



**AMERICAN PHYTOPATHOLOGICAL SOCIETY  
97<sup>TH</sup> SOUTHERN DIVISION MEETING**

*in conjunction with*

**SOUTHERN IPM CENTER**

*and*

**SOUTHERN PLANT DIAGNOSTIC NETWORK**

**PROGRAM**

**FEBRUARY 9-12, 2020  
CHARLESTON, SOUTH CAROLINA**

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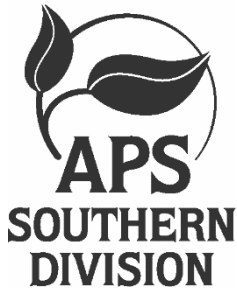
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# AMERICAN PHYTOPATHOLOGICAL SOCIETY 97<sup>th</sup> SOUTHERN DIVISION MEETING PROGRAM

The 97<sup>th</sup> annual meeting of the American Phytopathological Society, Southern Division, is being held in conjunction with the Southern IPM Center and the Southern Plant Diagnostic Network on February 9-12, 2020, in Charleston, SC, at the Francis Marion Hotel. Unless otherwise specified, all program events will take place at the Francis Marion Hotel; the main meeting room will be the Carolina Ballroom. Heavy hors d'oeuvres and a cash bar will be available at the Welcome Reception on Sunday evening. Grab-and-go breakfast items will be provided prior to the start of the scientific program on Monday and Tuesday. A cash bar will also be available during the social hour prior to the Awards Banquet and the first half of the Awards Banquet. Additional details regarding transportation and meals are included in the program at the listing for each event.

Photographs will be taken during the meeting. As a meeting registrant and attendee, you agree to allow the SD-APS to use your photo in APS publications and on the SD-APS website and social media pages. As a courtesy to presenters, please **do not take photos** of posters or presentation slides without presenter approval.

**Join us on Facebook!** - "Like" and follow the **APS Southern Division** and the **APS Southern Division - Graduate Students** pages on Facebook! Document your experiences throughout the meeting and post your photos using **#SDAPS2020**.

## Sunday, February 9, 2020

- |                 |   |
|-----------------|---|
| 8:30 - 11:30 AM | <b>Why Do These Pathogens Have Legs? Disease-like Arthropods and Their Identification</b> (Workshop)<br>Leader: <b>Matt Bertone</b> , <i>North Carolina State University</i><br><i>Pinckney Room</i><br><i>Sponsored by the Southern Plant Diagnostic Network</i> |
| 11:30 - 1:30 PM | Lunch (on your own)   |
| 1:30 - 4:30 PM  | <b>Tools for <i>Phytophthora</i> Identification</b> (Workshop)<br>Leader: <b>Steve Jeffers</b> , <i>Clemson University</i><br><i>Pinckney Room</i><br><i>Sponsored by the Southern Plant Diagnostic Network</i>   |
| 4:30 - 5:30 PM  | Executive Committee Meeting<br><i>Rutledge Room</i>   |
| 6:00 - 8:00 PM  | <b>Welcome Reception</b><br><i>Gold Ballroom</i>  |

## **Monday, February 10, 2020**

- 7:00 – 8:00 AM Breakfast (provided)  
*Pre-function Area, Carolina Ballroom*
- 7:00 - 7:30 AM Registration and Poster Setup (All Posters)  
*Carolina Ballroom*
- 7:30 - 7:45 AM **Welcome**  
**Shaker Kousik**, SD-APS President  
**Patrick Wechter**, Acting Research Leader, U.S. Vegetable Laboratory, USDA-ARS
- 8:15 - 12:15 PM **Southern Plant Diagnostic Network – Business Meeting**  
*Pinckney Room*  
*The business meeting is open to all registered meeting attendees.*
- Graduate Student Research Competition (Session I)**, Moderators: *Hope Becton, SD-APS Graduate Student, and Ying-Yu Liao, SD-APS Graduate Student*
- 7:45 - 7:57 AM *Pseudomonas chlororaphis* type VI secretion systems: roles in rhizosphere dynamics and plant microbe interactions. **E. Boak**, E. Pierson, and L. Pierson; Texas A&M University.
- 7:57 - 8:09 AM Pro-viral function of the glycolytic enzyme FBA1 during TBSV replication. **M. Molho** and P. Nagy; University of Kentucky.
- 8:09 - 8:21 AM Advanced molecular methods for detection and race differentiation of *Fusarium oxysporum* f. sp. niveum. **O. Hudson**, E. Ali, S. Waliullah, and P. Ji; University of Georgia.
- 8:21 - 8:33 AM Integrating beneficial bacteria for management of southern stem rot and late leaf spot in peanuts. **A. Herbert**, H. Wang, and D. Anco; Clemson University.
- 8:33 - 8:45 AM *Pythium* spp. infecting winter field and cover crops in North Carolina. **E. Reeves**<sup>1</sup>, B. Shew<sup>1</sup>, C. Cowger<sup>2</sup>, and J. Kerns<sup>1</sup>; <sup>1</sup>North Carolina State University, <sup>2</sup>USDA-ARS Plant Science.
- 8:45 - 8:57 AM An assessment of seed treatment efficacy and cotton seedling disease presence using innovative techniques. **S. Pate**, R. Guyer, and H. Kelly; University of Tennessee.
- 8:57 - 9:09 AM Physiological effects of soybean cyst nematode on real time N<sub>2</sub>-fixation activity, and leaf growth parameters of three soybean lines. **R. Akinrinlola**<sup>1</sup>, T. Sinclair<sup>2</sup>, A. Shekoofa<sup>1</sup>, and H. Kelly<sup>1</sup>; <sup>1</sup>University of Tennessee, <sup>2</sup>North Carolina State University.

### **Graduate Student Research Competition (Session I), *continued***

- 9:09 - 9:21 AM Fungicide sensitivity screening for *Corynespora cassiicola* and field evaluations. **T. Smith**, Z. Hansen, and H. Kelly; University of Tennessee.
- 9:21 - 9:33 AM Impact of the corn Bt trait on mycotoxin levels. **E. Zuchelli**, S. Stewart, H. Kelly, and R. Guyer; University of Tennessee.
- 9:33 - 9:45 AM Defining dispersal mechanisms in storage for *Ceratocystis fimbriata*, causal agent of black rot in sweetpotatoes. **M. Stahr**, M. Bertone, A. Huseth, and L. Quesada; North Carolina State University.
- 9:45 - 10:15 AM BREAK: Networking

### **Graduate Student Research Competition (Session II), Moderators: Tracy Hawk, SD-APS Graduate Student, and Melissa Molho, SD-APS Graduate Student**

- 10:15 - 10:27 AM Utilizing a population genetics approach to provide crop-specific management strategies for cucurbit downy mildew. **K. D'Arcangelo**<sup>1</sup>, L. Quesada<sup>1</sup>, T. Miles<sup>2</sup>, and A. Rahman<sup>3</sup>; <sup>1</sup>North Carolina State University, <sup>2</sup>Michigan State University, <sup>3</sup>Corteva Agrisciences.
- 10:27 - 10:39 AM Formulated magnesium nanomaterials as novel alternatives to bacterial spot of tomato disease management. **Y. Liao**<sup>1</sup>, A. Strayer-Scherer<sup>2</sup>, Z. Huang<sup>3</sup>, S. Santra<sup>3</sup>, J. White<sup>4</sup>, R. De La Torre-Roche<sup>4</sup>, Q. Fan<sup>1</sup>, S. Da Silva<sup>1</sup>, G. Vallad<sup>1</sup>, J. Freeman<sup>1</sup>, J. Jones<sup>1</sup>, and M. Paret<sup>1</sup>; <sup>1</sup>University of Florida, <sup>2</sup>Auburn University, <sup>3</sup>University of Central Florida, <sup>4</sup>University of Connecticut.
- 10:39 - 10:51 AM Survey of soil and foliar fungal pathogens observed in watermelon production fields throughout the growing regions of Texas. **B. Meyer**, K. Ong, and K. Cochran; Texas A&M University.
- 10:51 - 11:03 AM Evaluation of laser-guided air-blast sprayer on pest and disease control in peach orchards. **H. Boatwright** and G. Schnabel; Clemson University.
- 11:03 - 11:15 AM Hemp leaf spot, a major disease threat for hemp, is caused by haploid and heteroploid populations. **D. Szarka**, J. Jaromczyk, C. Schardl, and N. Gauthier; University of Kentucky.
- 11:15 - 11:27 AM Comparative performance of fungicides and biorational products in managing post-harvest *Botrytis cinerea* infection on hydrangea cut flowers. **R. Bika**<sup>1</sup>, F. Baysal-Gurel<sup>1</sup>, and C. Palmer<sup>2</sup>; <sup>1</sup>Tennessee State University, <sup>2</sup>IR-4.
- 11:27 - 11:39 AM Identification and management of *Phytophthium vexans* on *Ginkgo biloba*. **M. Panth**, F. Baysal-Gurel, F. Avin, and T. Simmons; Tennessee State University.

## Graduate Student Research Competition (Session II), *continued*

- 11:39 - 11:51 AM      Transmission of *Rose rosette emaravirus* (RRV) through non-vector related methodologies. **M. Shires**, J. Corser, J. Ueckert, and K. Ong; Texas A&M University.
- 11:51 - 12:03 PM      Flowering dogwoods under fire: responses of the microbiome under prescribed burn management. **B. Kapoor**<sup>1</sup>, D. Hadziabdic<sup>1</sup>, J. DeBruyn<sup>1</sup>, M. Cregger<sup>2</sup>, W. Klingeman<sup>1</sup>, R. Trigiano<sup>1</sup>, A. Onufrak<sup>1</sup>, and E. Wilcox<sup>1</sup>; <sup>1</sup>University of Tennessee, <sup>2</sup>Oak Ridge National Laboratory.
- 12:03 - 12:15 PM      Bacterial communities associated with *Juglans nigra* significantly differ between the tree's native and introduced ranges. **A. Onufrak**<sup>1</sup>, M. Cregger<sup>2</sup>, J. DeBruyn<sup>1</sup>, D. Hadziabdic<sup>1</sup>, G. Williams<sup>3</sup>, and M. Ginzel<sup>3</sup>; <sup>1</sup>University of Tennessee, <sup>2</sup>Oak Ridge National Laboratory, <sup>3</sup>Purdue University.
- 12:15 - 2:00 PM      **Careers 101 Workshop: Strategic Conversations** (Workshop)  
Leader: **Nicole Gauthier**, SD-APS Divisional Forum Representative  
*Lunch provided for workshop preregistrants.*  
*Sponsored by Corteva Agriscience*  
*Carolina Ballroom*
- 12:15 - 2:00 PM      Lunch (on your own)

## Technical Session I, Moderators: *Jeff Standish, SD-APS Postdoctoral Researcher, and Beant Kapoor, SD-APS Graduate Student*

- 2:00 - 2:12 PM      SP2700 – A novel antiviral plant activator. **B. Ma**; SePRO Corporation.
- 2:12 - 2:24 PM      Determining the role of the rhizospheric microbiome composition in the *Ralstonia solanacearum* distribution in tobacco fields in North Carolina. **R. Garcia**; North Carolina State University.
- 2:24 - 2:36 PM      Taproot decline of soybean is caused by a novel *Xylaria* sp. that produces phytotoxins associated with foliar symptoms. **T. Garcia-Aroca**<sup>1</sup>, P. Price<sup>1</sup>, M. Tomaso-Peterson<sup>2</sup>, T. Wilkerson<sup>2</sup>, T. Spurlock<sup>3</sup>, T. Faske<sup>3</sup>, B. Bluhm<sup>3</sup>, K. Conner<sup>4</sup>, E. Sikora<sup>4</sup>, R. Guyer<sup>5</sup>, H. Kelly<sup>5</sup>, T. Allen<sup>2</sup>, and V. Doyle<sup>1</sup>; <sup>1</sup>Louisiana State University, <sup>2</sup>Mississippi State University, <sup>3</sup>University of Arkansas, <sup>4</sup>Auburn University, <sup>5</sup>University of Tennessee.
- 2:36 - 2:48 PM      Secretion of effectors by a signal peptidase mutant of the maize anthracnose pathogen *Colletotrichum graminicola*. **R. Belisario** and L. Vaillancourt; University of Kentucky.
- 2:48 - 3:00 PM      Sensitivity of *Corynespora cassiicola* from cotton and soybean to DMI and QoI fungicides. **M. Rondon** and K. Lawrence; Auburn University.

### Technical Session I, *continued*

- 3:00 - 3:12 PM Investigating appressorium form and function using proximity-dependent proteomics. **N. Dulal**, R. Proko, and M. Egan; University of Arkansas.
- 3:12 - 3:24 PM Formation, viability and survival of *Pseudoperonospora cubensis* oospores under field conditions in southeastern United States. **I. Kikway**<sup>1</sup>, A. Kenaith<sup>2</sup>, and P. Ojiambo<sup>1</sup>; <sup>1</sup>North Carolina State University, <sup>2</sup>Clemson University.
- 3:24 - 3:36 PM Environmental bacteria as potent biocontrol agents for controlling Phytophthora fruit rot on watermelon. **J. Taylor**<sup>1</sup>, A. Boroujerdi<sup>1</sup>, T. Pikes<sup>1</sup>, R. Harris<sup>1</sup>, C. Kousik<sup>2</sup>, and M. Mandal<sup>1,2</sup>; <sup>1</sup>Claflin University, <sup>2</sup>U.S. Vegetable Laboratory, USDA-ARS.
- 3:36 - 3:48 PM Black rot resistance in sweetpotato (*Ipomoea batatas*): a case of age-related resistance. **C. Rojas**, K. Pecota, C. Yenchó, and L. Quesada-Ocampo; North Carolina State University.
- 3:48 - 4:00 PM Evaluating the relative contribution of fungicides applied alone or as mixtures for management of *Venturia effusa* in commercial pecan orchards. **L. Moore**, T. Brenneman, and K. Stevenson; University of Georgia.
- 4:00 - 4:12 PM Evaluation of host plant defense inducers for the management of plant pathogens in two North Carolina cropping systems. **A. Llanos**, S. Villani, and R. Kreis; North Carolina State University.
- 4:12 - 4:24 PM Turfgrass management practices influence fungicide fate on golf course putting greens. **C. Stephens**, T. Gannon, and J. Kerns; North Carolina State University.
- 4:24 - 4:48 PM BREAK: Networking

### Technical Session II, Moderators: *Teddy Garcia-Aroca, SD-APS Graduate Student, and Noam Eckshtain-Levi, SD-APS Postdoctoral Researcher*

- 4:48 - 5:00 PM Hold on to your roots: bacterial maintenance on plant roots. **N. Eckshtain-Levi**, S. Harris, and E. Shank; University of North Carolina.
- 5:00 - 5:12 PM Comparative transcriptome analysis of two contrasting maize inbred lines provides insights on molecular mechanisms for stalk rot resistance. **A. Salcedo**<sup>1</sup>, J. Al-Haddad<sup>2</sup>, C. Buell<sup>2</sup>, F. Trail<sup>2</sup>, E. Góngora-Castillo<sup>3</sup>, and L. Quesada<sup>1</sup>; <sup>1</sup>North Carolina State University, <sup>2</sup>Michigan State University, <sup>3</sup>Centro de Investigación Científica de Yucatán.
- 5:12 - 5:24 PM Surveying quinone outside inhibitor (QoI) resistance in peanut late leaf spot (*Nothopassalora personata*) in eastern North Carolina in 2018. **T. Schappe**, B. Shew, and L. Thiessen; North Carolina State University.

## Technical Session II, *continued*

- 5:24 - 5:36 PM      Assessment of nematicides for corn grown in fields infested with *Belonolaimus longicaudatus* and *Meloidogyne incognita*. **R. Kemerait** and M. Toews; University of Georgia.
- 5:36 - 5:48 PM      Cotton leafroll dwarf disease: an emerging viral disease on cotton in Georgia. **S. Bag**<sup>1</sup>, A. Tabassum<sup>1</sup>, N. Sedhain<sup>1</sup>, K. Morgan<sup>1</sup>, N. Suassuna<sup>2</sup>, J. Whitaker<sup>1</sup>, P. Chee<sup>1</sup>, R. Kemerait<sup>1</sup>, R. Nichols<sup>3</sup>, and P. Roberts<sup>1</sup>; <sup>1</sup>University of Georgia, <sup>2</sup>EMBRAPA, <sup>3</sup>Cotton Incorporated.
- 5:48 - 6:00 PM      SIMPAS™: The next generation of precision, prescriptive, in-furrow application equipment. **M. Newark**, S. Ludwig, W. Carter, and R. Rice; AMVAC Corporation.
- 6:00 - 6:12 PM      Introducing, Howler, an innovative, multi-site fungicide. **B. McInnes**; AgBiome Innovations.
- 6:12 - 6:24 PM      Ornamental annual and perennial flowering plants for Phytophthora-infested landscape beds. M. Henson, S. Sharpe, and **I. Meadows**; North Carolina State University.
- 6:45 – 7:45 PM      **Graduate Student/Post-doc Social Meeting**  
*Sponsored by Erwin Keith, Inc. / Progeny Ag Products*  
*Carolina Ballroom*

## 2020 SD-APS/SIPMC/SPDN Meeting Planning Committee

**Chandrasekar (Shaker) Kousik**, SD-APS President  
**Trey Price**, SD-APS President-Elect  
**Fulya Baysal-Gurel**, SD-APS Vice President  
**Rebecca A. Melanson**, SD-APS Secretary-Treasurer  
**Tracy Hawk**, SD-APS Graduate Student Representative  
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**Nicholas Dufault**, SD-APS Immediate Past President  
**Nicole Gauthier**, SD-APS Divisional Forum Representative  
**Carrie Harmon**, SPDN Project Director  
**Meg Williamson**, SPDN Local Coordinator  
**Joseph LaForest**, SIPMC Co-Director

### Local Arrangements

**Ginny DuBose**, **Anthony Keinath**, **Sean Toporek**, **Sierra Zardus**; Clemson University  
**Jennifer Ikerd**, **Gabriel Rennenberger**, **Patrick Wechter**; USDA, ARS  
**Mihir Mandal**; Claflin University





## **Tuesday, February 11, 2020**

7:00 – 8:00 AM Breakfast (provided)  
*Pre-function Area, Carolina Ballroom*

### **Symposium, “IPM Symposium”, Moderator: Joe LaForest, SIPMC Co-Director**

- 8:00 - 8:15 AM Bacterial blight of cotton: attributes of the causal agent (*Xanthomonas citri* subsp. *malvacearum*) and impact of management on disease. **T. Wheeler**<sup>1</sup>, T. Allen<sup>2</sup>, R. Bart<sup>3</sup>, T. Isakeit<sup>1</sup>, R. Kemerait<sup>4</sup>, and J. Woodward<sup>5</sup>; <sup>1</sup>Texas A&M University, <sup>2</sup>Mississippi State University, <sup>3</sup>Donald Danforth Plant Science Center, <sup>4</sup>University of Georgia, <sup>5</sup>Phytogen Cottonseed.
- 8:15 - 8:30 AM Virginia IPM: Ensuring food security, public health, and pollinator protection. **D. Langston, Jr.**<sup>1</sup>, E. Bush<sup>1</sup>, J. Derr<sup>2</sup>, M. Flessner<sup>1</sup>, C. Laub<sup>1</sup>, H. Mehl<sup>1</sup>, D. Miller<sup>1</sup>, D. Pfeiffer<sup>3</sup>, S. Taylor<sup>1</sup>, M. Weaver<sup>1</sup>, and J. Wilson<sup>1</sup>; <sup>1</sup>Virginia Tech University, <sup>2</sup>Weed Science Society of America, <sup>3</sup>VPI & State University.
- 8:30 - 8:45 AM A viability-qPCR test for quantifying viable pathogens of bacterial spot in tomato seed. **H. Wang**<sup>1</sup>, G. Vallad<sup>2</sup>, J. Jones<sup>2</sup>, and W. Turechek<sup>3</sup>; <sup>1</sup>Clemson University, <sup>2</sup>University of Florida, <sup>3</sup>USDA, ARS, U.S. Horticultural Research Laboratory.
- 8:45 - 9:00 AM Development of an IPM program for rose rosette disease using systemic acquired resistance inducer and biocontrol agents. **M. Paret**<sup>1</sup>, G. Knox<sup>1</sup>, X. Martini<sup>1</sup>, S. Joseph<sup>2</sup>, J. L. Williams-Woodward<sup>2</sup>, A. Fife<sup>1</sup>, A. Monterrosa<sup>2</sup>, F. B. Iriarte<sup>1</sup>, C. Alexander<sup>2</sup>, S. Da Silva<sup>1</sup>, B. Riddle<sup>1</sup>, K. Thomas<sup>1</sup>, and F. Ochoa Corona<sup>3</sup>; <sup>1</sup>University of Florida, <sup>2</sup>University of Georgia, <sup>3</sup>Oklahoma State University.
- 9:00 - 9:15 AM Rural integrated pest management implementations for Louisiana. G. Reagan, **B. Padgett**; Louisiana State University.
- 9:15 - 9:25 AM BREAK: Poster Viewing & Networking

### **Symposium, “Industry Sponsors”, Moderator: Shaker Kousik, SD-APS President**

- 9:25 - 10:30 AM **Marrone Bio Innovations** – Karla Medina, *Product Development & Technical Services Manager Southeast U.S., Wimauma, FL*  
**Nichino America, Inc.** – Scott Croxton, *Product Development Representative, LaBelle, FL*  
**Gowan USA** – Shine Taylor, *Southeast Field Development Representative, Bradenton, FL*

**Symposium, “Industry Sponsors”, *continued***

9:25 - 10:30 AM (continued) **Sakata Seed America, Inc.** – Traven Bentley, *Pathologist, Fort Myers, FL*  
**AMVAC Chemical Corporation** – Mason Newark, *Product Development Specialist, Gainesville, FL*  
**FMC Corporation Agricultural Solutions** – Blaire Colvin, *Technical Services Manager, Birmingham, AL*  
**SePRO** - Bangya Ma, *R&D Manager – Specialty Innovations, Whitakers, NC*

10:30 - 10:45 AM BREAK: Poster Viewing & Networking

10:45 - 12:15 PM **SD-APS Business Meeting & APS Update**

12:15 - 1:30 PM Lunch (provided)  
*Pre-function Area, Carolina Ballroom*

**Poster Session: Graduate Student Poster Competition and Contributed Papers**  
*Carolina Ballroom*

1:30 - 2:00 PM *Odd-numbered authors present*

2:00 - 2:30 PM *Even-numbered authors present*

2:30 - 2:45 PM BREAK: Networking

**Technical Session III**, *Moderators: Rufus Akinrinlola, SD-APS Graduate Student, and Madalyn Shires, SD-APS Graduate Student*

2:45 – 2:57 PM Predicting the *Peronospora belbahrii* secretome for *in silico* identification of effector proteins. **J. Standish**<sup>1</sup>, S. Purayannur<sup>1</sup>, M. Bowman<sup>2</sup>, K. Childs<sup>2</sup>, M. Tian<sup>3</sup>, and L. Quesada<sup>1</sup>; <sup>1</sup>North Carolina State University, <sup>2</sup>Michigan State University, <sup>3</sup>University of Hawaii.

2:57 - 3:09 PM Use of telomere fingerprinting to identify *Colletotrichum fioriniae* clones and application to cross-infection studies in Kentucky mixed-fruit orchards. **M. McCulloch**, E. Nuckles, L. Vaillancourt, and N. Gauthier; University of Kentucky.

3:09 - 3:21 PM Host-specific effectors of the cucurbit downy mildew pathogen *Pseudoperonospora cubensis*. **S. Purayannur**<sup>1</sup>, L. Cano<sup>1,2</sup>, M. Bowman<sup>3</sup>, K. Childs<sup>3</sup>, and L. Quesada<sup>1</sup>; <sup>1</sup>North Carolina State University, <sup>2</sup>University of Florida, <sup>3</sup>Michigan State University.

### Technical Session III, *continued*

- 3:21 - 3:33 PM      Development of a novel isothermal molecular assay with an internal control to detect Tomato brown rugose fruit virus. **R. Li**<sup>1</sup>, B. Davenport<sup>1</sup>, S. Zhang<sup>1</sup>, K. Schuetz<sup>1</sup>, and K. Ling<sup>2</sup>; <sup>1</sup>Agdia, Inc., <sup>2</sup>USDA-ARS.
- 3:33 - 3:45 PM      WITHDRAWN
- 3:45 - 3:57 PM      WITHDRAWN
- 3:57 - 4:09 PM      Development of leaf spots and fruiting bodies by *Stagonosporopsis citrulli* on fungicide-treated watermelon leaves in the field. **A. Keinath**; Clemson University.
- 4:09 - 4:21 PM      Citrus greening disease in Georgia citrus. **T. Stackhouse**, S. Waliullah, J. Price, J. Oliver, and E. Ali; University of Georgia.
- 4:21 - 4:33 PM      Evaluation of succinate dehydrogenase inhibitors for control of southern root-knot nematode and fungal pathogens in watermelon. **S. Wong** and L. Quesada-Ocampo; North Carolina State University.
- 4:33 - 4:45 PM      Pan-genome-wide analysis of *Pantoea ananatis* identified genes associated with onion pathogenicity. **G. Agarwal**, D. Choudhary, S. Stice, B. Kvitko, R. Gitaitis, and B. Dutta; University of Georgia.
- 4:45 - 4:57 PM      Response of snap bean genotypes to two distinct begomoviruses associated with leaf crumple disease. **S. Kavalappara**, B. Dutta, and R. Srinivasan; University of Georgia.
- 4:57 - 5:30 PM      Poster Breakdown
- 4:57 - 6:00 PM      BREAK: *Networking*
- 6:00 - 7:00 PM      **Social Hour**  
*Colonial Ballroom*
- 7:00 - 9:00 PM      **Awards Banquet**  
*Colonial Ballroom*



## **Contributed Papers (Posters)**

*Posters will be displayed in the Carolina Ballroom.*

\*Indicates Student Competition Paper

\*\*Indicates Southern Plant Diagnostic Network Laboratory Update

- \*1. Detection of airborne inoculum of *Nothopassalora personata* in peanut fields using impaction spore traps coupled with a qPCR assay. **M. Munir**, H. Wang, and D. Anco; Clemson University.
- \*2. Decomposition treatments for reducing *Nothopassalora personata* inoculum in peanut fields. **H. Becton**, E. Cieniewicz, K. Kirk, and D. Anco; Clemson University.
- \*3. Identification and biocontrol potential of antagonistic bacterial strains against *Pseudomonas syringae* pv. *tomato*. **C. Oksel**<sup>1</sup>, F. Baysal-Gurel<sup>1</sup>, and M. Mirik<sup>2</sup>; <sup>1</sup>Tennessee State University, <sup>2</sup>Namik Kemal University.
- \*4. Micronutrients affect induced resistance in watermelon against *Fusarium oxysporum* f. sp. *niveum* and *Meloidogyne incognita* infection. **K. Karki**<sup>1</sup>, B. Dutta<sup>1</sup>, A. Hajihassani<sup>1</sup>, T. Coolong<sup>1</sup>, C. Kousik<sup>2</sup>, and M. Mandal<sup>3</sup>; <sup>1</sup>University of Georgia, <sup>2</sup>U.S. Vegetable Laboratory, USDA-ARS, <sup>3</sup>Claflin University.
- \*5. Temperature effect on *Fusarium oxysporum* f.sp. *niveum* disease incidence in watermelon seedlings. **Z. Xu** and N. Dufault; University of Florida.
- \*6. WITHDRAWN
- \*7. Identification of accessions of melon (*Cucumis melo*) germplasm with resistance to bacterial wilt of cucurbits using mechanical inoculations. **B. Acharya**, L. Mackasmiel, and K. Dumenyo; Tennessee State University.
- \*8. Control of Phytophthora root rot of boxwood with chemical fungicides, biofungicides, fertilizers and host plant defense inducers in field production. **S. Neupane**, T. Simmons, and F. Baysal-Gurel; Tennessee State University.
- \*9. Optimal timing for preventative Pythium root rot management. **H. Hampy**; North Carolina State University.
10. Evaluating candidate anthracnose disease resistance genes in sorghum. **L. Stutts**<sup>1</sup>, W. Vermerris<sup>1</sup> and H. Cuevas<sup>2</sup>; <sup>1</sup>University of Florida, <sup>2</sup>USDA.
11. The occurrence of *Meloidogyne floridensis* on collard greens in Georgia, USA. J. Marquez, F. Forghani, **A. Hajihassani**; University of Georgia.
12. Evaluation of selected *Bacillus* spp. as biological control agents for Phytophthora Blight disease (*Phytophthora capsici*) in pepper. **B. Bhusal** and M. Mmbaga; Tennessee State University.

## **Contributed Papers (Posters), continued**

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13. Two season evaluation of diversity, pathogenicity and mycotoxin production potential of *Fusarium* spp. in North Carolina. **S. Cochran**, B. Bronico, M. Salazar, and L. Thiessen; North Carolina State University.
14. Phylogeography of *Ditylenchus gallaeformans*. **S. Azevedo de Oliveira**, P. Agudelo, and S. DeWalt; Clemson University.
15. Report of the Cottonseed Treatment Committee for 2019. **R. Guyer**<sup>1</sup>, Shelly Pate<sup>1</sup>, T. Allen<sup>2</sup>, P. Colyer<sup>3</sup>, T. Isakeit<sup>4</sup>, R. Kemerait<sup>5</sup>, K. Lawrence<sup>6</sup>, H. Mehl<sup>7</sup>, P. Price<sup>3</sup>, A. Rojas<sup>8</sup>, L. Thiessen<sup>9</sup>, T. Wilkerson<sup>2</sup>, and H. Kelly<sup>1</sup>; <sup>1</sup>University of Tennessee, <sup>2</sup>Mississippi State University, <sup>3</sup>Louisiana State University, <sup>4</sup>Texas A&M University, <sup>5</sup>University of Georgia, <sup>6</sup>Auburn University, <sup>7</sup>Virginia Tech University, <sup>8</sup>University of Arkansas, <sup>9</sup>North Carolina State University.
16. Identification of molecular biomarkers associated with reniform nematode (*Rotylenchulus reniformis*) resistance in soybean. **J. Wilkes** and P. Agudelo; Clemson University.
17. Potential host range and effects of taproot decline on rotation cover crops. J. Moscoso, S. Winters, and **A. Rojas**; University of Arkansas.
18. Bacterial biocontrol agents against fungal and oomycete pathogens of rice and other field crops. L. Delgado<sup>1</sup>, S. Winters<sup>2</sup>, C. Rojas<sup>2</sup>, and **A. Rojas**<sup>2</sup>; <sup>1</sup>Universidad de los Andes, Bogota, Colombia, <sup>2</sup>University of Arkansas.
19. Chemical management to reduce tomato spotted wilt virus on tobacco in North Carolina. **Y. Rosado-Rivera**, H. Burrack, A. Toennisson, and L. Thiessen; North Carolina State University.
20. Evaluation of fungicides and cultivars for control of cucumber downy mildew. **M. Adams**, K. D'Arcangelo, and L. Quesada-Ocampo; North Carolina State University.
21. Identification of effective fungicides for control of black rot, caused by *Ceratocystis fimbriata*, in sweetpotato for domestic and export markets. **H. Collins** and L. Quesada; North Carolina State University.
22. Pathogenic and genetic diversity of *Corynespora cassiicola* isolates from tomato across Florida. **K. Xavier**<sup>1</sup>, L. Sumabat<sup>2</sup>, M. Brewer<sup>2</sup>, and G. Vallad<sup>1</sup>; <sup>1</sup>University of Florida, <sup>2</sup>University of Georgia.
23. Susceptibility of hemp varieties to leaf spot in Tennessee. **Z. Hansen**<sup>1</sup>, H. Kelly<sup>1</sup>, M. Cartwright<sup>1</sup>, and E. Walker<sup>2</sup>; <sup>1</sup>University of Tennessee, <sup>2</sup>Burley Stabilization Corporation.
24. Palm diseases and their management. **B. Dhillon**; University of Florida.

## **Contributed Papers (Posters), continued**

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- \*\*25. The University of Arkansas Plant Health Clinic. S. Smith and **K. Romero**; University of Arkansas.
- \*\*26. Alabama - Auburn University Plant Diagnostic Lab. **K. Conner** and J. Jacobi; Auburn University.
- \*\*27. University of Kentucky Plant Disease Diagnostic Laboratory State Report, SPDN Meeting 2020. **J. Beale**, B. Kennedy, S. Long, and P. Vincelli; University of Kentucky.
- \*\*28. The Mississippi State University Extension Service Plant Diagnostic Laboratory 2019 SPDN Activity Report. **C. Balbalian**; Mississippi State University.
- \*\*29. Intensive training in plant problem diagnosis by the NC State Plant Disease and Insect Clinic. **B. Shew**, M. Bertone, M. Munster, and S. Butler; North Carolina State University.
- \*\*30. Louisiana Plant Diagnostics Report 2019. **R. Singh**; Louisiana State University.
- \*\*31. The guardians of our present and future: Plant diagnosticians safeguarding plant health across the state of Florida. **S. Bec**, R. Gazis, M. Paret, P. Roberts, N. Peres, F. Iriarte, P. Tian<sup>1</sup>, J. Fulton, and C. Harmon; University of Florida.
- \*\*32. Recent updates on the University of Georgia Extension Plant Pathology Southern Plant Diagnostic Network Plant Disease Clinics and Nematology Lab. **A. Jogi**, P. Brannen, J. Brock, B. Dutta, G. Jagdale, R. Kemerait, E. Little, A. Martinez-Espinoza, J. Oliver, and J. Williams-Woodward; University of Georgia.
- \*\*33. New state, county records for insect and mite pests, plant diseases in Tennessee in 2019. **A. Windham**, F. Hale, D. Hensley, M. Windham, B. Kauffman, and R. Florence; University of Tennessee.
- \*\*34. Trends and impacts, interesting diagnoses, quality control and new testing in the Virginia Tech Plant Disease Clinic. **E. Bush** and M. Hansen; Virginia Tech University.
- \*\*35. WITHDRAWN
- \*\*36. Texas Plant Disease Diagnostic Laboratory at Texas A&M Annual Report. **K. Ong**, V. Ayala, and S. McBride; Texas A&M University.
- 37. Characterization, detection and management of emerging tomato brown rugose fruit virus infecting greenhouse tomatoes in the U.S. **B. Chanda**<sup>1</sup>, M. Galvez<sup>2</sup>, S. Nunziata<sup>3</sup>, Y. Rivera<sup>3</sup>, A. Gilliard<sup>1</sup> and K. Ling<sup>1</sup>, <sup>1</sup>USDA-ARS, <sup>2</sup>North Carolina State University, <sup>3</sup>USDA-APHIS-PPQ-S&T-CPHST.



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- 38. Does crop rotation influence inoculum density of *Xylaria* sp., the pathogen of taproot decline of soybean? **A. Badial**, K. Phillips, T. Wilkerson, and M. Tomaso-Peterson; Mississippi State University.
- 39. Physiological and molecular-genetic characterization of basal resistance in sorghum. **R. Samira**<sup>1</sup>, J. Kimball<sup>2</sup>, L. Lopez<sup>3</sup>, G. Stacey<sup>4</sup>, and P. Balint-Kurti<sup>3</sup>; <sup>1</sup>Texas Tech University, <sup>2</sup>University of Minnesota, <sup>3</sup>North Carolina State University, <sup>4</sup>University of Missouri.
- 40. Evaluation of Salibro as a new nematicide against major plant-parasitic nematodes. **B. Lawaju** and K. Lawrence; Auburn University.
- 41. Steam-based thermotherapy for non-chemical management of nematodes in strawberry transplants. J. Desaegeer, **C. Khanal**, and H. Regmi; University of Florida.
- 42. Phylogenetic informativeness of mitochondrial protein-coding genes in Nematoda. **X. Ma**, J. Baeza, V. Richards, and P. Agudelo; Clemson University.
- 43. Occurrence of the root-knot nematode *Meloidogyne enterolobii* infecting sweetpotato in North Carolina, United States. **W. Ye**, T. Schwarz, E. Davis, L. Thiessen, L. Quesada-Ocampo, and A. Gorny; North Carolina State University.
- 44. Exploring new control methods for ‘*Candidatus Liberibacter asiaticus*’ by using genetically engineered *Liberibacter crescens* strains. **M. Sena-Velez**<sup>1</sup>, J. Portilla<sup>1</sup>, S. Holland<sup>1</sup>, M. Jain<sup>2</sup>, D. Gabriel<sup>2</sup>, and K. Jones<sup>1</sup>; <sup>1</sup>Florida State University, <sup>2</sup>University of Florida.
- 45. Evaluating the response of new soybean germplasm to environmental conditions that promote reduced grain quality. **J. Fomba**<sup>1</sup>, M. Tomaso-Peterson<sup>1</sup>, D. Cook<sup>1</sup>, T. W. Allen<sup>1</sup>, R. Smith<sup>2</sup>, and T. H. Wilkerson<sup>1</sup>; <sup>1</sup>Mississippi State University, <sup>2</sup>USDA, ARS.
- \*\*46. Observations for 2019 from the Clemson University Plant and Pest Diagnostic Clinic. **M. Williamson**; Clemson University.

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*See you next year in Baton Rouge, Louisiana!*

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## Southern IPM Center

The Southern IPM Center is one of four regional IPM Centers funded by the USDA National Institute of Food and Agriculture operating as a hub of multi-state partnership and community network. We serve a variety of stakeholders, including extension agents, growers, government agencies, and researchers.

Our Center includes three university partners: N.C. State University, Auburn University, and the University of Georgia. We serve Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, Puerto Rico and the Virgin Islands.

The Southern IPM Center promotes the adoption of IPM practices driven by strong science to solve pest management issues in agricultural, urban, and rural settings to identify and address regional priorities for research, education, and outreach.

To accomplish that goal, the Center coordinates, enhances, and facilitates the flow of resources and information in IPM to and among stakeholders through grants management; fulfilling prioritization of pest management needs submitted through working groups, research, and Extension projects; documenting IPM impacts through crop profiles and pest management strategic plans; and the organization of efficient responses to regional emerging issues.

Our programs include:

- **Grant Opportunities** to help fund innovation and broader application of IPM, respond to critical needs of the region, and give stakeholders a voice
- **Facilitation of Innovation Through Technology (FITT)** to facilitate communication, sharing of information, and provide tools that assist in common research and extension activities
- **Underserved Audiences Program** to better assist specific academic audiences through a grant writing workshop and mentoring program
- **Pollinator Protection** to engage with Southern Region stakeholders in addressing the pollinator health and protection issues
- **Invasive species and Resistance Management** to provide tools and coordination that can mitigate the impact of these threats
- **Regulatory Science Network** to ensure documentation of current production practices is readily available to inform regulatory decisions and provide documentation of stakeholder priorities

For more information, visit our website at [www.southernipm.org](http://www.southernipm.org) or follow us on Twitter and Facebook @SouthernIPM.

## Southern Plant Diagnostic Network

The Southern Plant Diagnostic Network (SPDN) comprises 12 states and two U.S. island territories: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee, Texas, Virginia, and the US Virgin Islands. The SPDN hub laboratory and Regional Center are located at the University of Florida. Plant pathologists represent most states. The SPDN comprises subtropical to temperate climates and therefore plants under its protection include a diversity across agronomics, specialty crops, and natural areas. USDA-NIFA funds support lab functions as well as training efforts for diagnosticians and identifiers throughout the region, including the two diagnostic workshops at the SD-APS meeting this year. The SPDN Regional Director is Dr. Jeffrey B. Jones, Distinguished Professor of the UF Department of Plant Pathology. Dr. Carrie Lapaire Harmon serves as project director and NPDN Executive Director and directs the hub laboratory. Together they administer regional funding allocations and coordinate diagnostic efforts in the SPDN. Find us on the web at [www.NPDN.org](http://www.NPDN.org) and on Facebook at [facebook.com/SouthernPlantDiagnosticNetwork](https://facebook.com/SouthernPlantDiagnosticNetwork).

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