Station, TX

**1:30 PM** Cotton Tolerance to Non-Labeled Herbicides in Mississippi Zaim Ugljic<sup>1</sup>, Connor Ferguson<sup>1</sup>, Daniel B. Reynolds<sup>1</sup>, Brian K. Pieralisi<sup>2</sup>, Darrin M. Dodds<sup>1</sup> and Gaylon Morgan<sup>3</sup>, (1)Mississippi State University, Mississippi State, MS, (2)Mississippi State University, Starkville, MS, (3)Cotton Incorporated, Cary, NC

**1:45 PM** Where Does Isoxaflutole Fit into Cotton Weed Management? Charlie Cahoon<sup>1</sup>, Joshua Daniel Joyner<sup>2</sup>, Guy D. Collins<sup>3</sup>, W J Everman<sup>4</sup>, Andrew Cole Blythe<sup>5</sup> and Zack Taylor<sup>4</sup>, (1)North Carolina State University, Raleigh, NC, (2)NC State University, Mount Olive, NC, (3)North Carolina State University, Rocky Mount, NC, (4)NC State University, Raleigh, NC, (5)NC State University, Denver, NC

### 2:00 PM Cotton Tolerance to Dimethenamid-P, S-Metolachlor, and Acetochlor Preemergence and in Replant Situations

Lavesta C. Hand, Jenna C Vance and A. Stanley Culpepper, University of Georgia, Tifton, GA

# **Sustainability**

#### COTTON SUSTAINABILITY - WEDNESDAY EARLY MORNING 8:30 AM-10:00 AM

8:30 AM U.S. Cotton Trust Protocol Is Now Launched! an Update from Gary Adams Gary Adams, National Cotton Council, Cordova, TN

8:50 AM Hear from Our Customers: How the Trust Protocol Will Help Fuel Demand for US Cotton (Panel Discussion) Jesse Daystar, Cotton Incorporated, Cary, NC

9:25 AM Hear from the Experts: Sustainable Fiber Matters (Panel Discussion) Andrew Jordan, Jordan Associates Ag and Bio Engineering Services, Cordova, TN

#### COTTON SUSTAINABILITY - WEDNESDAY LATE MORNING 10:30 AM-12:00 PM

10:30 AM Grower Enrollment: A Short Tutorial on How to Enroll Growers in the US Cotton Trust Protocol Ken Burton, National Cotton Council, Cordova, TN

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#### 10:50 AM Hear Direct from Protocol Growers: Benefits to Participant Growers (Panel Discussion) Steven Pires, Cotton Incorporated, Cary, NC

11:25 AM Field to Market and the Cotton Trust Protocol: Partnering to Measure and Advance the Sustainability of US Cotton Rod Snyder, Field to Market, Washington, DC, DC

#### COTTON SUSTAINABILITY - WEDNESDAY EARLY AFTERNOON 1:00 PM-3:00 PM

1:00 PM US Cotton Trust Protocol Verification Procedures: Update from the 2019 Pilot Phase Robert Demianew, Control Union, Plantation, FL

1:30 PM Q&A with the U.S. Cotton Trust Protocol: Your Chance to Ask Questions

Jesse Daystar, Cotton Incorporated, Cary, NC

2:00 PM Sustainability Matters to US Cotton Gary Adams, National Cotton Council, Cordova, TN

#### COTTON SUSTAINABILITY - WEDNESDAY LATE AFTERNOON 3:30 PM-5:00 PM

3:30 PM Textile Exchange Climate+ Strategy and Impact Incentive Overview

La Rhea Pepper, Textile Exchange, Lander, WY

4:00 PM US Cotton and the Conscientious Consumer: Why Brands Must Now Prove Sustainability, and How Verified Growers Are Leading the Way (Panel Discussion)

April Kappler, Better Cotton Initiative, London, United Kingdom

#### 4:40 PM Organic Cotton: Production and Market Trends in the U.S. and Globally Sandra Marguardt Taxtile Exchange Silver Spring MD

Sandra Marquardt, Textile Exchange, Silver Spring, MD

# Cotton Agronomy, Physiology & Soil Conference

#### COTTON AGRONOMY, PHYSIOLOGY & SOILS -THURSDAY EARLY MORNING

#### 8:00 AM-10:00 AM

8:00 AM A Meta-Analysis of Cotton Response to Plant Growth Regulators from the Scott Learning Center - 2011-2020 Jay Mahaffey, Blake Edwards, Scott Horton and Joseph Cummins, Bayer Crop Science, Scott, MS

### 8:15 AM Soil Health Conditions Under Cotton Production in North Carolina

Alan J Franzluebbers, USDA-ARS, Raleigh, NC

### 8:30 AM Initial Effect of Cover Crop Species and Seeding Rate on Texas Dryland Cotton Production

Paul DeLaune<sup>1</sup>, Emi Kimura<sup>2</sup>, Katie L. Lewis<sup>3</sup>, Charles Coufal<sup>1</sup> and Anthony Pennartz<sup>1</sup>, (1)Texas A&M AgriLife Research, Vernon, TX, (2)Texas A&M AgriLife Research and Extension Service, Vernon, TX, (3)Texas A&M AgriLife Research and Extension Center, Lubbock, TX

8:45 AM Cotton Yield Response to Nitrogen Rates in Long-Term Conventional- and Conservation-Tillage Plots in Georgia Glendon Harris, University of Georgia, Tifton, GA

#### 9:00 AM Greenhouse Gas Emissions and Nitrogen Dynamics in Texas High Plains Cotton

Christopher Cobos, Texas A&M AgriLife Research, Lubbock, TX, Katie L. Lewis, Texas A&M AgriLife Research and Extension Center, Lubbock, TX, Mark McDonald, Texas Tech University, Department of Plant and Soil Science, Lubbock, TX and Paul DeLaune, Texas A&M AgriLife Research, Vernon, TX

#### 9:15 AM Evaluation of the Effects of Winter Wheat Cover Crop on Soil Health in Cotton Production Systems of the Texas Rolling Plains

Sushil Kumar Himanshu<sup>1</sup>, Srinivasulu Ale<sup>1</sup>, Jasdeep Singh<sup>1</sup>, Paul De-Laune<sup>1</sup> and Edward M. Barnes<sup>2</sup>, (1)Texas A&M AgriLife Research, Vernon, TX, (2)Cotton Incorporated, Cary, NC

#### COTTON AGRONOMY, PHYSIOLOGY & SOILS -THURSDAY LATE MORNING

#### 10:30 AM-12:00 PM

#### 10:30 AM Impact of Nitrogen Fertilizer Sources on Ammonia Volatilization and Lint Yield in an Unirrigated Cotton Field

Nutifafa Adotey, University of Tennessee, Jackson, TN and Tyson B Raper, University of Tennessee, Jackson, TN

#### 10:45 AM Optimizing Nitrogen Management across Cotton Cropping Systems

Katie L. Lewis, Texas A&M AgriLife Research and Extension Center, Lubbock, TX, J. Wayne Keeling, Texas A&M AgriLife Research Center, Lubbock, TX, Paul DeLaune, Texas A&M AgriLife Research, Vernon, TX, Joseph Alan Burke, Texas A&M University, College Station, TX, Amee Bumguardner, Texas Tech University, Lubbock, TX and Christopher Cobos, Texas A&M AgriLife Research, Lubbock, TX

### 11:00 AM Soil Potassium Dynamics of Upland Cotton: A Three Year Study

Hunter Frame<sup>1</sup>, Gaylon Morgan<sup>2</sup>, Darrin M. Dodds<sup>3</sup>, Randy Norton<sup>4</sup>, Katie L. Lewis<sup>5</sup>, Michael A. Jones<sup>6</sup>, Tyson B Raper<sup>7</sup>, Robert L. Nichols<sup>2</sup>, Bill Robertson<sup>8</sup> and Andrea S. Jones<sup>9</sup>, (1)Virginia Polytechnic Institute & State University, Blacksburg, VA, (2)Cotton Incorporated, Cary, NC, (3)Mississippi State University, Mississippi State, MS, (4)University of Arizona, Safford, AZ, (5)Texas A&M AgriLife Research Center, Lubbock, TX, (6)Clemson University, Florence, SC, (7)University of Tennessee, Jackson, TN, (8)University of Arkansas, Newport, AR, (9)University of Missouri, Portageville, MO

#### 11:15 AM Soil Organic C and N Fractions and Chemical Properties across a Diversity of Cotton Nitrogen Trials in 2020

Alan J Franzluebbers<sup>1</sup>, Richard L. Haney<sup>2</sup>, Tyson B Raper<sup>3</sup>, Brian K. Pieralisi<sup>4</sup>, Gaylon Morgan<sup>5</sup>, Calvin D Meeks<sup>6</sup>, Benjamin M. McKnight<sup>7</sup>, Murilo Maeda<sup>8</sup>, Katie L. Lewis<sup>9</sup>, Julie A. Howe<sup>10</sup>, James W. Heiser<sup>6</sup>, Hunter Frame<sup>11</sup>, Bhupinder S. Farmaha<sup>12</sup> and Brian Arnall<sup>13</sup>, (1)USDA-ARS, Raleigh, NC, (2)USDA-ARS, Temple, TX, (3)University of Tennessee, Jackson, TN, (4)Mississippi State University, Starkville, MS, (5)Cotton Incorporated, Cary, NC, (6)University of Missouri, Portageville, MO, (7)Texas A&M University, College Station, TX, (8) Texas A&M AgriLife Extension, Lubbock, TX, (9)Texas A&M AgriLife Research and Extension Center, Lubbock, TX, (10)Texas AgriLife Research, College Station, TX, (11)Virginia Polytechnic Institute & State University, Blacksburg, VA, (12)Clemson University, Blackville, SC, (13)Oklahoma State University, Stillwater, OK

#### 11:30 AM Evaluation of Cotton Yield Response to Nitrogen Fertilizer Application across the US Cotton Belt

Bhupinder S. Farmaha<sup>1</sup>, Brian Arnall<sup>2</sup>, Hunter Frame<sup>3</sup>, Alan J Franzluebbers<sup>4</sup>, Richard L. Haney<sup>5</sup>, James W. Heiser<sup>6</sup>, Julie A. Howe<sup>7</sup>, Katie L. Lewis<sup>8</sup>, Murilo Maeda<sup>9</sup>, Benjamin M. McKnight<sup>10</sup>, Calvin D Meeks<sup>6</sup>, Gaylon Morgan<sup>11</sup>, Brian K. Pieralisi<sup>12</sup> and Tyson B Raper<sup>13</sup>, (1)Clemson University, Blackville, SC, (2)Oklahoma State University, Stillwater, OK, (3)Virginia Polytechnic Institute & State University, Blacksburg, VA, (4)USDA-ARS, Raleigh, NC, (5)USDA-ARS, Temple, TX, (6)University of Missouri, Portageville, MO, (7)Texas AgriLife Research, College Station, TX, (8)Texas A&M AgriLife Research and Extension Center, Lubbock, TX, (9)Texas A&M AgriLife Extension, Lubbock, TX, (10)Texas A&M University, College Station, TX, (11)Cotton Incorporated, Cary, NC, (12)Mississippi State University, Starkville, MS, (13)University of Tennessee, Jackson, TN

#### 11:45 AM Twenty Years of Cotton Nitrogen Management and Cycling Trials in Texas and Arizona: What Have We Learned? Kevin F. Bronson, USDA-ARS, Maricopa, AZ

# **Cotton Ginning Conference**

#### COTTON GINNING - THURSDAY EARLY MORNING

#### 8:00 AM-10:00 AM

### 8:00 AM Assuring Cotton Quality from Field to Mill- the Importance of an Integrated Approach

Marinus H.J van der Sluijs, Textile Technical Services, Geelong, VIC, Australia

#### 8:15 AM New Product Developments from Lummus

Mark D. Cory, Lummus Ag Technology, Savannah, GA and Ross D. Rutherford, Lummus Ag Technology, Lubbock, TX

### 8:30 AM Improving Energy Efficiency in Seed Cotton Conveying and Drying

Sunil Kumar, Robert G. Hardin and Maria D. King, Texas A&M University, College Station, TX

### 8:45 AM Design of a Plastic Removal System for a Cotton Gin Module Feeder

**Adeyemi Adeleke**<sup>1</sup>, Robert G. Hardin<sup>1</sup> and Mathew G. Pelletier<sup>2</sup>, (1)Texas A&M University, College Station, TX, (2)USDA-ARS Cotton Production and Processing Research Unit, Lubbock, TX

**9:00** AM Measurement of Emission Factors for Cotton Gin Trash Piles Garrett Shaw<sup>1</sup>, Maria D. King<sup>1</sup>, J. Kelley Green<sup>2</sup>, Derek P. Whitelock<sup>3</sup> and John D Wanjura<sup>4</sup>, (1)Texas A&M University, College Station, TX, (2)Texas Cotton Ginners Association, Austin, TX, (3)USDA-ARS Southwestern Cotton Ginning Research Laboratory, Mesilla Park, NM, (4)USDA-ARS Cotton Production and Processing Research Unit, Lubbock, TX

#### 9:15 AM Round Modules: Handling Logistics and Cover Damage, 2nd Year

**Md Zafar Iqbal**<sup>1</sup>, Robert G. Hardin<sup>1</sup>, Tianyi Wang<sup>2</sup>, Jason K Ward<sup>3</sup> and John D. Wanjura<sup>4</sup>, (1)Texas A&M University, College Station, TX, (2)Texas A&M AgriLife Research, Dallas, TX, (3)NC State University, Raleigh, NC, (4)USDA-ARS Cotton Production and Processing Research Unit, Lubbock, TX

# Cotton Insect Research and Control Conference

COTTON INSECT RESEARCH & CONTROL CONFERENCE -THURSDAY MORNING

#### 9:00 AM-12:00 PM

#### 9:00 AM Cotton Yield Response to Simulated Cotton Fleahopper and Western Tarnished Plant Bug Infestations as Influenced by Irrigation Level

**Dol P. Dhakal**, Abdul Hakeem, J. Wayne Keeling and Megha N. Parajulee, Texas A&M AgriLife Research Center, Lubbock, TX

9:15 AM Three Years of ThyrvOn<sup>™</sup> Technology Timothy Dabbert, Bayer Crop Science, Creve Couer, MO

### 9:30 AM Shaping the Future of Cotton Insect Pest Management Together

Waseem Akbar, Aqeel Ahmad, Jason W Stelzer, Scott Bollman and Michael Grosz, Bayer Company, Chesterfield, MO

#### 9:45 AM Managing Early Versus Late Season Insects in Limited Irrigation Cotton

Megha N. Parajulee<sup>1</sup>, Abdul Hakeem<sup>1</sup>, Dol P. Dhakal<sup>1</sup>, Suhas Vyavhare<sup>2</sup>, Michael Toews<sup>3</sup>, Donna McCallister<sup>1</sup> and Katie L. Lewis<sup>1</sup>, (1)Texas A&M AgriLife Research Center, Lubbock, TX, (2)Texas A&M AgriLife Extension Service, Lubbock, TX, (3)University of Georgia, Tifton, GA

#### 10:00 AM Interactions of Nitrogen Fertilizer, Cotton Seeding Rate, and Late Season Insecticide for Tarnished Plant Bug Control in Midsouth Cotton.

Tina Gray Teague<sup>1</sup>, N. Ray Benson<sup>2</sup>, Andrew J. Baker<sup>3</sup>, Amanda M. Mann<sup>3</sup> and John W. Nowlin<sup>4</sup>, (1)Ark State Univ / Univ Ark Agri Exp Sta, State University, AR, (2)University of Arkansas Coop Extension Service, Little Rock, AR, (3)University of Arkansas System Division of Agriculture, State University, AR, (4)Arkansas State University, State University, AR

#### 10:15 AM Monitoring Population Dynamics of Aphids across the Cotton Belt

Alana Lynn Jacobson<sup>1</sup>, Charles Ray<sup>1</sup>, Phillip Roberts<sup>2</sup>, Michael Toews<sup>2</sup>, Jeremy Greene<sup>3</sup>, Anders S. Huseth<sup>4</sup>, George G. Kennedy<sup>4</sup>, Sally Taylor<sup>5</sup>, Silvana Paula-Moraes<sup>6</sup>, Sebe Brown<sup>7</sup>, Jeff Gore<sup>8</sup>, Whitney Crow<sup>8</sup>, Scott D. Stewart<sup>9</sup>, David Kerns<sup>10</sup>, Suhas Vyavhare<sup>11</sup>, Scott H. Graham<sup>12</sup>, Ron Smith<sup>1</sup> and Katelyn Kesheimer<sup>1</sup>, (1)Auburn University, Auburn, AL, (2)University of Georgia, Tifton, GA, (3)Clemson University, Blackville, SC, (4)North Carolina State University, Raleigh, NC, (5)Virginia Tech University, Suffolk, VA, (6)University of Florida, Jay, FL, (7)LSU AgCenter, Winsboro, LA, (8)Mississippi State University, Stoneville, MS, (9)The University of Tennessee, Jackson, TN, (10) Texas A&M University, College Station, TX, (11)Texas A&M AgriLife Extension Service, Lubbock, TX, (12)Auburn University, Auburn University, AL

#### 10:30 AM Cotton Aphid Insecticide Efficacy in the Southeast: A Two Year Summary

**Phillip Roberts**<sup>1</sup>, Michael Toews<sup>1</sup>, Sally Taylor<sup>2</sup>, Dominic Reisig<sup>3</sup>, Anders S. Huseth<sup>4</sup>, Francis Reay-Jones<sup>5</sup>, Jeremy Greene<sup>6</sup>, Silvana Paula-Moraes<sup>7</sup>, Alana Lynn Jacobson<sup>8</sup>, Scott Graham<sup>8</sup> and Ron Smith<sup>8</sup>, (1)University of Georgia, Tifton, GA, (2)Virginia Tech University, Suffolk, VA, (3)North Carolina State University, Plymouth, NC, (4)North Carolina State University, Raleigh, NC, (5) Clemson University, Florence, SC, (6)Clemson University, Blackville, SC, (7) University of Florida, Jay, FL, (8)Auburn University, Auburn, AL

#### 10:45 AM Honey Bees Experience Forage Opportunities and Pesticide Exposure in a Row Crop Environment

**Sally Taylor**, Virginia Tech University, Suffolk, VA, Margaret Couvillon, Virginia Polytechnic Institute and State University, Blacksburg, VA and Roger Schurch, Virginia Tech, Blacksburg, VA

#### 11:00 AM Benefits of a Native Bee Pollinator Melissodes Tepaneca (Hymenoptera: Apidae) on Cotton Yield

Isaac L. Esquivel and Michael J. Brewer, Texas A&M AgriLife Research, Department of Entomology, Corpus Christi, TX

#### 11:15 AM Comparison of Sentinel-2, Landsat, and Airborne Imagery for Early Identification of Cotton Fields for Boll Weevil Eradication Chenghai Yang, USDA-ARS, College Station, TX and Charles P.-C. Suh, USDA-ARS ICCDRU, College Station, TX

### 11:30 AM A Comparison of Tools for Documenting the Demography of Boll Weevil Reinfestations

**Lindsey C Perkin**<sup>1</sup>, Charles P.-C. Suh<sup>1</sup>, Tyler Jay Raszick<sup>2</sup> and Gregory A. Sword<sup>2</sup>, (1)USDA-ARS ICCDRU, College Station, TX, (2)Texas A&M University, College Station, TX

#### 11:45 AM Development Toward Rapid Diagnostic Tools for Boll Weevil Identification and Source Estimation

**Tyler Jay Raszick**<sup>1</sup>, Lindsey C Perkin<sup>2</sup>, Alejandra Godoy<sup>3</sup>, Raul Ruiz-Arce<sup>3</sup>, Charles P.-C. Suh<sup>2</sup>, Xanthe A. Shirley<sup>4</sup> and Gregory A. Sword<sup>1</sup>, (1)Texas A&M University, College Station, TX, (2)USDA-ARS ICCDRU, College Station, TX, (3)USDA-APHIS, Edinburg, TX, (4)USDA-APHIS, College Station, TX

#### COTTON INSECT RESEARCH & CONTROL CONFERENCE -THURSDAY EARLY AFTERNOON

#### 1:00 PM-2:45 PM

#### 1:00 PM Influence of Planting Date on Bollworm Incidence and Damage in Cotton

**Dominic Reisig**, North Carolina State University, Plymouth, NC, Jeremy Greene, Clemson University, Blackville, SC, Phillip Roberts, University of Georgia, Tifton, GA and Sally Taylor, Virginia Tech University, Suffolk, VA

1:15 PM What Ever Happened to Old World Bollworm Invasion of the US? Gregory A. Sword and Zhen Fu, Texas A&M University, College Station, TX

### 1:30 PM Partnerships for Data Innovation (PDI) Cotton - the Potential for Entomological Data Collection and Aggregation

Ryan W Kurtz<sup>1</sup>, Edward M. Barnes<sup>1</sup>, Gaylon Morgan<sup>1</sup>, Tina Gray Teague<sup>2</sup>, Christopher D. Delhom<sup>3</sup>, Michael D. Buser<sup>4</sup>, Mauricio Ulloa<sup>5</sup> and James R. Mahan<sup>6</sup>, (1)Cotton Incorporated, Cary, NC, (2)Ark State Univ / Univ Ark Agri Exp Sta, State University, AR, (3)USDA-ARS, New Orleans, LA, (4)USDA Agricultural Research Service, Beltsville, MD, (5)USDA-ARS, PA, CSRL, Plant Stress and Germplasm Development Research, Lubbock, TX, (6)USDA/ARS, Lubbock, TX

#### 1:45 PM Effectiveness of Insecticide Oversprays for Control of Bollworm and Stink Bugs on Bt Cotton Technology in South Carolina

Jeremy Greene<sup>1</sup>, Francis Reay-Jones<sup>2</sup>, Dan Robinson<sup>1</sup> and Katie Seavey<sup>1</sup>, (1) Clemson University, Blackville, SC, (2)Clemson University, Florence, SC

#### 2:00 PM Genomic Mechanisms for the Evolution of Bt/Insecticide Resistance in US Cotton Bollworms: Humans to Insects

**R. Michael Roe**<sup>1</sup>, Roger D Lawrie<sup>1</sup>, Robert D. Mitchell III<sup>1</sup>, Jean Marcel Deguenon<sup>1</sup>, Loganathan Ponnusamy<sup>1</sup>, Dominic Reisig<sup>2</sup>, Alejandro Del Pozo-Valdivia<sup>3</sup> and Ryan W Kurtz<sup>4</sup>, (1)North Carolina State University, Raleigh, NC, (2) North Carolina State University, Plymouth, NC, (3)University of California Cooperative Extension & UC Statewide IPM Program, Salinas, CA, (4)Cotton Incorporated, Cary, NC

#### 2:15 PM Managing Wireworms in Texas High Plains Cotton

Suhas Vyavhare, Texas A&M AgriLife Extension Service, Lubbock, TX and Blayne Reed, Texas A&M AgriLife Extension, Plainview, TX

#### 2:30 PM Insect Pest Management in Texas Cotton

**Abdul Hakeem**<sup>1</sup>, Megha N. Parajulee<sup>1</sup> and Dol P. Dhakal<sup>2</sup>, (1)Texas A&M AgriLife Research and Extension Center, Lubbock, TX, (2)Texas A&M AgriLife Research Center, Lubbock, TX

#### COTTON INSECT RESEARCH & CONTROL CONFERENCE -THURSDAY LATE AFTERNOON

#### 3:00 PM-5:00 PM

#### 3:00 PM Cotton Insect Research and Control Conference Business Meeting and Awards

Jeff Gore, Mississippi State University, Stoneville, MS and Nathan S. Little, USDA-ARS SIMRU, Stoneville, MS

# Cotton Weed Science Research Conference

COTTON WEED SCIENCE RESEARCH - GRADUATE STUDENT AWARDS

9:00 AM-9:30 AM

# **Sustainability**

#### COTTON SUSTAINABILITY - THURSDAY EARLY MORNING

#### 8:30 AM-10:00 AM

8:30 AM Distinguished Lecture: Transitioning Food and Agricultural Systems to Circular Economies Jim Jones, University of Florida, Gainesville, FL

#### 9:00 AM International Standards Organization TC323 Update: Defining a Standard in Circularity Michele Wallace, Cotton Inc., Cary, NC

9:30 AM Contributions of the Apparel Industry to Plastic Leakage Sophie Chalumeau, Quantis, Lausanne, Switzerland

#### COTTON SUSTAINABILITY - THURSDAY LATE MORNING 10:30 AM-12:00 PM

**10:30 AM Sustainability Metrics Research and Development Allison Thomson**, Field to Market, Washington, DC, DC

10:45 AM Evaluating and Working to Improve Georgia Cotton and Peanut Sustainability Practices Using the Fieldprint Calculator Kaylyn Groce and Wesley M Porter, University of Georgia, Tifton, GA

11:00 AM Field-Scale Greenhouse Gas Emissions: Significance of Cover Cropping and Soil Methane Sequestration

Nithya Rajan<sup>1</sup>, Sk. Musfiq-Us- Salehin<sup>1</sup> and Kenneth Casey<sup>2</sup>, (1)Texas A&M University, College Station, TX, (2)Texas A&M Agrilife Research, Amarillo, TX

### 11:15 AM Impacts of Conservation Practices and Irrigation on Greenhouse Gas Emissions in Mid-South Cotton

Arlene Adviento AdvientoBorbe, DWMRU USDA-ARS, State University, AR, **Sandhya Karki**, University of Arkansas, Jonesboro, AR, Michele L. Reba, USDA-ARS, Jonesboro, AR and Tina Gray Teague, Ark State Univ / Univ Ark Agri Exp Sta, State University, AR

# Cotton Agronomy, Physiology & Soil Conference

### COTTON AGRONOMY, PHYSIOLOGY & SOILS CONFERENCE POSTERS

### Comparison of on-Board Harvester Scale Systems to Ground Scale Systems in Cotton Yield Measurements

**Guy D. Collins**<sup>1</sup>, Keith L. Edmisten<sup>2</sup>, Mitch K Williams<sup>3</sup>, Charlie Cahoon<sup>2</sup> and Lori Unruh Snyder<sup>2</sup>, (1)NC State University, Rocky Mount, NC, (2)North Carolina State University, Raleigh, NC, (3)North Carolina State University, Sanford, NC

#### Effects of Handling of Cotton Seed on Stand Establishment and Crop Yield

Dalton E Barber, Steven M Brown and Jenny Koebernick, Auburn University, Auburn, AL

### Preliminary Results for 48-Inch Row Spacing in Cotton in South Alabama

Steven M Brown and Dalton E Barber, Auburn University, Auburn, AL

#### Preliminary Results for Seeding Rate Studies in Cotton in South Alabama

Steven M Brown and Dalton E Barber, Auburn University, Auburn, AL

## Evaluation of Cotton in Large-Plot on-Farm Variety Testing in Arkansas for 2020

Bill Robertson, Joe McAlee, Amanda Free and Whitney Haigwood, University of Arkansas, Newport, AR

**Evaluation of Cotton Yield to in-Season Soil Applied Potassium Bill Robertson**, Amanda Free, Joe McAlee and Whitney Haigwood, University of Arkansas, Newport, AR

# Greenhouse Gas Emissions, Soil Moisture and Temperature Dynamics with Different Cover Crops in Organic Cotton

Sk. Musfiq-Us- Salehin<sup>1</sup>, Nithya Rajan<sup>1</sup>, Kenneth Casey<sup>2</sup>, Peter Tomlinson<sup>3</sup>, Jake Mowrer<sup>4</sup> and Muthu Bagavathiannan<sup>1</sup>, (1)Texas A&M University, College Station, TX, (2)Texas A&M Agrilife Research, Amarillo, TX, (3)Kansas State University, Manhattan, KS, (4)Texas A&M AgriLife Extension Service, College Station, TX

# Cotton Maturity and Yield Response to Various Irrigation Schedules in the Oklahoma Panhandle

Andrea J Althoff<sup>1</sup>, Bradley R. Wilson<sup>1</sup>, Cayden B. Catlin<sup>1</sup>, Jason Warren<sup>1</sup>, Sumit Sharma<sup>2</sup>, Cameron Murley<sup>2</sup>, Randy Norton<sup>3</sup> and Seth A. Byrd<sup>1</sup>, (1)Oklahoma State University, Stillwater, OK, (2)Oklahoma State University, Goodwell, OK, (3)University of Arizona, Safford, AZ

### Comparison of Multiple and Single Pass Harvest Systems Effect on Cotton Yield and Fiber Quality

James A. Griffin<sup>1</sup>, Gaylon Morgan<sup>2</sup>, Robert G. Hardin<sup>3</sup>, Emi Kimura<sup>4</sup>, John L. Snider<sup>5</sup>, Tyson B Raper<sup>6</sup> and Edward M. Barnes<sup>2</sup>, (1)Texas A&M Cotton Extension, College Station, TX, (2)Cotton Incorporated, Cary, NC, (3)Texas A&M University, College Station, TX, (4)Texas A&M AgriLife Research and Extension Service, Vernon, TX, (5)University of Georgia, Tifton, GA, (6)University of Tennessee, Jackson, TN

### Effect of Temperature Extremes on Seedling Growth and Photosynthetic Performance of Different Cotton Genotypes

Gurpreet Virk, John L. Snider and Peng Chee, University of Georgia, Tifton, GA

# Nitrogen and Cover Crop Effects on Yield and Fiber Quality of Irrigated Cotton

Ruixiu Sui and Jonnie L. Baggard, USDA-ARS, Stoneville, MS

### Optimizing Cover Crop Overseeding for Continuous Cotton in the Mississippi Delta

Gurpreet Kaur and Gurbir Singh, Mississippi State University, Stoneville, MS

### Yield Partitioning Effects of Low-Rate Auxin Applications on Sensitive Cotton

Savana D Denton<sup>1</sup>, Tyson B Raper<sup>1</sup>, Darrin M. Dodds<sup>2</sup>, Chris L Main<sup>3</sup> and Freeman Brown<sup>1</sup>, (1)University of Tennessee, Jackson, TN, (2)Mississippi State University, Mississippi State, MS, (3)PhytoGen, Medina, TN

### Replicated Agronomic Cotton Evaluation (RACE) Trial in the Rolling Plains of Texas-2020

Jonathan H. Ramirez<sup>1</sup>, Emi Kimura<sup>1</sup> and Paul DeLaune<sup>2</sup>, (1)Texas A&M AgriLife Research and Extension Service, Vernon, TX, (2)Texas A&M AgriLife Research, Vernon, TX

## 2020 Texas Upper Gulf Coast Replicated Agronomic Cotton Evaluation (RACE) - Trial Summary

**Dale A. Mott**<sup>1</sup>, Ben McKnight<sup>2</sup>, Aaron Sumrall<sup>3</sup>, Corrie Bowen<sup>4</sup>, Kate Harrell-Crumley<sup>4</sup>, Laramie Naumann<sup>5</sup> and Mike Hiller<sup>6</sup>, (1)Texas A&M AgriLife Extension Service, College Station, TX, (2)Texas A&M University, College Station, TX, (3)Texas A&M AgriLife Extension Service, Bay City, TX, (4)Texas A&M AgriLife Extension Service, Wharton, TX, (5)Texas A&M AgriLife Extension Service, Columbus, TX, (6)Texas A&M Agrilife Extension Service, Edna, TX

### Effect of Temperature Fluctuations on Early Season Growth and Development of Cotton (Gossypium hirsutum)

Harsimran Kaur Kapoor, Texas Tech University, Lubbock, TX

## Cotton Phenotyping and Physiological Monitoring with a Simple Proximal Remote Sensing System

Curtis B. Adams, Texas A&M AgriLife Research, Vernon, TX, **Glen Ritchie**, Department of Plant & Soil Science, Texas Tech University, Lubbock, TX and Nithya Rajan, Texas A&M University, College Station, TX

### Cotton Production: Plant Growth Regulators Management Under Rainfed and Irrigation Conditions

Kurt Wedegaertner, Avat Shekoofa, Kendall Sheldon, Sam Purdom, Tyson B Raper and Freeman Brown, University of Tennessee, Jackson, TN

### Variable Rate Seeding in Cotton

Michael T. Plumblee, Kendall R. Kirk and Tyler S. Soignier, Clemson University, Blackville, SC

#### Demonstration and Evaluation of Cotton Module Traceability and on-Machine Module Weighing Capabilities

**Michael T. Plumblee**<sup>1</sup>, Kendall R. Kirk<sup>1</sup>, Tyler S. Soignier<sup>1</sup> and Edward M. Barnes<sup>2</sup>, (1)Clemson University, Blackville, SC, (2)Cotton Incorporated, Cary, NC

## Evaluating Variety Placement in Cotton Using Precision Multi-Variety Planting Technologies

Julianna B. Corbin, Michael T. Plumblee, Kendall R. Kirk and Tyler S. Soignier, Clemson University, Blackville, SC

# Evaluating Various Soil Moisture Sensor Thresholds in Cotton in South Carolina

Wendy Buchanan<sup>1</sup>, Michael T. Plumblee<sup>1</sup>, Kendall R. Kirk<sup>1</sup>, Cal Sawyer<sup>2</sup>, Gilbert A. Miller<sup>1</sup> and Tyler S. Soignier<sup>1</sup>, (1)Clemson University, Blackville, SC, (2)Clemson University, Clemson, SC Cotton Leaf Mn Concentration and Lint Yield in Acidic Soils Haile Tewolde and Johnie N. Jenkins, USDA-ARS, Mississippi State, MS

#### **Evaluation of Cotton Varieties on-Farm in Florida**

**Ethan Carter**, University of Florida Jackson County, Marianna, FL, Libbie Johnson, University of Florida Escambia County, Cantonment, FL, David L. Wright, University of Florida, Quincy, FL and Drew Schrimsher, Auburn University, Auburn University, AL

#### Validation of UAV Estimates of Canopy Height and Boll Count with Manual Measurements for Two Cotton Cultivars

Srinivasulu Ale<sup>1</sup>, Sushil Kumar Himanshu<sup>1</sup>, Sayantan Samanta<sup>2</sup>, Anjin Chang<sup>3</sup>, JungJin Kim<sup>4</sup>, James P. Bordovsky<sup>5</sup>, Jinha Jung<sup>6</sup> and Edward M. Barnes<sup>7</sup>, (1) Texas A&M AgriLife Research, Vernon, TX, (2)Texas A&M University, College Station, TX, (3)Texas A&M University - Corpus Christi, Corpus Christi, TX, (4) Seoul National University of Science and Technology, Seoul, Korea, Republic of (South), (5)Texas A&M AgriLife Research Center, Lubbock, TX, (6)Purdue University, West Lafayette, IN, (7)Cotton Incorporated, Cary, NC

## The Effect of Nitrogen Rate on Uptake and Partitioning and Reniform Nematode Reproduction in Gossypium hirsutum.

**Daryl Chastain**, Mississippi State University, Stoneville, MS, John L. Snider, University of Georgia, Tifton, GA, Alvaro Sanz-Saez, Auburn University, Auburn, AL and Reuben K Alawode, Mississippi State University, Delta Research and Extension Center, Greenville, MS

### Last Effective Bloom Date for Cotton in Georgia

Brian W. Hayes, University of Georgia Cooperative Extension, Camilla, GA

### Effect of Cotton Seed Size and Seeding Rate on Cotton Growth, Development and Yield

Steven D. Hall<sup>1</sup>, Darrin M. Dodds<sup>1</sup>, Brian K. Pieralisi<sup>2</sup>, Bradley Norris<sup>1</sup>, William J Rutland<sup>1</sup>, Jacob P. McNeal<sup>1</sup>, John J. Williams<sup>1</sup> and Tyson B Raper<sup>3</sup>, (1)Mississippi State University, Mississippi State, MS, (2)Mississippi State University, Starkville, MS, (3)University of Tennessee, Jackson, TN

### **Refinement of Cotton Nitrogen Use Recommendations in Texas**

Joshua M Doria, Texas A&M AgriLife Research, College Station, TX, Julie A. Howe, Texas AgriLife Research, College Station, TX, Gaylon Morgan, Cotton Incorporated, Cary, NC and Benjamin M. McKnight, Texas A&M University, College Station, TX

### Photosynthetic Cold Acclimation in Cotton Seedlings

John L. Snider<sup>1</sup>, Cristiane Pilon<sup>1</sup>, Wei Hu<sup>2</sup>, Haimiao Wang<sup>1</sup>, Viktor Tishchenko<sup>3</sup>, William Slaton<sup>4</sup> and Daryl Chastain<sup>5</sup>, (1)University of Georgia, Tifton, GA, (2)Nanjing Agricultural University, Nanjing, China, (3)University of Georgia, Griffin, GA, (4)University of Central Arkansas, Conway, AR, (5)Mississippi State University, Stoneville, MS

2020 Cotton Variety and Agronomy Evaluation in Northeast Texas David R. Drake, Texas A&M AgriLife Extension Service, Commerce, TX, Amy D. Braley, Texas A&M - Commerce, Commerce, TX and Scott Stewart, Texas A&M University - Commerce, Commerce, TX

### **Right Balance of Macros and Micros in Modern Cotton Cultivars**

Irish Lorraine B Pabuayon<sup>1</sup>, Katie L. Lewis<sup>2</sup> and Glen Ritchie<sup>1</sup>, (1)Texas Tech University, Lubbock, TX, (2)Texas A&M AgriLife Research and Extension Center, Lubbock, TX

### Impact of Soil Acidity on Cotton Production

Raedan L Sharry, Vaughn L Reed, Bronc Finch, Michaela Smith, Joao Bigatao Souza, Seth A. Byrd and Brian Arnall, Oklahoma State University, Stillwater, OK

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## Zinc Sulfate and Urea Ammonium Nitrate Interaction Effects on Corn-Cotton Production System

Gurbir Singh, Wayne Ebelhar and Gurpreet Kaur, Mississippi State University, Stoneville, MS

### Influence of Multiple Potassium Rates on Cotton Yield across Different Cultivars

**William Joseph Rutland**<sup>1</sup>, Brian K. Pieralisi<sup>1</sup>, Bradley Norris<sup>2</sup>, Jacob P. Mc-Neal<sup>2</sup>, Steven D. Hall<sup>2</sup> and John J. Williams<sup>2</sup>, (1)Mississippi State University, Starkville, MS, (2)Mississippi State University, Mississippi State, MS

Variability of Cotton Lint Yield as Predicted by Boll Counts Wyatt Medina, Bradley R. Wilson, Cayden B. Catlin, Andrea J Althoff and Seth A. Byrd, Oklahoma State University, Stillwater, OK

# **Cotton Disease Council**

### COTTON DISEASE COUNCIL POSTERS

### Cotton Disease Loss Estimate Committee Report, 2020.

Kathy S. Lawrence<sup>1</sup>, Amanda Lawrence<sup>1</sup>, Randy Norton<sup>2</sup>, Jiahuai Hu<sup>3</sup>, Travis R. Faske<sup>4</sup>, Robert Hutmacher<sup>5</sup>, John Muller<sup>6</sup>, Ian Small<sup>7</sup>, Zane J. Grabau<sup>8</sup>, Robert C. Kemerait<sup>9</sup>, Paul Price<sup>10</sup>, Thomas W. Allen<sup>11</sup>, Sam Atwell<sup>12</sup>, John Idowu<sup>13</sup>, Lindsey D. Thiessen<sup>14</sup>, Seth A. Byrd<sup>15</sup>, Jerry Goodson<sup>16</sup>, Heather M Kelly<sup>17</sup>, Terry A Wheeler<sup>18</sup>, Thomas Isakeit<sup>19</sup> and Hillary L. Mehl<sup>20</sup>, (1)Auburn University, Auburn, AL, (2)University of Arizona, Safford, AZ, (3)University of Arizona, Tucson, AZ, (4)University of Arkansas Division of Agriculture, Lonoke, AR, (5) University of California, Shafter, CA, (6)Clemson University, Blackville,, SC, (7) University of Florida, Quincy, FL, (8)University of Florida, Gainesville, FL, (9) University of Georgia, Tifton, GA, (10) Louisiana State University, Winnsboro, LA, (11) Mississippi State University, Delta Research and Extension Center, Stoneville, MS, (12)University of Missouri, New Madrid, MO, (13)New Mexico State University, Las Cruces, NM, (14)NC State University, Raleigh, NC, (15) Oklahoma State University, Stillwater, OK, (16)OSU Southwest Research and Extension Center, Altus, OK, (17)University of Tennessee, Jackson, TN, (18) Texas A&M AgriLife Research and Extension Center, Lubbock, TX, (19) Texas A&M University, College Station, TX, (20) Virginia Tech Tidewater AREC, Suffolk, VA

Cotton Cultivar Disease Incidence, Severity, and Yields When Challenged with Verticillium Wilt in the Tennessee Valley Region, 2020 Kathy S. Lawrence<sup>1</sup>, Tyler Sandlin<sup>2</sup>, Andy Page<sup>1</sup>, Tyson B Raper<sup>3</sup>, Heather M Kelly<sup>3</sup>, Brad Meyer<sup>4</sup> and Nathan Silvey<sup>5</sup>, (1)Auburn University, Auburn, AL, (2) Auburn University, Belle Mina, AL, (3)University of Tennessee, Jackson, TN, (4) GreenPoint AG, Decatur, AL, (5)Madison County Co-op, Decatur, AL

Evaluation of Effectiveness and Economic Returns Associated with Fungicide Applications for Control of Areolate Mildew Stephanie Hollifield<sup>1</sup>, Robert Kemerait<sup>2</sup> and Jared R. Whitaker<sup>2</sup>, (1)University of Georgia, Quitman, GA, (2)University of Georgia, Tifton, GA

Comparative Genomics of Fov (Fusarium oxysporum f. sp. vasinfectum) in US Cotton Provides Insights into Race-Specific Regions Related to Pathogenicity and Evolution

**Catherine Danmaigona Clement**<sup>1</sup>, Lin Zhang<sup>1</sup>, Zunyong Liu<sup>1</sup>, Steve Hague<sup>1</sup>, Terry Wheeler<sup>2</sup>, Jane K Dever<sup>3</sup>, Ping He<sup>1</sup> and Libo Shan<sup>1</sup>, (1)Texas A&M University, College Station, TX, (2)Texas A&M AgriLife Research, Lubbock, TX, (3) Texas A&M AgriLife Research and Extension Center, Lubbock, TX

### Efficacy of Phytogen Seed Treatment Products and Cultivars to Manage the Reniform Nematode in Mississippi

**Tessie H. Wilkerson**, Mississippi State University, Stoneville, MS, Thomas W. Allen, Mississippi State University, Delta Research and Extension Center, Stoneville, MS and Thomas Eubank, Phytogen, Greenville, MS

### Efficacy of Reniform Resistant Cultivars and Commercially Available Nematicides to Manage the Reniform Nematode

**Tessie H. Wilkerson**<sup>1</sup>, Thomas W. Allen<sup>2</sup>, Daryl Chastain<sup>1</sup>, Sally Stetina<sup>3</sup>, Jack C. McCarty<sup>4</sup> and Nicholus Tadlock<sup>5</sup>, (1)Mississippi State University, Stoneville, MS, (2)Mississippi State University, Delta Research and Extension Center, Stoneville, MS, (3)USDA-ARS, Stoneville, MS, (4)USDA-ARS, Mississippi State, MS, (5)Mississippi State University-Delta Research and Extension Center, Stoneville, MS

## Quantification of FOV4 in Soils with Susceptible or Tolerant Cotton Cultivars

Jennifer Chagoya<sup>1</sup>, Heather Arce<sup>2</sup>, Joel Arce<sup>3</sup>, Roy Davis<sup>3</sup>, Thomas M. Chappell<sup>3</sup>, Mauricio Ulloa<sup>4</sup> and Cecilia Monclova-Santana<sup>5</sup>, (1)Texas A&M AgriLife Research, Lubbock, TX, (2)Texas A&M AgriLife Research, El Paso, TX, (3)Texas A&M University, College Station, TX, (4)USDA-ARS, Lubbock, TX, (5)Texas A&M AgriLife Extension, Lubbock, TX

## Fitness Penalty of Qoi-Resistant Isolates of *C. cassiicola* and Sensitivity Profile to Five Fungicides

Marina Nunes Rondon, Bisho Ram Lawaju and Kathy Lawrence, Auburn University, Auburn, AL

### Cultivar Response to Inoculation with Xanthomonas Citri Subsp. Malvacearum in Mississippi during 2020

Thomas W. Allen, Mississippi State University, Delta Research and Extension Center, Stoneville, MS

### Cotton Damage Thresholds of M. Enterolobii in the Presence of Fusarium Oxysporum

Ashley Joyce, North Carolina State University, Raleigh, NC

### Evaluation of Upland Cotton Varieties for Reaction to Fusarium Wilt Race 4 in El Paso County, Texas

**Thomas Isakeit**, Texas A&M University, College Station, TX and Joel Arce, Texas A&M Agrilife Extension, El Paso, TX

### Analyzation of the Benefits of Root-Knot Nematode Resistant Cotton Varieties within a Variety Trial

Jason E. Mallard, University of Georgia Cooperative Extension, Portal, GA and Robert Kemerait, University of Georgia, Tifton, GA

### The Effect of Blocking Methylation of Sesquiterpenoids By Omt RNAi on Disease Resistance in Cotton

Tanya A Wagner<sup>1</sup>, Lorraine Puckhaber<sup>2</sup>, Alois A. Bell<sup>3</sup>, Clint W Magill<sup>4</sup> and **Jinggao Liu**<sup>3</sup>, (1)USDA-ARS-ICCDRU, College Station, TX, (2) USDA-ARS, College Station, TX, (3)USDA-ARS ICCDRU, College Station, TX, (4)Texas A&M University, College Station, TX

#### Response of Root-Knot Nematode Resistant and Susceptible Varieties to Telone II Application in Root-Knot, Columbia Lance, and Lesion Nematode Infested Fields

Michael T. Plumblee, Tyler S. Soignier, Bill Bonnette and **John Mueller**, Clemson University, Blackville, SC

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### Evaluating Genetic Resistance and Nematicides for Reniform Nematode Management in Cotton

**Morgan N McCulloch**<sup>1</sup>, Jennifer Dudak<sup>1</sup>, Thomas Isakeit<sup>1</sup>, Terry Wheeler<sup>2</sup>, Benjamin M. McKnight<sup>1</sup>, Gaylon Morgan<sup>3</sup> and Reagan L. Noland<sup>4</sup>, (1)Texas A&M University, College Station, TX, (2)Texas A&M AgriLife Research, Lubbock, TX, (3)Cotton Incorporated, Cary, NC, (4)Texas A&M Agrilife Extension Service, San Angelo, TX

### 2020 National Cottonseed Treatment Program

Rachel R. Guyer<sup>1</sup>, Shelly Neill Pate<sup>1</sup>, Heather M Kelly<sup>1</sup>, Thomas W. Allen<sup>2</sup>, Tessie H. Wilkerson<sup>3</sup>, M. B. Bayles<sup>4</sup>, Robert Kemerait<sup>5</sup>, Kathy Lawrence<sup>6</sup>, Cecilia Monclova-Santana<sup>7</sup>, Paul Price<sup>8</sup>, Alejandro Rojas<sup>9</sup> and Terry Spurlock<sup>10</sup>, (1) University of Tennessee, Jackson, TN, (2)Mississippi State University, Delta Research and Extension Center, Stoneville, MS, (3)Mississippi State University, Stoneville, MS, (4)Oklahoma State University, Stillwater, OK, (5)University of Georgia, Tifton, GA, (6)Auburn University, Auburn University, AL, (7) Texas A&M AgriLife Extension, Lubbock, TX, (8)Louisiana State University, Winnsboro, LA, (9)University of Arkansas, Fayetteville, AR, (10)University of Arkansas, Monticello, AR

# Cotton Economics and Marketing Conference

### COTTON ECONOMICS AND MARKETING POSTERS

### A Profitability Analysis Comparing Continuous Cotton to Alternative Crop Rotations Under Limited Irrigation in Texas High Plains

Rachel Elizabeth Buck<sup>1</sup>, Donna McCallister<sup>2</sup>, Eduardo Segarra<sup>2</sup>, James P. Bordovsky<sup>3</sup>, J. T. Mustian<sup>4</sup>, David Winters<sup>5</sup>, Heath Johnson<sup>5</sup> and Scott Jordan<sup>6</sup>, (1)Texas Tech University College of Agricultural Sciences & Natural Resources, Lubbock, TX, (2)Texas Tech University, Lubbock, TX, (3)Texas A&M AgriLife Research Center, Lubbock, TX, (4)Texas A&M AgriLife Research, Plainview, TX, (5)Texas A&M AgriLife Research & Extension Center at Lubbock - Halfway Location, Plainview, TX, (6)Texas A&M AgriLife Research and Extension Service, Lubbock, TX

Economics of Xtendflex Cotton by Tillage, Rotation, and Herbicide Input Rohith Vulchi<sup>1</sup>, John R.C. Robinson<sup>2</sup>, Josh McGinty<sup>3</sup>, Muthu Bagavathiannan<sup>2</sup> and Scott Nolte<sup>2</sup>, (1)Texas A&M University, College Station, College Station, TX, (2)Texas A&M University, College Station, TX, (3)Texas A&M AgriLife Extension Service, Corpus Christi, TX

# Cotton Engineering-Systems Conference

### **COTTON ENGINEERING-SYSTEMS POSTERS**

Bench-Top Plastic Contaminant Detection in Cotton Using Deep Learning Neural Network Trained with Images Taken Under 4 Lighting Colors Joshua H Tandio<sup>1</sup>, Filip To<sup>1</sup> and Ruixiu Sui<sup>2</sup>, (1)Mississippi State University, Mississippi State, MS, (2)USDA-ARS, Stoneville, MS

### Moisture Determination of Cotton in Static Conditions Via Capacitive Sensing

**Lucas Gay**<sup>1</sup>, Filip To<sup>1</sup> and Ruixiu Sui<sup>2</sup>, (1)Mississippi State University, Mississippi State, MS, (2)USDA-ARS, Stoneville, MS

## Precision Nitrogen Fertigation Using NDVI Crop Sensors Integrated with a Lateral Move Irrigation System

**Stewart M Bell**<sup>1</sup>, Bulent Koc<sup>1</sup>, Joe Mari J. Maja<sup>2</sup>, Jose Payero<sup>2</sup>, Michael W. Marshall<sup>3</sup> and Ahmad Khalilian<sup>2</sup>, (1)Clemson University, Clemson, SC, (2)Clemson University, Blackville, SC, (3)Clemson University - Edisto REC, Blackville, SC

### Demonstration of Cotton Module Traceability and on-Machine Module Weighing Capabilities

Michael T. Plumblee<sup>1</sup>, Kendall R. Kirk<sup>1</sup>, Tyler S. Soignier<sup>1</sup> and Edward M. Barnes<sup>2</sup>, (1)Clemson University, Blackville, SC, (2)Cotton Incorporated, Cary, NC

### A Wireless Soil Moisture Sensing Network to Automate Site-Specific Irrigation of Cotton Using a Lateral Move Irrigation System

Jose Payero<sup>1</sup>, Rebecca Hitchcock Davis<sup>2</sup> and Bayleah Cooper<sup>1</sup>, (1)Clemson University, Blackville, SC, (2)Clemson University, Bamberg, SC

# Cotton Improvement Conference

### COTTON IMPROVEMENT POSTERS

Temporal Changes in Membrane Lipid Composition of Upland Cotton (Gossypium hirsutum) Seeds in Response to Cold Water Imbibition Lakhvir Kaur and Rosalyn B Angeles-Shim, Texas Tech University, Lubbock, TX

### Dissecting Quantitative Variation Introgressed into Four Different Backgrounds of Upland Cotton Using Variance Components Analysis and Comparative Transcriptomics

Samantha Jo Wegener<sup>1</sup>, Sameer Khanal<sup>1</sup>, Nino Brown<sup>1</sup>, Pawan Kumar<sup>2</sup>, Andrew Paterson<sup>3</sup>, Neha Kothari<sup>4</sup> and Peng Chee<sup>1</sup>, (1)University of Georgia, Tifton, GA, (2)USDA-ARS, Salinas, CA, (3)College of Agricultural and Environmental Sciences, The University of Georgia, Athens, GA, (4)Cotton Incorporated, Cary, NC

# Cotton Insect Research and Control Conference

### **COTTON INSECTS POSTERS**

### Effects of Plant Density on Thrips Injury to Cotton

**Jessica Loren Krob**, University of Tennessee, Jackson, TN and Scott D. Stewart, The University of Tennessee, Jackson, TN

### Rearing Technic for *Nezara viridula* (Heteroptera: Pentatomidae) Using Semi-Solid Artificial Diet.

Maribel Portilla, USDA-ARS (SIMRU), Stoneville, MS

### 2020 Cotton Insect Losses Estimates

**Don Cook**, Mississippi State University, Stoneville, MS and Meg Threet, MSU, Stoneville, MS

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### Effect of Okra Leaf Cotton on Canopy Microclimate and Helicovera Zea (Boddie) Survival

Ivan Tellez, Jane Pierce and Patricia Monk, New Mexico State University, Las Cruces, NM

#### **Evaluation of Insecticides for Lygus Management in California Cotton Ian M Grettenberger**, University of California-Davis, Davis, CA, CA and Treanna Pierce, UC Cooperative Extension, Shafter, CA

# Cotton Quality Measurements Conference

### COTTON QUALITY MEASUREMENTS POSTERS

### Does Low Rates of 2,4-D Affect Cotton Fiber Quality?

**Kyle Russell**, Texas Tech University, Lubbock, TX, Texas A&M AgriLife Research, Lubbock, TX, Peter A. Dotray, Texas Tech University, Texas A&M AgriLife Research and Extension Service, Lubbock, TX and Brendan Kelly, Texas Tech University, Lubbock, TX

### Do Metals in Cotton Affect Dyeing Efficiency?

**Chanel Angelique Fortier**<sup>1</sup>, Christopher D. Delhom<sup>2</sup> and Michael K. Dowd<sup>2</sup>, (1)USDA, New Orleans, LA, (2)USDA-ARS, New Orleans, LA

# **Cotton Utilization Conference**

### COTTON UTILIZATION POSTERS

### Examining Cotton Maturity Distribution in Small Fiber Bundles Using an Infrared Imaging System

Michael Santiago Cintron, USDA, New Orleans, LA and Terri Von Hoven, USDA-ARS-SRRC, New Orleans, LA

### Water Sorption Behaviors of Cottonseed Meal, Washed Cottonseed Meal, and Cottonseed Protein Isolate

**Zhongqi He**<sup>1</sup>, David Zhang<sup>2</sup> and H.N. Cheng<sup>2</sup>, (1)USDA Agricultural Research Service, New Orleans, LA, (2)USDA-ARS-SRRC, New Orleans, LA

# **Cotton Weed Science Research Conference**

### COTTON WEED SCIENCE RESEARCH POSTERS

### Utility of Isoxaflutole for Weed Control in Isoxaflutole-Resistant Cotton Systems

**Rodger B. Farr**, Jason K Norsworthy, James W Beesinger, Jacob Flemming and Lawson Priess, University of Arkansas, Fayetteville, AR

### Use of Auxin Herbicides Other Than 2,4-D in Enlist Cotton

James W Beesinger, Jason K. Norsworthy, Rodger B. Farr, Mason Castner and Lawson Priess, University of Arkansas, Fayetteville, AR

### Sensitivity of Palmer Amaranth to Dicamba & Glufosinate

**Navdeep Godara**<sup>1</sup>, Jason Norsworthy<sup>1</sup>, Tom Barber<sup>2</sup>, Larry Steckel<sup>3</sup> and Lawson Priess<sup>1</sup>, (1)University of Arkansas, Fayetteville, AR, (2)University of Arkansas-Extension, Lonoke, AR, (3)University of Tennessee, Jackson, TN

## Determining the Optimum Rate of Potassium Borate Needed to Reduce Dicamba Volatility

Mason Castner, Jason K Norsworthy, Trenton L Roberts, Maria L Zaccaro and Jacob A Fleming, University of Arkansas, Fayetteville, AR

## Evaluating Tolerance of HPPD-Tolerant Cotton to PRE and POST Applications of Isoxaflutole

Jacob A Fleming<sup>1</sup>, Jason K Norsworthy<sup>1</sup>, Tom Barber<sup>2</sup> and Rodger B. Farr<sup>1</sup>, (1) University of Arkansas, Fayetteville, AR, (2)University of Arkansas-Extension, Lonoke, AR

# Quantifying Reductions in Palmer Amaranth Groundcover Following an Auxin Herbicide Application

Lawson Priess<sup>1</sup>, Jason K. Norsworthy<sup>1</sup>, Rodger B. Farr<sup>1</sup>, Mason Castner<sup>1</sup>, Thomas R Butts<sup>2</sup> and Tom Barber<sup>3</sup>, (1)University of Arkansas, Fayetteville, AR, (2)University of Arkansas, Lonoke, AR, (3)University of Arkansas-Extension, Lonoke, AR

### Performance of Tank Mix Partners with Isoxaflutole across the Cotton Belt

Delaney C. Foster<sup>1</sup>, Peter A. Dotray<sup>1</sup>, Todd A Baughman<sup>2</sup>, Seth A. Byrd<sup>3</sup>, A. Stanley Culpepper<sup>4</sup>, Darrin M. Dodds<sup>5</sup>, Steven D. Hall<sup>5</sup>, Jacob P. McNeal<sup>5</sup>, Bradley Norris<sup>5</sup>, Reagan L. Noland<sup>6</sup>, Scott Nolte<sup>7</sup>, Mason House<sup>8</sup>, Jason K. Norsworthy<sup>9</sup>, Rodger B. Farr<sup>9</sup>, Larry Steckel<sup>10</sup> and Corey N. Thompson<sup>11</sup>, (1)Texas Tech University, Texas A&M AgriLife Research and Extension Service, Lubbock, TX, (2)Oklahoma State University, Ardmore, OK, (3)Oklahoma State University, Stillwater, OK, (4)University of Georgia, Tifton, GA, (5)Mississippi State University, Mississippi State, MS, (6)Texas A&M Agrilife Extension Service, San Angelo, TX, (7)Texas A&M University, College Station, TX, (8)Texas A&M Agrilife Extension, College Station, TX, (9)University of Arkansas, Fayetteville, AR, (10)University of Tennessee, Jackson, TN, (11)BASF, Lubbock, TX

### Stoneville Cotton Response to Low Rates of Dicamba and 2-4-D

Taghi Bararpour and Ralph R. Hale, Mississippi State University, Stoneville, MS

### Xtend Cotton Response to Low Rates of 2-4-D

Taghi Bararpour, Ralph R. Hale, Thomas W. Allen and Tessie H. Wilkerson, Mississippi State University, Stoneville, MS

### **Enlist Cotton Response to Low Rates of Dicamba**

Taghi Bararpour, Ralph R. Hale, Tessie H. Wilkerson and Thomas W. Allen, Mississippi State University, Stoneville, MS

### Utility of Cotoran, Dual Magnum, and Warrant in Two-Pass Enlist Weed Management Programs with Enlist One and Liberty

Donnie Miller and Marcie Mize, LSU AgCenter, St. Joseph, LA

### Impact of Application Timing of Dual Magnum, Warrant, and Outlook on Weed Management and Crop Tolerance in Two-Pass Programs in Xtend Cotton

Donnie Miller and Marcie Mize, LSU AgCenter, St. Joseph, LA

### Kochia Control with Engenia Pre/Post Combinations

**C.D. Ray White**, Texas A&M AgriLife Research, Lubbock, TX, J. Wayne Keeling, Texas A&M AgriLife Research Center, Lubbock, TX, Justin Lee Spradley, Texas A&M AgriLife, Lubbock, TX and Adam Hixson, BASF, Lubbock, TX Cotton Response to Imazapyr, Triclopyr, and Metsulfuron Michael W. Marshall, Clemson University - Edisto REC, Blackville, SC

#### **Controlling Volunteer Cotton in the Southwest**

Todd A Baughman, Oklahoma State University, Ardmore, OK and Peter A. Dotray, Texas Tech University, Texas A&M AgriLife Research and Extension Service, Lubbock, TX

# **Sustainability**

### COTTON SUSTAINABILITY POSTERS

#### Improving Cotton Sustainability: Pilot Program to Demonstrate Implementation and Benefits of the US Cotton Trust Protocol and Better Cotton Initiative (BCI) Better Cotton Program

**Bill Robertson**<sup>1</sup>, Amanda Free<sup>1</sup>, Matt Fryer<sup>2</sup>, Joe McAlee<sup>1</sup>, Karen Wynne<sup>3</sup>, Jesse Daystar<sup>4</sup>, Andrew Jordan<sup>5</sup>, Steven Pires<sup>4</sup> and Whitney Haigwood<sup>1</sup>, (1) University of Arkansas, Newport, AR, (2)University of Arkansas, Little Rock, AR, (3)Better Cotton Initiative, Huntsville, AL, (4)Cotton Incorporated, Cary, NC, (5) Jordan Associates Ag and Bio Engineering Services, Cordova, TN

# **Recorded Presentations**

The Beltwide Cotton Conferences (BWCC) continue the tradition of putting leading edge information and innovations into attendees' hands to help with decision-making. The full 2020 BWCC Proceedings are scheduled to be mailed in May to attendees who purchase them. However, many of the forum's reports - gleaned from the Confex Podium presentation management/ recording service - are available online.\*

The National Cotton Council is pleased to make these presentations available to the cotton industry through the Confex Podium web site. To view presentations on the computer, all that is needed is a high-speed Internet connection.

These can be viewed by selecting the 2020 Recorded Presentations tab at the BWCC website home page, **www.cotton.org/beltwide** or use this QR Code.



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\*The Confex Podium presentation service has been available to Beltwide speakers and attendees since the 2006 BWCC. The primary goal is to enable attendees timely access to a wide range of conference presentations prior to the published proceedings - including reports they did not hear at the conferences and reports they did hear but want to review.

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