10th International IPM Symposium
Concurrent Session Program – 2/17/22

1
Global Challenges: Transboundary Pests of Global Significance
Governor's Square 14

8:30
1.1
Introductory remarks: Jhalendra Rijal

8:35
1.2
Strengthening pest outbreak alert and response systems, Sarah Brunel, sarah.brunel@fao.org, International Plant Protection Convention Secretariat, FAO, Rome, Italy

8:50
1.3
Integration of biological control into IPM practices by smallholder farmers in developing countries, Wade Jenner, w.jenner@cabi.org, CABI, Delémont, Switzerland

9:05
1.4
The Role of APHIS Preclearance Programs in the Management of Transboundary Pests and Disease, John E. Bowman, John.Bowman@usda.gov, Animal Plant Health Inspection Service, Plant Protection and Quarantine, Pest Exclusion and Import Programs, Preclearance and Offshore Programs, Riverdale, MD

9:20
1.5
Precision agriculture to reduce negative impacts to the agro-ecosystem in the Netherlands, Corne Kempenaar, corne.kempenaar@wur.nl, Wageningen University & Research, Wageningen, Netherlands

9:35
1.6
Supporting farmers in IPM: The road from Plantwise to PlantwisePlus, Janny Vos, j.vos@cabi.org, CABI, Leusden, Netherlands

9:50
Closing remarks

10:15
Introductory remarks: Jhalendra Rijal, jrijal@ucdavis.edu, University of California Agriculture and Natural Resources & Statewide IPM Program, Modesto, CA

10:20
1.7
Pest Management in High Value Fruit Crops: Is IPM the Correct Framework? Michael Seagraves, michael.seagraves@driscolls.com, Driscoll's, Aromas, CA

10:35
1.8
IPM in soybean in Brazil and other South American countries, Adeney de Freitas Bueno,

adeney.bueno@embrapa.br, EMBRAPA (Brazilian Agricultural Research Centre, Ministry of Agriculture), Brazil

10:50
1.9
Resistance Gene Rotation: A Novel Addition to the IPM Playbook, Dilantha Fernando, Dilantha.Fernando@umanitoba.ca, University of Manitoba, Winnipeg, MB, Canada

11:05
1.10
Ongoing IPM practices in multiple cropping systems in China, William Guangwei Yu, yuguangwei@139.com, Weifang University of Science & Technology, Weifang, Shouguan, China

11:20
1.11
Successes and Lesson-learned from the Farmer's Field School-based IPM in tackling endemic and exotic pests in Nepal, Jhalendra Rijal, jrijal@ucdavis.edu, University of California Agriculture and Natural Resources & Statewide IPM Program, Modesto, CA

11:35
Closing remarks

2
Bridging the Divide: Pathways to Partnership for Pesticide Safety Education and IPM
Governor's Square 15

8:30
2.1
Panel Discussion, Amanda Bachmann, amanda.bachmann@sdstate.edu, South Dakota State University, Brookings, SD; Lisa Blecker, lisa.blecker@colostate.edu, Colorado State University, Fort Collins, CO; James Jay Farrar, jjfarrar@ucanr.edu, Statewide Integrated Pest Management Program, University of California Agriculture and Natural Resources, Davis, CA; Joseph LaForest, laforest@uga.edu, Southern IPM Center, University of Georgia, Tifton, GA; Rebecca Melanson, rebecca.melanson@msstate.edu, Mississippi State University, Mississippi State, MS; Gene Merkl, gm53@msstate.edu, Mississippi State University, Mississippi State, MS; David Owens, owensd@udel.edu, University of Delaware, Newark, DE; Shelby Pritchard, Shelby.Pritchard@sdstate.edu, South Dakota State University, Brookings, SD; Kerry Richards, kerryr@udel.edu, University of Delaware, Newark, DE

10:15
2.2
Panel Discussion, Conversations with state lead agency personnel and program coordinators about achieving IPM Roadmap goals

3
Novel Tools and Opportunities for Cucurbit IPM in North America
Plaza Ballroom F

8:30 AM
3.1
Implementing cucumber beetle IPM for pollinator protection, Ashley Leach, leach.379@osu.edu, Entomology Department, Ohio State University, Ohio Agricultural Research and Development Center, Wooster, OH; Jacob Pecenka, Laura Ingwell, Rick Foster, Christian Krupke, Ian Kaplan, Department of Entomology, Purdue University, West Lafayette, IN

8:45 AM

3.2
Seasonal and spatial patterns of attraction to vittatalactone, Ariela Haber, ariela.haber@usda.gov, Invasive Insect Biocontrol and Behavior Laboratory, USDA Agricultural Research Service, Beltsville, MD; Kayla Pasteur and Don Weber, Invasive Insect Biocontrol and Behavior Laboratory, USDA Agricultural Research Service, Beltsville, MD

9:00 AM
3.3
Developing attractive and repellant semiochemicals for behaviorally-based cucumber beetle management, Christie Shee, cshee@purdue.edu, Department of Entomology, Purdue University, West Lafayette, IN; Zsofia Szendrei, Department of Entomology, Michigan State University, East Lansing, MI; Don Weber, USDA Agricultural Research Service, Beltsville, MD; Hui Zhu, School of Life Sciences, Northeast Normal University Changchun, China; Ian Kaplan, Department of Entomology, Purdue University West Lafayette, IN

9:15 AM
3.4
Vittatalactone: A keystone semiochemical for use in cucurbit pest management?, Don Weber, don.weber@usda.gov, Invasive Insect Biocontrol and Behavior Laboratory, USDA Agricultural Research Service, Beltsville, MD; Ariela Haber, Kayla Pasteur, Invasive Insect Biocontrol and Behavior Laboratory, USDA Agricultural Research Service, Beltsville, MD

9:30 AM
3.5
Integrating feeding stimulants into cucurbit IPM, Anna Wallingford, anna.wallingford@unh.edu; Department of Agriculture, Nutrition and Food Systems, University of New Hampshire, Durham, NH; Fathi Halaweish, Department of Chemistry and Biochemistry, South Dakota State University, Brookings, SD; Don Weber, Invasive Insect Biocontrol and Behavior Laboratory, USDA Agricultural Research Service, Beltsville, MD; Tom Kuhar, Department of Entomology, Virginia Tech, Blacksburg, VA; Helene Doughty, Department of Entomology, Virginia Tech, Painter, VA; Brent Short, Trécé Inc., Hedgesville, WV

9:45 AM
3.6
The egg parasitoid *Gryon pennsylvanicum* for biological control of squash bugs (*Anasa* spp.), Sean Boyle, seanboyle@vt.edu, Department of Entomology, Department of Entomology, Virginia Tech, Blacksburg, VA; Mary Cornelius, Invasive Insect Biocontrol and Behavior Laboratory, USDA Agricultural Research Service, Beltsville, MD; Tom Kuhar, Department of Entomology, Virginia Tech, Blacksburg, VA

10:15 AM
3.7
The pest control and pollinator protection dilemma: The case of thiamethoxam prophylactic applications in squash crops, Diana Obregon, do265@cornell.edu, Department of Entomology, Cornell University, Ithaca, NY; Grace Pederson, Department of Biological Sciences, Cornell University, Ithaca, NY; Alan Taylor, Department of Horticulture, Cornell AgriTech, Cornell University, Geneva, NY; Katja Poveda, Department of Entomology, Cornell University, Ithaca, NY

10:30 AM
3.8
Relating *Bombus* visitation to colony density and field scale: Implications for balancing bee safety and *Acalymma* management, Shelby J. Fleischer, sjf4@psu.edu, Department of Entomology, Penn State University, University Park, PA; Carley McGrady, Department of Entomology, Penn State University, University Park, PA; Margarita Lopez-Uribe, Department of Entomology, Penn State University, University Park, PA; James Strange, Department of Entomology, Ohio State University, Columbus, OH

10:45 AM

3.9
Novel approaches to addressing the challenge of cucumber beetles in California cucurbits, Ian Grettenberger, imgrettenberger@ucdavis.edu, Department of Entomology and Nematology, University of California Davis, Davis, CA; Jasmin Ramirez Bonilla, Department of Entomology and Nematology, University of California Davis, Davis, CA; Amber Vinchesi-Vahl, University of California Cooperative Extension, Colusa County, Colusa, CA

11:00 AM
3.10
Can living mulches harmonize chemical and biological control of cucurbit pests? Carmen Blubaugh, carmen.blubaugh@uga.edu, Department of Entomology, University of Georgia, Athens, GA; Allison Stawara, Department of Entomology, University of Georgia, Athens, GA; Tom Kuhar, Department of Entomology, Virginia Tech, Blacksburg, VA; Jim Walgenbach, Tom Bilbo, Department of Entomology and Plant Pathology, North Carolina State University, Mountain Horticultural Crops Research & Extension Center, Mills River, NC; Helene Doughty, Department of Entomology, Virginia Tech, Painter, VA; Lorena Lopez, Courtney Walls, Sean Boyle, Department of Entomology, Virginia Tech, Blacksburg, VA; Adam Alford, Assistant Professor of Agronomy, Southwest Minnesota State University, Marshall, MN

11:15 AM
3.11
Breeding to support IPM in cucurbit crops, Lauren Brzozowski, ljb279@cornell.edu, Section of Plant Breeding & Genetics, School of Integrative Plant Science, Cornell University, Ithaca, NY; Michael Mazourek, Section of Plant Breeding & Genetics, School of Integrative Plant Science, Cornell University, Ithaca, NY

11:30 AM
3.12
Virus and vector IPM in *Cucumis melo*: Trying to hit a moving target, Kerry Mauck, kerry.mauck@ucr.edu, Department of Entomology, University of California, Riverside, Riverside, CA; Jaimie Kenney, Penglin Sun, Department of Entomology, University of California, Riverside, CA; Quentin Chesnais, Institut National de Recherche en Agriculture, Alimentation et Environnement, Université de Strasbourg, Colmar, France; Marco Gebiola, Department of Entomology, University of California, Riverside, CA

4
Use of Drones in IPM Monitoring Application of Low Risk Pesticides and for Biological Organism Releases
Plaza Ballroom E

8:30
4.1
Introduction

8:35
4.2
Drone in Commercial Uses, Kirk Floyd, kdroneservices@gmail.com, Kdrone Services LLC, Damascus, MD

8:55
4.3
Use of drone to apply low risk pesticides to commercial horticulture crops, Stanton Gill, sgill@umd.edu, Central Maryland Research and Education Center, University of Maryland Extension, Ellicott City, MD

9:25
4.4
Identification of Nutrient Deficiency and Water Stress in Ornamental Plant Production, Andrew G. Ristvey, aristvey@umd.edu, Wye Research and Education Center, University of Maryland Extension, Queenstown, MD

9:40
4.5
Use of Drone in Disease Monitoring in Commercial Horticulture Crops, David Clement, Clement@umd.edu, Home and Garden Information Center, University of Maryland Extension, Ellicott City, MD: Karen Rane, Plant Diagnostic Laboratory, Department of Entomology, University of Maryland, College Park, MD

5
Students: The future of IPM research
Plaza Ballroom AB

8:30
5.1
Developing management systems for corn earworm, *Helicoverpa zea*, in Alabama hemp, Alejandra Velez, azv0040@auburn.edu, Department of Entomology and Plant Pathology, Auburn University, Auburn, AL; I.N. Thweatt; K.A. Kesheimer

8:42
5.2
Understanding Fov4 infection in cotton, Catherine Danmaigona Clement, cdanmaigona@tamu.edu, Dept. Soil and Crop Sciences, Dept. Biochemistry and Biophysics, Texas A&M University, College State, TX; Fausto Andres Ortiz, Texas A&M University, College Station, TX; Zunyong Liu, Texas A&M University, College Station, TX; Steve Hague, Texas A&M University, College Station, TX; Terry Wheeler, Texas A&M AgriLife Research, Lubbock, TX; Jane K Dever, Texas A&M AgriLife Research, Lubbock, TX; Ping He, Texas A&M University, College Station, TX; Libo Shan, Texas A&M University, College Station, TX

8:54
5.3
Remote Sensing as a new approach to monitor defoliation in soybean plants, Fernando Iost Filho, fernandohiost@usp.br, Department of Entomology and Acarology, University of São Paulo/ESALQ, Piracicaba, SP, Brazil

9:06
5.4
Reduced dispersal capacity of the invasive larger grain borer (*Prostephanus truncatus*) and the cosmopolitan maize weevil (*Sitophilus zeamais*) after exposure to a novel and reduced risk insecticide, Hannah Quellhorst, hquellho@ksu.edu, Department of Entomology, Kansas State University, Manhattan, KS; Frank H. Arthur, USDA, Agricultural Research Service, Center for Grain and Animal Health Research, Manhattan, KS; Kun Yan Zhu, Department of Entomology, Kansas State University, Manhattan, KS; William R. Morrison III, USDA, Agricultural Research Service, Center for Grain and Animal Health Research, Manhattan, KS

9:18
5.5
Plot Size Effects on Non-Target Organism Ecology in Cotton, Isodora Bordini, icb@arizona.edu, Maricopa Agricultural Center, University of Arizona, Maricopa, AZ; Peter C. Ellsworth; Steven E. Naranjo

9:30
5.6
Evaluating Nitrogen Rates on Plant Growth and Chemical Composition in Outdoor Hemp in Alabama, Ivy Thweatt, int0002@auburn.edu, Department of Entomology and Plant Pathology, Auburn University, Auburn, AL; Alejandra Velez; Katelyn Kesheimer

9:42
5.7

Parasitism rates of *Trichopoda pennipes* on *Nezara viridula* in Corn, Kendall Stacey, kstacey@ufl.edu, Department of Entomology and Nematology, University of Florida, Gainesville, FL; Norman Leppla, Glynn Tillman, Lillie Rooney, Nolan Missigman, Department of Entomology and Nematology, University of Florida, Gainesville, FL

9:54
5.8
Occurrence and Duration of Mating Prior to First Oviposition in the Southern Green Stink Bug, *Nezara viridula* (Hemiptera: Pentatomidae), Lillie Rooney, rooney.lillie@ufl.edu, Department of Entomology and Nematology, University of Florida, Gainesville, FL

10:15
5.9
Cannabis aphid: A New Aphid Vector of Potato Virus Y, Lisa Kairy, Lisa.Kairy@ colostate.edu, Department of Agricultural Biology, Colorado State University, Fort Collins, CO; William Jacob Pitt; Punya Nachappa

10:21
5.10
Utilizing Spore Trapping to Understand White Mold in Delaware, Madeline Henrickson, madelhen@udel.edu, Department of Plant and Soil Sciences, University of Delaware, Georgetown, DE; Alyssa M. Koehler

10:33
5.11
Pest Quest: A game of strategy, uncertainty, and sticky traps, Max Helmberger, helmberg@msu.edu, Department of Entomology, Michigan State University, East Lensing, MI; Timothy P. Lampasona, Department of Entomology, Rutgers University, Rutgers, NJ; Amanda R. Lorenz-Reaves, Department of Entomology, Michigan State University, East Lansing, MI; Matthew Grieshop, Department of Entomology, Michigan State University, East Lansing, MI

10:45
5.12
Volunteer Hemp Resilience to Spring Burndown Herbicide Application in Soybean Influenced by Selection of Active Ingredient, Milos Zaric, milos.zaric@huskers.unl.edu, Department of Agronomy & Horticulture, University of Nebraska, North Platte, NE; Jeff Golus; Kelly Bruns; Sam Wortman

10:57
5.13
Resistance is Futile: Whitefly Resistance Management and Pesticide Usage, Naomi Pier, nmpier@arizona.edu, Entomology and Insect Science Graduate Interdisciplinary Program, Maricopa Agricultural Center, University of Arizona, Maricopa, AZ; Peter C. Ellsworth, University of Arizona, Department of Entomology, Maricopa, AZ; John Palumbo, University of Arizona, Department of Entomology, Yuma, AZ; Yves Carrière, University of Arizona, Department of Entomology, Tucson, AZ;
Al Fournier, University of Arizona, Department of Entomology, Maricopa, AZ; Wayne Dixon, University of Arizona, Department of Entomology, Maricopa, AZ; Steven E. Naranjo, USDA-ARS, Maricopa, AZ; Steven J. Castle, USDA-ARS, Maricopa, AZ (deceased); Nilima Prabhaker, University of California, Riverside, CA (deceased)

11:09
5.14
Systems approach to IPM on low tunnel strawberry, Samantha Willden, saw326@cornell.edu, Cornell AgriTech, Cornell University, Geneva, NY

11:21-11:45
5.15
Discussion

6
The Science and Practice of Glyphosate Alternatives in the Urban Landscape
Plaza Ballroom D

8:30
6.1
Research on organic and alternative herbicide efficacy, Maggie Reiter, reit0215@umn.edu, University of Minnesota Extension, St. Paul, MN; Kai Umeda, University of Arizona Cooperative Extension, Phoenix, AZ

8:55
6.2
Practical application of lethal steam on educational campuses, David Lawson, david.lawson@colorado.edu, University of Colorado, Boulder, CO

9:20
6.3
Empowering homeowners with custom natural lawncare programs, Coulter Lewis, coulter@getsunday.com, Sunday, Boulder, CO

9:45
6.4
Discussion

7
Detection and Management of Fungicide-Resistant Plant Pathogens of Soybean
Plaza Ballroom E

10:15
7.1
Current status of fungicide-resistant pathogens that cause foliar diseases of soybean in the U.S., Carl A. Bradley, carl.bradley@uky.edu, Department of Plant Pathology, University of Kentucky, Princeton, KY; Danilo Neves, Department of Plant Pathology, University of Kentucky, Princeton, KY

10:27
7.2
Molecular assay identifying mutation associated with QoI-fungicide resistance in *Cercospora* spp. associated with Cercospora leaf blight of soybean, Bishnu Shrestha, Bshrestha@agcenter.lsu.edu, Department of Plant Pathology and Crop Physiology, Louisiana State University, Baton Rouge, LA; Ernesto da Silva, Vinson P. Doyle, Department of Plant Pathology and Crop Physiology, LSU AgCenter, Baton Rouge, LA; Tom Allen, Delta Research and Extension Center, Mississippi State University, Stoneville, MS; Pengyin Chen, Fisher Delta Research Center, University of Missouri, Portageville, MO; Blair Buckley, Red River Research Station, LSU AgCenter, Bossier City, LA; Guy B. Padgett, Dean Lee research and Extension Center, LSU AgCenter, Alexandria, LA; Xin-Gen Zhou, Texas A&M University System, AgriLife Research and Extension Center, Beaumont, TX; Heather M. Kelly, Department of Entomology and Plant Pathology, University of Tennessee, West Tennessee Research and Education Center, Jackson; Edward Sikora, Department of Entomology and Plant Pathology, Auburn University, AL; Terry Spurlock, Department of Plant Pathology, University of Arkansas System Division of Agriculture Cooperative Extension Service, Monticello, AR; John C. Rupe, Department of Plant Pathology, University of Arkansas, Fayetteville, AR; Jenny Koebernick, Department of Crop, Soil and Environmental Sciences, Auburn University, AL; Carl A. Bradley, Department of Plant Pathology, University of Kentucky Research and Education Center, Princeton, KY; Paul P. Price III, Macon Ridge Research Station, LSU AgCenter, Winnsboro, LA

10:39
7.3

Fungicide resistance of *Phakopsora pachyrhizi* in Brazil: An overview, Jhonatan Barro, jhonatan.barro@uky.edu, Department of Plant Pathology, University of Kentucky, Lexington, KY; Emerson M. Del Ponte, Department of Plant Pathology, Universidade Federal da Vicosa, MG, Brazil; Carl A. Bradley, Department of Plant Pathology, University of Kentucky, Princeton, KY

10:51
7.4
Fungicide Sensitivity of *Sclerotinia sclerotiorum* from U.S. Soybean and Dry Bean, Compared to Different Regions and Climates, Edgar Nieto Lopez, edgar.nieto@huskers.unl.edu, Department of Plant Pathology, University of Nebraska, Lincoln, NE; Thomas Jose Justo Miorini, Department of Plant Pathology, University of Nebraska, Carrington Research and Extension Center, North Dakota State University, Carrington, ND; Cristian A. Wulkop-Gil, Department of Plant Pathology, University of Nebraska, Department of Molecular Medicine, Scripps Research Institute, La Jolla, CA; Martin Chilvers, Department of Plant, Soil, and Microbial Sciences, Michigan State University, East Lansing, MI; Loren J. Giesler and Tamra A. Jackson-Ziems, Department of Plant Pathology, University of Nebraska, Lincoln, NE; Mehdi Kabbage, Department of Plant Pathology, University of Wisconsin-Madison, Madison, WI; Daren S. Mueller, Department of Plant Pathology and Microbiology, Iowa State University, Ames, IA; Damon L. Smith, Department of Plant Pathology, University of Wisconsin-Madison, Madison, WI; Juan Manuel Tovar-Pedraza, Centro de Investigación en Alimentación y Desarrollo, A. C., Culiacán, Mexico; Jaime F. Willbur, Department of Plant, Soil, and Microbial Sciences, East Lansing, MI; Sydney E. Everhart, Plant Science and Landscape Architecture, University of Connecticut, Storrs, Connecticut, CT

11:03
7.5
Evolution of fungicide resistance in oomycete communities associated with soybeans, Zachary Noel, zan0002@auburn.edu, Department of Entomology and Plant Pathology, Auburn University, Auburn, AL

8
Wood Destroying Insect Pest Exclusion Using Physical Barriers: A Sustainable Future for New and Existing Structures
Plaza Ballroom D

10:15
8.1
Qualifications and history of subterranean termite physical barriers and how research has evolved different barrier designs, Roger E. Gold, r-gold@tamu.edu, Department of Entomology (Emeritus), Texas A&M University, College Station, TX

10:45
8.2
Green Market and Code Compliance Challenges showing Hawaii Research from Jia Wei, what it looks like for CLT and MT, Holly Beard, hbeard@polyguard.com, TERM® Barriers by Polyguard Products, Honolulu, HI

11:15
8.3
Termite Barriers in the Building Envelope, Jill Heidorf, jheidorf@polyguard.com, TERM Barriers by Polyguard Products, McKinney, TX

9
Fresh from the Field: New IPM Technologies in Entomology and Plant Pathology
Plaza Ballroom E

1:15
9.1

Welcome, D. Tyler Mays

1:20
9.2
Advanced Insect Pest Scouting Applications for Smart Devices, Kristopher L. Giles, kris.giles@okstate.edu, Department of Entomology and Plant Pathology, Oklahoma State University, Stillwater, OK; Tom A. Royer, Nina Rudin, Department of Entomology and Plant Pathology, Oklahoma State University, Stillwater, OK; Brian Arnall, Department of Plant and Soil Sciences, Oklahoma State University, Stillwater, OK; Norman C. Elliott, USDA-ARS, Stillwater, OK; Jessica Lindenmayer, Trece, Inc., Adair, OK; Brian McCornack, Department of Entomology, Kansas State University, Manhattan, KS; Mike Brewer, Department of Entomology, Texas A&M University AgriLife Research Center, Corpus Christi, TX; Thomas Hess, Department of Entomology and Plant Pathology, Oklahoma State University, Stillwater, OK

1:38
9.3
In-Field Sensors for Plant Volatile Analysis, Qingshan Wei, qwei3@ncsu.edu, Department of Chemical and Biomolecular Engineering, North Carolina State University, Raleigh, NC

1:56
9.4
Pest Cotton App in Florida: Keep simple with identification and IPM information for farmers, Silvana V. Paula-Moraes, paula.moraes@ufl.edu, West Florida Research and Education Center/Entomology & Nematology Department/IFAS/University of Florida, Jay, FL; Marcelo Mendes Rabelo, West Florida Research and Education Center/Entomology & Nematology Department/IFAS/University of Florida, Jay, FL; Ethan Carter, Jackson County Extension Office/IFAS/University of Florida, Marianna, FL; Mauricio Alex Zientarski Karrei, Clyde William Fraisse, Agricultural and Biological Engineering/IFAS/University of Florida, Gainesville, FL

2:14
9.5
MyIPM for Row Crop Pests: A Smartphone Application to Increase Adoption of IPM, Francis Reay-Jones, freayjo@clemson.edu, Department of Plant and Environmental Sciences, Clemson University, Pee Dee Research Education Center, Florence, SC; Tim Bryant, Department of Plant and Environmental Sciences, Clemson University, Pee Dee Research Education Center, Florence, SC; Guido Schnabel, Department of Plant and Environmental Sciences, Clemson University, Clemson, SC

2:32
9.6
What is Holding Back the Adoption of Technology For Field Crop IPM, D. Tyler Mays

3:00
9.7
Welcome, D. Tyler Mays

3:05
9.8
IPM Wheat Model: Digital-Results of 37 Years of Experience for Development of Prognosis Systems Against Important Wheat Diseases in Germany, Jospeh Alexander-Verreet, javerreet@phytomed.uni-kiel.de, Institute of Phytopathology, University of Kiel, Kiel Germany; T. Birr, H. Kline, W. Hammer, R. Duttmann

3:23
9.9
Leveraging Data Science and Digital Tools to Support Precision Pest Management Practices, Andre Felli, Andre.felli@bayer.com, Climate FieldView, St. Louis, MO

3:41
9.10
Unmanned Aerial Systems (UAS) and Data Analytics in Disease Assessment of Field Crops, Mahendra Bhandari, Mahendra.bhandari@ag.tamu.edu, Texas A&M AgriLife Research and Extension Center-Corpus Christi, Corpus Christi, TX; Amir M.H. Ibrahim, Department of Soil and Crop Sciences, Texas A&M University, Hend Alkittawi, Jose Landivar, Anjuin Chang, Juan Landivar, Texas A&M AgriLife Research and Extension Center-Corpus Christi, Corpus Christi, TX; Jinha Jung, Purdue University, West Lafayette, IN

3:59
9.11
Using AgPest Monitor to coordinate data collection and near-real time visualization of outbreak data, Joe LaForest, laforest@uga.edu, Southern IPM Center, Tifton, GA; Roger Magarey, Southern IPM Center, Raleigh, NC; Rebekah Wallace, Charles Bargeron, Bugwood Center for Invasive Species and Ecosystem Health, University of Georgia, Tifton, GA

4:17
9.12
What is Holding Back the Adoption of Technology for Field Crop IPM
Panel Discussion

10
Using Active Learning to Enhance your IPM Programming
Governor's Square 15

1:15
10.1
Welcome & Introduction, Amara Dunn and Joellen Lampman

1:25
10.2
Teaching IPM through real-world scenarios, Dawn H. Gouge, dhgouge@email.arizona.edu, Department of Entomology, College of Agriculture and Life Science, University of Arizona, Maricopa, AZ

1:40
10.3
Hands-free Hands-on: Transforming a hands-on greenhouse IPM program during COVID, Elizabeth Lamb, eml38@cornell.edu, New York State Integrated Pest Management Program, Cornell University, Ithaca, NY; Brian Eshenaur, NYS IPM; Neil Mattson, Cornell University; John Sanderon, Cornell University

1:55
10.4
Using quizzes to engage audiences and teach pest ID, Edward Zaworski, zaworski@iastate.edu, Plant Pathology and Microbiology, Iowa State University, Ames, IA

2:10
10.5
Small changes to add active learning to your existing extension programs, Amara Dunn, arc55@cornell.edu, New York State Integrated Pest Management Program, Cornell University, Geneva, NY

2:25
10.6
Planning your own active learning & Final Questions, All speakers

11
Furthering Small Fruit IPM after a Decade-Long Battle with Spotted-Wing Drosophila
Plaza Ballroom F

1:15
11.1
Introductory Remarks

1:20
11.2
Progress on behavior-based control strategies to manage spotted-wing drosophila, Cesar Rodriguez-Saona, crodriguez@njaes.rutgers.edu, Department of Entomology, Rutgers University, P.E. Marucci Center, Chatsworth, NJ

1:35
11.3
Open-field observations and implementation of an Attract-and Kill strategy against *Drosophila suzukii,* Vaughn Walton, vaughn.walton@oregonstate.edu, Department of Horticulture, Oregon State University, Corvallis, OR; Gabriella Tait, Ryan Chave, Serhan Mermer, Edwin Harris, Chris Adams, Department of Horticulture, Oregon State University, Corvallis, OR; Jimmy Klick, Claira Castillo, Driscoll's Inc., Watsonville, CA; Marco Corradi, Berry Gardens, Maidstone, UK; Alberto Grassi, Marco Valerio Rossi-Stacconi, Fondazione Edmund Mach, St. Michele, Italy; Fatemeh Ganjisaffer, Frank Zalom, University of California, Davis, CA; Gregory Loeb, Nicholas Aflitto, Department of Entomology, Cornell AgriTech, Geneva, NY; Cesar Rodriguez-Saona, Department of Entomology, Rutgers University, New Brunswick, NJ; Ashfaq Sial, Department of Entomology, University of Georgia, Athens, GA; Phillip Fanning, Maine Food and Agriculture Center, University of Maine, Orono, ME; Rufus Isaacs, Steve Van Timmerin, Department of Entomology, Michigan State University, East Lansing, MI

1:50
11.4
Spotted-wing drosophila—An overview of classical biological control in the United States, Judith Stahl, judithmstahl@berkeley.edu, ESPM Department, University of California, Berkeley, CA; Xingeng Wang, Kim Hoelmer, Matt Buffington, Vaughn Walton, Greg Loeb, Jana Lee, Brian Hogg, Amanda Stout, Betsy Beers, Marc Kenis, Emilio Guerrieri, Massimo Giorgini, Claudio Ioriatti, Gianfranco Anfora, Antonio Biondi, Annabelle Firlej, Fu-Shou Chen, Hong-Mei Zhang, Yoohan Song, Kent Daane, ESPM Department, University of California, Berkeley, CA

2:05
11.5
Chemical control of spotted-wing drosophila (Diptera: Drosophilidae)—Current tactics, Philip D. Fanning, philip.fanning@maine.edu, School of Biology and Ecology, University of Maine, Orono, ME

2:20
11.6
Strategies to manage spotted-wing drosophila in organic systems, Ashfaq Sial, ashsial@uga.edu, Department of Entomology, University of Georgia, Athens, GA; Craig Roubos, Department of Entomology, University of Georgia, Athens, GA; Vaughn Walton, Department of Horticulture, Oregon State University, Corvallis, OR; Cesar Rodriguez-Saona, Department of Entomology, Rutgers University, New Brunswick, NJ; Rufus Isaacs, Department of Entomology, Michigan State University, East Lansing, MI; Kelly Hamby, Department of Entomology, University of Maryland, College Park, MD; Mary Rogers, Department of Horticultural Science, University of Minnesota, Saint Paul, MN; Oscar Liburd, Entomology and Nematology Department, University of Florida, Gainesville, FL; Donn Johnson, Entomology Department, University of Arkansas, Fayetteville, AR; Frank Zalom, Department of Entomology and Nematology, University of California Davis, Davis, CA; Kent Daane, ESPM, University of California, Berkeley, CA; Hannah Burrack, Department of Entomology and Plant Pathology, North Carolina State University,

Raleigh, NC; Jana Lee, USDA-ARS, Horticultural Crops Research Laboratory, Corvallis, OR; Philip Fanning, School of Biology and Ecology, University of Maine, Orono, ME

2:35
11.7
Discussion and Concluding Remarks

12
Global Challenges: IPM for Tropical Crops in Asia and Africa
Governor's Square 14

1:15
12.1
Role of IPM Innovation Lab in Developing IPM Packages for Tropical Crops, Rangaswamy (Muni) Muniappan, rmuni@vt.edu, Integrated Pest Management Innovation Lab, Virginia Tech, Blacksburg, VA

1:30
12.2
IPM packages for chickpea in Ethiopia, Tadele Tefera, ttefera@icipe.org, International Centre of Insect Physiology and Ecology (ICIPE), Addis Ababa, Ethiopia; Tarekegn Fite, International Centre of Insect Physiology and Ecology (ICIPE), Addis Ababa, Ethiopia and School of Plant Sciences, College of Agriculture and Environmental Sciences, Haramaya University, Dire Dhawa, Ethiopia

1:45
12.3
IPM package for Longan [*Dimocarpus longan* (Sapindaceae)], Anamika Sharma, anamika.sharma@FAMU.EDU, Department of Entomology, Florida A&M University, Tallahassee, FL; Hanh Tran, Hoa Nguyen Van, Plant Protection Division, Southern Horticultural Research Institute, My Tho city, Tien Giang, Vietnam; Rangaswamy Muniappan, Integrated Pest Management Innovation Lab, Virginia Tech, Blacksburg, VA

2:00
12.4
Ecologically-based IPM package for rice in Cambodia: Results and status of adoption, Virender Kumar, virender.kumar@irri.org, International Rice Research Institute, IRRI-Los Baños, Laguna, Philippines; Ricardo Oliva, Nancy Castilla, International Rice Research Institute, IRRI-Los Baños, Laguna, Philippines; Rica Joy Flor, Rathmuny Then, Akhara Ouk, Sokheng Keo, International Rice Research Institute, IRRI-Cambodia Office, Phnom Penh, Cambodia; Khay Sathya, Cambodian Agricultural Research and Development Institute, Phnom Penh, Cambodia; Chou Cheythyrith, General Directorate of Agriculture, Phnom Penh, Cambodia; Alexander Stuart, Pesticide Action Network, Brighton, UK; Buyung Hadi, Food and Agriculture Organization of the United Nations, Rome, Italy

2:15
12.5
IPM Training for Vegetable Farmers in Mozambique, Surendra K. Dara, skdara@ucanr.edu, University of California Cooperative Extension, San Luis Obispo, CA

13
Early Career Researchers in IPM: Balancing Work, Life, and Everything In Between
Plaza Ballroom AB

1:15
13.1
AWaRe: Communicating risk factors associated with wheat streak mosaic disease in the Northern Great Plains through the interactive learning tool AWaRe, Uta McKelvy, uta.mckelvy@montana.edu, Department of Plant

Science and Plant Pathology, Montana State University, Bozeman, MT; Mary Burrows, Department of Plant Science and Plant Pathology, Montana State University, Bozeman, MT

1:30
13.2
Perennial grass weed infestations within perennial grass forage systems, Zachary Howard, zachary.howard@ag.tamu.edu, Texas A&M AgriLife, College Station, TX

1:45
13.3
Transdisciplinary management of invasive vascular wilt pathogens: From the Colombian Pacific coast to Michigan in the US, Pedro Pablo Parra, parragir@msu.edu, Department of Plant, Soil and Microbial Sciences, Michigan State University, East Lansing, MI; Bernhard Löhr, Independent Palm Specialist, Germany; Romina Gazis, Tropical Research & Education Center, Department of Plant Pathology, University of Florida, Homestead, FL; Karan Chahal, Department of Plant, Soil and Microbial Sciences, Michigan State University, East Lansing, MI; Monique L. Sakalidis, Department of Plant, Soil and Microbial Sciences and Department of Forestry, Michigan State University, East Lansing, MI

2:00
13.4
A year of firsts: My experiences as a new mom and postdoc, Ashley Leach, leach.379@osu.edu, Entomology Department, Ohio State University, Ohio Agricultural Research and Development Center, Wooster, OH

2:15
13.5
Fostering a sense of togetherness and balance among your mentees and yourself in the lab starting from the ground up, Robert Morrison, william.robert.morrison@gmail.com, Stored Product Insects and Engineering Research Unit, USDA-ARS Center for Grain and Animal Health Research, Manhattan, KS

2:30
13.6
Navigating grants, fellowships and funds in academia, Priyadarshini Chakrabarti, pb1090@msstate.edu, Department of Biochemistry, Molecular Biology, Entomology and Plant Pathology, Oregon State University and Mississippi State University, Mississippi State, MS

14
Meeting the IPM Needs of Urban Growers
Plaza Ballroom D

1:15
14.1
Meeting the needs of urban growers, Jacqueline A. Kowalski, jacqueline.kowalski@uconn.edu, University of Connecticut Extension-Fairfield County, Bethel, CT

1:20
14.2
Understanding the goals and needs of Urban Farms in the Midwest: Results from a needs assessment survey in Indiana, Laura L. Ingwell, lingwell@purdue.edu, Entomology, Purdue University, West Lafayette, IN; Nathan Shoaf, Urban Agriculture State Coordinator, Extension, Purdue University

1:32
14.3
Observations on promoting IPM in urban agriculture, Marissa Schuh, mschuh@umn.edu, Extension, University of

Minnesota, Minneapolis, MN

1:44
14.4
University of Missouri Extension and Springfield Community Gardens—A productive IPM partnership, Patrick L. Byers, byerspl@missouri.edu, Extension, University of Missouri, Marshfield, MO

1:56
14.5
Utilizing Integrated Pest and Pollinator Management Strategies to Improve Pollinator Habitats and Plant Production and Urban Gardens. Jennifer B. Noseworthy, Jennifer.Noseworthy@indwes.edu, Biology, Indiana Wesleyan University, Marion, IN; Laura L. Ingwell and Brock Harpur, Purdue University

2:08
14.6
Vegetable grafting for the urban grower, Margaret Lloyd, mglloyd@ucanr.edu, Extension, University of California, Woodland, CA

2:20
14.7
Supporting Pest Management Needs of Urban Farmers in California, Karey Windbiel-Rojas, kwindbiel@ucanr.edu, Statewide Integrated Pest Management Program (UC IPM), University of California Agriculture and Natural Resources, Davis, CA

15
IPM Award Winner Stories
Governor's Square 15

3:00
15.1
Tom A. Royer, tom.royer@okstate.edu, Department of Entomology and Plant Pathology, Oklahoma State University, Stillwater, OK

3:20
15.2
Extension to Urban IPM Clientele: Why are low-hanging fruit so difficult to pick? Andrew M. Sutherland, amsutherland@ucanr.edu, University of California Cooperative Extension, Hayward, CA

3:40
15.3
Paradigm Shift, Change Management, Frank Meek, fmeek@rollins.com, Rollins, Inc., Atlanta, GA

4:00
15.4
Team Efforts Foster Adoption of Mating Disruption for Navel Orangeworm in California, David Haviland, dhaviland@ucanr.edu, University of California Cooperative Extension-Kern County, Bakersfield, CA; Jhalendra Rijal, Emily Symmes, Brad Higbee

16
Minimizing Disease and Weed Impacts on Pumpkin and Squash
Plaza Ballroom F

3:00

16.1
Three Approaches to Managing Bacterial Leaf Spot of Pumpkins and Squash, Elaine Roddy, elaine.roddy@ontario.ca, Agriculture Development Branch, Ontario Ministry of Agriculture, Food and Rural Affairs, Ridgetown, ON, Canada

3:25
16.2
Integrated Weed Management in Pumpkin- Opportunities and Challenges, Stephen Meyers, slmeyers@purdue.edu, Department of Horticulture and Landscape Architecture, Purdue University, West LaFayette, IN

3:50
16.3
Using Mustard Cover Crops as a Biofumigant to Manage Plectosporium Blight on Pumpkin, James Jasinski, jasinski.4@osu.edu, Extension, Ohio State University, Urbana, OH

17
Global Challenges: Roundtable Discussion on IPM in Developing Countries
Governor's Square 14

3:00
17.1
Roundtable Discussion on IPM in Developing Countries, moderators: Jhalendra Rijal, jrijal@ucdavis.edu, University of California Agriculture and Natural Resources & Statewide IPM Program, Modesto, CA; Rangaswamy (Muni) Muniappan, rmuni@vt.edu, IPM Innovation Lab, Virginia Tech, Blacksburg, VA

18
Growing Big Trees from Small Seeds
Plaza Ballroom AB

3:00
18.1
Introduction to the session: Growing Big Trees from Small Seeds, Lynnae Jess and Laura Iles
Organizers: Laura Iles, ljesse@iastate.edu, North Central IPM Center, Ames, IA; Lynnae Jess, jess@msu.edu, North Central IPM Center, East Lansing, MI

3:05
18.2
Great Lakes Urban Agriculture IPM Working Group, Jacqueline A. Kowalski, jacqueline.kowalski@uconn.edu, University of Connecticut Extension-Fairfield County, Bethel, CT

3:12
18.3
Do most with mess, Ben Phillips, phill406@msu.edu, Extension, Michigan State University, East Lansing, MI

3:19
18.4
Rights-of-Ways as Habitat| Collaborative Conservation in Practice, Caroline Hernandez, cah272@uic.edu, Energy Resources Center, University of Illinois-Chicago, Chicago, IL

3:26
18.5
Great Lakes Fruit: Maintaining connections to the past so that we can make the most of the future, Julianna

Wilson, jkwilson@msu.edu, Entomology, Michigan State University, East Lansing, MI

3:33
18.6
Public gardens as sentinels against invasive horticultural plants, Kurt Dreisilker, kdreisilker@mortonarb.org, Morton Arboretum, Lisle, IL; Theresa Culley, University of Cincinnati; Clair Ryan. Midwest Invasive Plant Network

3:40
18.7
The Pulse Crops Working Group: Advancing Stakeholder Research Priorities and Increasing IPM adoption, Audrey Kalil, audrey.kalil@ndsu.edu, Williston Research Extension Center, North Dakota State University, Williston, ND; Mary Burrows, Montana State University

3:47
18.8
The Midwest Grows Green Lawn & Land Forum, Ryan Anderson, randerson@ipminstitute.org, Community IPM, IPM Institute of North America, Madison, WI

3:54
18.9
Sunflower Pathology Working Group, Tom Gulya, tjgulya@gmail.com, USDA-ARS (retired), Santa Rosa, CA; Samuel Markell, North Dakota State University

19
Beyond CEUs: Developing Hands-on, Impact-Driven Programs for Structural Pest Management Applicator Education
Plaza Ballroom D

3:00
19.1
Welcome and Introduction to Session, Matthew Frye, mjf267@cornell.edu, New York State IPM Program, Cornell University, Carmel, NY

3:05
19.2
The National Pesticide Information Center: What concerns the public about pest professionals? Kaci Buhl, buhlk@ace.orst.edu, Pesticide Safety Education Program, Oregon State University, National Pesticide Information Center [National], Pesticide Educational Resources Collaborative [National], Corvallis, OR

3:25
19.3
Educational accountability and the 10,000 hour rule? Faith Oi, foi@ufl.edu, Entomology and Nematology Department, University of Florida, Gainesville, FL

3:50
19.4
Creating a pest house for hands-on applicator training, Janet Hurley, jahurley@ag.tamu.edu, Department of Entomology–IPM Program, Texas A&M AgriLife Extension Service, Dallas, TX

4:05
19.5
Incentivizing hands-on training with the Master Pest Control Technician certification designation, Eric Benson, ebenson@clemson.edu, Plant and Environmental Sciences Department, Clemson University, Clemson, SC

4:20
19.6
Questions/Closing remarks

20
Beyond the Field and Into the Community
Plaza Ballroom AB

8:30
20.1
Introduction, Shaku Nair

8:35
20.2
Communicating IPM to Urban & Community Audiences, Karey Windbiel-Rojas, kwindbiel@ucanr.edu, Statewide Integrated Pest Management Program, University of California, Davis, CA

9:05
20.3
Reducing pests, insecticide residues, and cockroach allergens in low-income communities through the adoption of IPM, Changlu Wang, changluw@rutgers.edu, Department of Entomology, Rutgers University, The State University of New Jersey, New Brunswick, NJ

9:35
20.4
Using pest biology and assessment-based management to reduce the use of chemical pesticides and manage insecticide resistance in bed bug control, Nina Ellen Jenkins, nej2@psu.edu, Department of Entomology, Penn State University, University Park, PA

10:15
20.5
Tick Surveillance in an Urban County, Jody Gangloff-Kaufmann, jlg23@cornell.edu, The NY State IPM Program, Cornell University, Babylon, NY

10:45
20.6
Survey Reveals Greatest Needs and Obstacles to IPM in Affordable Housing, Susannah Krysko Reese, sck27@cornell.edu, StopPests in Housing, Northeastern IPM Center, Cornell University, Ithaca, NY

11:15
20.7
The public is primed for learning more about the eco-epidemiology of vector-born disease, Dawn H. Gouge, dhgouge@email.arizona.edu, University of Arizona-MAC, Maricopa, AZ

21
Approaching IPM and Resistance Management through Understanding How Community Social Dynamics Can Affect Adoption
Plaza Ballroom E

8:30
21.1
IPM in Ag Retail is not an oxymoron, Amy Asmus, amy@afschem.com, Asmus Farm Supply, Rake, IA

8:42
21.2
The Wicked Nature of Herbicide Resistance, Jill Schroeder, jischroe1@gmail.com, Department of Entomology, Plant Pathology and Weed Science, New Mexico State University, Las Cruces, NM; David Shaw, Mississippi State University, Mississippi, MS

8:54
21.3
Fungicide resistance to frogeye leaf spot pathogen in Iowa, Daren S. Mueller, dsmuelle@iastate.edu, Department of Plant Pathology and Microbiology, Iowa State University, Ames, IA

9:06
21.4
Resistance Management Lessons from Area-Wide Insect Control, George Frisvold, gfrisvold@gmail.com, Agricultural & Resource Economics, University of Arizona, Tucson, AZ

9:18
21.5
Community Collaborative as an Alternative to Techno-Optimism and Individualism in Pest Resistance Management, Katherine Dentzman, dentzman@iastate.edu, Sociology and Criminal Justice, Iowa State University, Ames, IA

9:30
21.6
Eliciting Local Stakeholder Input to Evaluate the Economics of Community-Based Resistance Management, Alicia Rosburg, alicia.rosburg@uni.edu, Economics, University of Northern Iowa, Cedar Falls, IA; Alejandro Plastina, Michael Witt, Iowa State University, Ames, IA

9:42
21.7
Industry ideas to enable community-based resistance management adoption, Clinton Pilcher, clint.pilcher@corteva.com, Global Technical Education, Corteva Agriscience, Johnston, IA

10:15
21.8
Panel Discussion

22
Utilizing Soil Amendments to Improve Turfgrass Health and Suppress Turfgrass Disease
Plaza Ballroom D

8:30
22.1
Leveraging the rhizosphere to improve sports and recreational turfgrass field performance, Ryan Anderson, randerson@ipminsitute.org, Community IPM, IPM Institute of North America, Inc., Madison, WI

8:55
22.2
Case Study: North Shore Country Club, Dan Dinelli, ddinelli@aol.com, North Shore Country Club, Glenview, IL

9:20
22.3
Fertility and soil amendment manipulation for turfgrass disease management, Lee Miller,

purdueturfpath@gmail.com, Purdue University Extension, West Lafayette, IN

23
Integrated Pest Management Programs and Centers: Bringing Diverse Experience into Action
Governor's Square 14

8:30
23.1
Utah IPM Program in specialty crops yields results, Marion Murray, marion.murray@usu.edu, Department of Biology, Utah State University, Logan, UT; Diane Alston, Department of Biology, Utah State University, Logan, UT

8:55
23.2
Overview of the North Central IPM Center, Laura Iles, ljesse@iastate.edu, North Central IPM Center, Ames, IA

9:20
23.3
Idaho State IPM Program, Arash Rashed, arashed@uidaho.edu, Entomology, University of Idaho, Moscow, ID

10:15
23.4
California Statewide IPM Program, Jim Farrar, jjfarrar@ucanr.edu, UC Statewide IPM Program, UC Agriculture and Natural Resources, Davis, CA

10:40
23.5
Outline of the Center for IPM, Danesha Seth-Carley, Danesha_Carley@ncsu.edu, Center for IPM, University of North Carolina, Raleigh, NC

11:05
23.6
Overview of the Northeast IPM Center, Deb Grantham, dgg3@cornell.edu, Northeast IPM Center, Cornell University, Ithaca, NY

24
Managing Invasive Pests in the New Era of IPM in Specialty Crops
Plaza Ballroom F

8:30
24.1
Welcome and Introduction

8:35
24.2
Abundance of pestiferous mite species in blueberries and opportunities to use IPM principles to manage mite populations, Oscar E. Liburd, oeliburd@ufl.edu, Entomology and Nematology Department, University of Florida, Gainesville, FL; Lorena Lopez, Stella Ruber, Rosangela C. Marucci, Entomology and Nematology Department, University of Florida, Gainesville, FL

8:45
24.3
Developing novel approaches for IPM of key insect pests in apple, Jaime C. Piñero, jpinero@umass.edu, Dorna Saadat; Prabina Regmi, Stockbridge School of Agriculture, University of Massachusetts, Amherst, MA; Dorna

Saadat, Prabina Regmi, Stockbridge School of Agriculture, University of Massachusetts, Amherst, MA

8:55
24.4
Managing Asian citrus psyllid and the pest complex of citrus using integrated approaches, Jawwad A. Qureshi, jawwadq@ufl.edu, Southwest Florida Research and Education Center, University of Florida, Immokalee, FL

9:05
24.5
Effectiveness of alternatives to broad-spectrum insecticides to manage spotted-wing drosophila in southeastern blueberry systems, Ashfaq Sial, ashsial@uga.edu, Department of Entomology, University of Georgia, Athens, GA

9:15
24.6
Push-pull technology evaluation of selective vegetable crops in north Florida, Alejandro Bolques, alejandro.bolques@famu.edu, College of Agriculture and Food Sciences, Cooperative Extension Program, Research and Extension Center, Quincy, FL; Jesusa C. Legaspi, United States Department of Agriculture, Agricultural Research Service, Center for Medical, Agricultural and Veterinary Entomology, Tallahassee, FL

9:25
24.7
Delivering specialty crop IPM research, extension, and educational programs for underserved small farmers, Daniel J. Collins, dcollins1@alcorn.edu, Alcorn State University Lorman, MS; Tahir Rasheed, Derrick Owens, Kaleb Robinson, Alcorn State University Lorman, MS

9:35
24.8
What have we learned on hemp arthropods in two years in Kentucky? Raul Villanueva, raul.villanueva@uky.edu, University of Kentucky, Research and Education Center at Princeton, KY; Zenaida Viloria, Armando Falcon-Brindis, Christine Bradley, University of Kentucky, Research and Education Center at Princeton, KY

9:45
24.9
Management of *Drosophila suzukii* in blueberry planting in Florida, Muhammad Haseeb, muhammad.haseeb@famu.edu, Center for Biological Control, College of Agriculture and Food Sciences, Florida A&M University, Tallahassee, FL; Lambert H.B. Kanga, Center for Biological Control, College of Agriculture and Food Sciences, Florida A&M University, Tallahassee, FL; Dasia Harmon, FoodCorps, Inc., Atlanta, GA; Jesusa C. Legaspi, United States Department of Agriculture - Agricultural Research Service, Center for Medical, Agricultural and Veterinary Entomology, Tallahassee, FL; Oscar E. Liburd, Entomology and Nematology Department, University of Florida, Gainesville, FL

10:25
24.10
Migration and dispersal of the fall armyworm in East Asia, Akira Otuka, aotuka@affrc.go.jp, Institute for Plant Protection, NARO, Japan

10:35
24.11
Rapid identification of fall armyworm using loop-mediated isothermal amplification (LAMP). Gaku Akiduki, akiduki@affrc.go.jp, Migratory Insect Pests and Advanced Control Technology Group, Division of Core Technology for Pest Control Research, Institute for Plant Protection, National Agriculture and Food Research Organization, Japan

10:45
24.12
Current status of chemical control in the fall armyworm in Japan. Sachiyo Sanada-Morimura, sanadas@affrc.go.jp, Institute for Plant Protection, NARO, Japan

10:55
24.13
Current situation and management of fall armyworm in Thailand, Sarute Sudhi-aromna, sarutes@yahoo.com, Plant Protection Research and Development Office, Department of Agriculture, Thailand; Pruetthichat Punyawattoe, Plant Protection Research and Development Office, Department of Agriculture, Thailand

11:05
24.14
Population dynamics of the fall armyworm in maize fields in Thailand, Youichi Kobori, koboriy@affrc.go.jp, Japan International Research Center for Agricultural Sciences, Japan; Siwilai Lapbanjob, Nakhon Sawan Field Crops Research Center, Department of Agriculture, Thailand, Pruetthichat Punyawattoe, Plant Protection Research and Development Office, Department of Agriculture, Thailand

11:15
24.15
Cause and frequent seasonal occurrence of *Autographa nigrisigna* (Lepidoptera: Noctuidae) in mating disrupted IPM fields in Japan, Masashi Nomura, nomuram@faculty.chiba-u.jp, Aoi Igarashi-Hashiyama, Laboratory of Applied Entomology, Graduate School of Horticulture, Chiba University, Matsudo, Chiba, Japan

11:25
24.16
IPM challenges and opportunities in Ecuador, Amanda C. Hodges, achodges@ufl.edu, University of Florida, Entomology and Nematology Department, Gainesville, FL; Morgan Pinkerton, University of Florida, IFAS Extension, Seminole County, Sanford, FL; Jenny M. Gavilanez-Slone, University of Florida, Entomology and Nematology Department, Gainesville, FL; Lisbeth Espinoza, Escuela Superior Poltécnica del Litoral, Correra de Biologia, Guayaquil, Ecuador; Daniel Mancero, Universidad Agraria del Ecuador, Guayaquil, Ecuador

11:35
24.17
Quantifying diversity of natural enemies for IPM of vegetable pests, Ihsan Nurkomar, ihsan.nurkomar@umy.ac.id; Dina Wahyu Trisnawati, Jefri Ardi Saputra, Aswinda Damar Prayoga. Department of Agrotechnology, Faculty of Agriculture, Universitas Muhammadiyah Yogyakarta. Jl. Brawijaya, Kasihan, Bantul, Yogyakarta, Indonesia Azru Azhar, Biological Control Laboratory, Department of Plant Protection, Faculty of Agriculture, IPB University. Jl. Kamper, Kampus IPB Dramaga, Bogor, Indonesia

11:45
24.18
Bio-based technologies for managing cacao pests in the Philippines, Divina Amalin, divina.amalin@dlsu.edu.ph, Department of Biology, College of Science and Center for Natural Science and Environmental Research, Biological Control Research Unit, De La Salle University, Malate, Metro Manila, Philippines; Jose Isagani Janairo, Department of Biology, College of Science and Center for Natural Science and Environmental Research, Biological Control Research Unit, De La Salle University, Malate, Metro Manila, Philippines; Lilia Fernando, Institute of Crop Science, University of the Philippines Los Baños, Laguna, Philippines; Dionisio Alvindia, Department of Agriculture, Philippine Mechanization, Science City, Muñoz, Nueva Ecija, Philippines; Billy Joel Almarinez, Department of Biology, College of Science and Center for Natural Science and Environmental Research, Biological Control Research Unit, De La Salle University, Malate, Metro Manila, Philippines; Alberto Barrion, Department of Biology, College of Science and Center for Natural Science and Environmental Research, Biological Control Research Unit, De La Salle University, Malate, Metro Manila, Philippines

25
IPM in the US Department of the Interior Land Management Agencies and Partners
Plaza Ballroom D

10:15
25.1
Biological control impacts using a post-release assessment tool and its implementation in the USA, Joseph Milan, jmilan@blm.gov, Bureau of Land Management (BLM), Department of the Interior, Boise, ID

10:30
25.2
Carbon dioxide as a control tool for aquatic nuisance species, Aaron Cupp, acupp@usgs.gov, U.S. Geological Survey-Upper Midwest Environmental Sciences Center, Department of the Interior, La Crosse, WI

10:45
25.3
IPM Tool-kits and Road Show in the National Park Service, John D. Nelson, John.nelson3@usda.gov, US Forest Service–Forest Health Protection, Department of Agriculture, Gunnison, CO

11:00
25.4
IPM Projects and Research at the Bureau of Reclamation, Scott O'Meara, someara@usbr.gov, Bureau of Reclamation, Technical Service Center, Department of the Interior, Denver, CO

11:15
25.5
Historic Preservation Training Center (HPTC)–IPM in Historic Buildings Workshop, James Howard, James_C_Howard@nps.gov, National Park Service, Department of the Interior, Fort Collins, CO

11:30
25.6
Building a Community-Based Stewardship Effort to Control Perennial Pepperweed (*Lepidium latifolium*) in the Great Marsh of Massachusetts, Lauren Healey, Lauren.healey@usda.gov, Natural Resources Conservation Service, US Department of Agriculture, Moro, OR

1:15
25.7
Powder Post Beetle Management on Alcatraz Island, National Park Service, Bruce Badzik, Bruce_Badzik@nps.gov, National Park Service-Golden Gate National Recreation Area, Department of the Interior, San Francisco, CA

1:30
25.8
Investigating Invasive Mussel Biocontrol, Sherri Pucherelli, spucherelli@usbr.gov, Bureau of Reclamation, Technical Service Center, Department of the Interior, Denver, CO

1:45
25.9
Integrated Pest Management Strategies for Round-tailed Ground Squirrels, Shakunthala Nair, nairs@arizona.edu, Department of Entomology, University of Arizona, Maricopa, AZ

2:00
25.10

Benefits, Challenges, and Solutions of Agricultural Use in Region 1 of the National Park Service, Casey Reece, casey_reese@nps.gov, National Park Service (NPS), Department of the Interior, Shepherdstown, WV

2:15
25.11
Restore New Mexico, State-wide and Multi-Jurisdictional Landscape Restoration Efforts, Ty Carter, Tjcarter@blm.gov, Bureau of Land Management (BLM), Department of the Interior, Roswell, NM

2:30
25.12
Competitive Plantings–A Final Step to Successful Long-Term Invasive Weed Control, Lynn A. Danly, ldanly@blm.gov, Bureau of Land Management (BLM), Department of the Interior, Cottonwood, ID

3:00
25.13
Invasive Plant Management: Increasing the Likelihood of Success on National Wildlife Refuges, Jess Wenick, jess_wenick@fws.gov, United States Fish and Wildlife Service, Department of the Interior, Ridgefield, WA

3:15
25.14
A Land Manager's Guide to Invasive Plant management Planning, Giselle Block, Giselle_block@fws.gov, United States Fish and Wildlife Service, Department of the Interior, Sacramento, CA

3:30
25.15
Conducting Workshops to Prioritize Invasive Plant Species and Areas on Refuges across Oregon, Washington, Idaho, and Hawaii, Jess Wenick, jess_wenick@fws.gov, United States Fish and Wildlife Service, Department of the Interior, Ridgefield, WA

3:45
25.16
South Warner Habitat Restoration, Grace J. Haskins, ghaskins@blm.gov, Bureau of Land Management (BLM), Department of the Interior, Lakeview, OR

4:00
25.17
Adaptive management of invasive plants: Case studies from National Wildlife Refuges in the Midwest region, Joshua Booker, Joshua_booker@fws.gov, United States Fish and Wildlife Service, Department of the Interior, Oak Harbor, OH

4:15
25.18
Multi-Agency Mission Support: How a unique Sikes Act partnership helps implement invasive species control projects on US Air Force bases and National Wildlife Refuges, Meg H. Duhr, mduhr@umn.edu, Minnesota Aquatic Invasive Species Research Center, University of Minnesota, St. Paul, MN

26
IPM across Disciplines
Governor's Square 15

1:15
26.1

Pandemic response, social equity and federal environmental policy formulation, Marc Lame, mlame@indiana.edu, O'Neill School of Public and Environmental Affairs, Indiana University, Bloomington, IN

1:45
26.2
Latinos and Agriculture: A Changing Demographic, Maria Gorgo, mag38@psu.edu, Penn State Extension, Penn State University, West Chester, PA

2:15
26.3
Landscape IPM by Design, Chris Geiger, chris.geiger@sfgov.org, Department of the Environment, City & County of San Francisco, San Francisco, CA

27
Communicating and Building Partnerships for IPM in Communities
Plaza Ballroom E

1:15
27.1
Opportunities and Outcomes of Working with Elected Officials to Advance the Adoption of IPM, Matt Frye, mjf267@cornell.edu, NYS IPM Program, Cornell University, Elmsford, NY; Julie Suarez, Cornell University, Albany, NY

1:30
27.2
Successes with Establishing and Fostering the *Space Coast Golf and Turf Association* to Promote Extension's IPM Initiative to the Local Turfgrass Industry, Bonnie C. Wells, bcwells@ufl.edu, UF/IFAS Extension Brevard County, Cocoa, FL

1:45
27.3
Honoring and Empowering Tribal Nations and Indigenous Peoples Through IPM, Shujuan (Lucy) Li, lucyli@email.arizona.edu, Department of Entomology, Arizona Pest Management Center, University of Arizona, Maricopa Agricultural Center, Maricopa, AZ

2:00
27.4
IPM Speaks: Communicating Risks of IPM Practices to the Public, Al Fournier, Fournier@cals.arizona.edu, Arizona Pest Management Center, University of Arizona, Maricopa Agricultural Center, Maricopa, AZ

2:15
27.5
University and Private Partnerships: A Road to Quality and Sustainable Programs, Niamh Quinn, nmquinn@ucdavis.edu, University of California Cooperative Extension, South Coast Research and Extension Center, Irvine, CA; Sylvia Kenmuir, sylvia.kenmuir@basf.com, BASF, Irvine, CA

2:30
27.6
Train-the-trainer Model for Educating Master Gardeners and Retail Nurseries, Karey Windbiel-Rojas, kwindbiel@ucanr.edu, University of California Division of Agriculture and Natural Resources, UC Statewide Integrated Pest Management Program (UC IPM), Davis, CA

28

Predicting, Monitoring and Responding to New Plant Pests
Plaza Ballroom F

1:15
28.1
Predicting introductions of emerging pests and diseases and designing risk-based surveys, Weiqi Luo, wluo2@ncsu.edu, Center for Integrated Pest Management, Fort Pierce, FL; Drew Posny, Center for Integrated Pest Management, Fort Pierce, FL

1:30
28.2
Pest Prioritization, Preparedness, and Opportunities, Godshen Pallipparambil, godshenrobert@ncsu.edu, Center for Integrated Pest Management, North Carolina State University, Raleigh, NC; Michelle Gray,Wendy Marchant, USDA APHIS PPQ (U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection Quarantine), Raleigh, NC; Jennifer Cook, Center for Integrated Pest Management, North Carolina State University, Raleigh, NC

1:45
28.3
Designing delimitation surveys for new pest introductions, Godshen Pallipparambil, godshenrobert@ncsu.edu, Center for Integrated Pest Management, North Carolina State University, Raleigh, NC; Kevin Bigsby, Barney Caton, USDA APHIS PPQ (U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Plant Protection Quarantine), Raleigh, NC; Hui Fang, Center for Integrated Pest Management, North Carolina State University, Raleigh, NC

2:00
28.4
Dramatic Range Expansion of the Oriental Fruit Fly (OFF), *Bactrocera dorsalis* (Hendel), (Insecta: Diptera: Tephritidae) in Asia, Yulu Xia, yuluxia@ncsu.edu, Center for Integrated Pest Management, North Carolina State University, Raleigh, NC

2:15
28.5
Modeling spread in different landscapes to inform management programs, Drew Posny, dsposny@ncsu.edu, Center for Integrated Pest Management, Fort Pierce, FL; Weiqi Luo, Center for Integrated Pest Management, Fort Pierce, FL

2:30
28.6
Invasive species response toolkit, Joseph LaForest, laforest@uga.edu, Southern IPM Center, Tifton, GA; Kevin Judd, Northeastern IPM Center, Ithaca, NY; Jacque Pohl, North Central IPM Center, Ames, IA; Rebekah Wallace, Charles Bargeron, Bugwood Center for Invasive Species and Ecosystem Health, University of Georgia, Tifton, GA

29
Management of Fall Armyworm in Africa and Asia
Governor's Square 14

1:15
29.1
IPM Innovation Lab and Fall Armyworm Management, Rangaswamy (Muni) Muniappan, rmuni@vt.edu, IPM Innovation Lab, Virginia Tech, Blacksburg, VA

1:30

29.2
An Integrated Approach to Managing Fall Armyworm in Small-holder Maize Farming System in Africa, Tadele Tefera, ttefera@icipe.org, International Center of Insect Physiology & Ecology (icipe), Addis Ababa, Ethiopia; Birhanu Sisay, International Center of Insect Physiology & Ecology (icipe), Addis Ababa, Ethiopia; Paddy Likhayo, Kenya Agricultural and Livestock Research Organization (KARLO), Nairobi, Kenya; Josephine Simiyu, Ministry of Agriculture, Bungoma County, Kenya

1:45
29.3
Delivering Scalable Fall Armyworm IPM Technologies to Smallholder African Farmers Through Research and Partnerships, Peter Chinwada, P.Chinwada@cgiar.org, IITA, Southern Africa Research and Administration Hub Campus, Lusaka, Zambia

2:00
29.4
Harnessing climate-smart IPM for long-term management of fall armyworm *Spodoptera frugiperda* in Africa, Ghislain Tepa-Yotto, G.Tepa-Yotto@cgiar.org, Biorisk Management Facility (BIMAF), International Institute of Tropical Agriculture (IITA-Benin), Cotonou, Benin and Ecole de Gestion et de Production Végétale et Semencière (EGPVS), Université Nationale d'Agriculture (UNA), Kétou, Bénin; Jeannette Winsou, Biorisk Management Facility (BIMAF), International Institute of Tropical Agriculture (IITA-Benin), Cotonou, Benin and Faculty of Biosciences (BIOVIT), Norwegian University of Life Sciences, Ås, Norway and Department for Invertebrate Pests and Weeds in Forestry, Horticulture and Agriculture, Norwegian Institute of Bioeconomy Research (NIBIO), Ås, Norway; Manuele Tamò, Biorisk Management Facility (BIMAF), International Institute of Tropical Agriculture (IITA-Benin), Cotonou, Benin

2:15
29.5
Integrated Pest Management of Fall Armyworm (*Spodoptera frugiperda*) in Cambodia: Experiments on commercially-available and laboratory reared biological control, Rica Joy Flor, r.flor@irri.org, International Rice Research Institute, IRRI-Cambodia Office, Phnom Penh, Cambodia; Sokheng Keo, International Rice Research Institute, IRRI-Cambodia Office, Phnom Penh, Cambodia; Vichet Sorn, Chhunneang Hak, Oeurn Samoul, Nit Ti, General Directorate of Agriculture, Phnom Penh, Cambodia; Kim Eang Tho, Marb Thanuth, Royal University of Agriculture, Phnom Penh, Cambodia; Khay Sathya, Cambodian Agricultural Research and Development Institute, Phnom Penh, Cambodia; Buyung Hadi, Food and Agriculture Organization of the United Nations, Rome, Italy; Nurmi Pangesti, International Rice Research Institute, IRRI-Cambodia Office, Phnom Penh, Cambodia; Virender Kumar, International Rice Research Institute, Los Baños, Laguna, Philippines

2:30
29.6
Parasitoids for biological control of the fall armyworm in Africa, Malick N. Ba, b.malick@cgiar.org, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Niamey, Niger; Saidou A. Laminou, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and University Abdou Moumouni, Niamey, Niger; Laouali Karimoune, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Niamey, Niger; Ali Doumma, University Abdou Moumouni, Niamey, Niger; Rangaswamy Muniappan, Virginia Tech, Blacksburg, VA

30
Integrated Tick Management: Increasing Adoption of ITM Practices to Address the Global Tick Problem
Plaza Ballroom AB

1:15
30.1
Introduction/information about the Tick IPM Working Group

1:30
30.2
Strategies and Challenges to Adoption and Implementation of Integrated Tick Management Practices, Kirby C. Stafford III, Kirby.Stafford@ct.gov, Department of Entomology, Center for Vector Biology & Zoonotic Diseases, The Connecticut Agricultural Experiment Station, New Haven, CT

3:05
30.3
Local issues: ITM adoption in Colorado and other Rocky Mountain states, Dan Salkeld, dansalkeld@gmail.com, Colorado State University, Fort Collins, CO

3:50
30.4
Cigarettes and Kerosene: Addressing 20 years of Tick Myths Heard at the Veterinary Clinic through Education, Timothy McDermott, Mcdermott.15@osu.edu, Ohio State University Extension, Franklin County, Agriculture and Natural Resources, Columbus, OH

31
Re-Imaging IPM for Broader Social Challenges: Integrating Social, Political, Cultural, Economic and Ecological Dimensions
Governor's Square 15

1:15
31.1
Introduction, Margaret (Amy) Lemay

1:25
31.2
The new IPM Model, Surendra K. Dara, skdara@ucanr.edu, University of California, Cooperative Extension, San Luis Obispo, CA

1:38
31.3
Training for stakeholders, from IPM educators to agricultural workers, is critical to the success of IPM programs, Ryan Gott, rgott@maitrigenetics.com, Maitri Genetics, Pittsburgh, PA; David Coyle, Department of Forestry & Environmental Conservation, Clemson University, Clemson, SC

1:51
31.4
The Role of Knowledge Mobilization in the Adoption of IPM, Margaret (Amy) Lemay, lemaym@uoguelph.ca, Department of Plant Agriculture, University of Guelph, Guelph, Ontario, Canada; Mary Ruth McDonald, Department of Plant Agriculture, University of Guelph, Guelph, Ontario, Canada

2:04
31.5
Ecoefficiency and IPM: A joint solution to pesticide overreliance in the age of industrial agriculture, Roger Magarey, rdmagare@ncsu.edu, Southern IPM Centre, North Carolina State University, Raleigh, NC

2:17
31.6
Systems Thinking and the New Integrated Pest Management Paradigm: Opportunities for growth and engagement, Camille Ryan, camille.ryan@bayer.com, Regulatory Scientific Affairs, Bayer Crop Science, St. Louis, MO

2:30
31.7
Discussion

32
Ecostacking as an Approach to IPM
Governor's Square 14

3:00
32.1
Using the principles of ECOstacking to develop ecologically-based IPM approaches in apple agroecosystems in New England, Jaime C. Piñero, jpinero@umass.edu, Stockbridge School of Agriculture, University of Massachusetts, Amherst, MA; Prabina Regmi, Dorna Saadat, Stockbridge School of Agriculture, University of Massachusetts, Amherst, MA; Tracy Leskey, USDA-ARS, Appalachian Fruit Research Station, Kearneysville, WV; David -Shapiro-Ilan, USDA ARS Southeastern Fruit and Tree Nut Research Laboratory, Byron, GA; Binita Shrestha, Entomology and Nematology Department, Citrus Research and Education Center, University of Florida, Lake Alfred, FL; Deborah Finke, Division of Plant Sciences, University of Missouri, Columbia, MO

3:30
32.2
IPM for a crop, Anamika Sharma, anamika.sharma@famu.edu, Center for Biological Control, College of Agriculture and Food Sciences, Florida A&M University, Tallahassee, FL; R. Muniappan, IPM Innovation Lab, Virginia Tech, Blacksburg, VA

3:45
32.3
Development of entomopathogens for the management of wireworms, Gadi V.P. Reddy, gadi.reddy@usda.gov, USDA-ARS-Southern Insect Management Research Unit, Stoneville, MS; David I. Shapiro-Ilan, USDA-ARS, SE Fruit and Tree Nut Research Unit, Byron, GA

4:00
32.4
Cabbage-faba bean strip cropping: Biological pest control, crop compatibility and yield, Joonas Mäkinen, Joonas.makinen@uef.fi, University of Eastern Finland, Department of Environmental and Biological Sciences, University of Eastern Finland (UEF), Kuopio, Finland; Sari J. Himanen, Natural Resources Institute Finland and South-Eastern Finland University of Applied Sciences; Pirjo Kivijärvi, Natural Resources Institute Finland; James D. Blande, University of Eastern Finland

4:15
32.5
Ecostacking: The way forward, Heikki MT Hokkanen, heikki.hokkanen@uef.fi, University of Eastern Finland, Department of Environmental and Biological Sciences, Kuopio, Finland; Ingeborg Menzler-Hokkanen, University of Eastern Finland, Department of Environmental and Biological Sciences, Kuopio, Finland

33
IPM of *Cannabis sativa*: Lessons Learned and Future Directions
Plaza Ballroom F

3:00
33.1
Priority Research Needs to Address Advancement of Integrated Pest Management Programs for Arthropod Pests of *Cannabis sativa* crops in North America, Whitney Cranshaw, Whitney.Cranshaw@ColoState.edu, Colorado State University, Fort Collins, CO

3:15
33.2
Small pest, big problem: Integrated Pest Management (IPM) strategies to manage hemp russet mite, Punya Nachappa, punya.nachappa@colostate.edu, Department of Agricultural Biology, Colorado State University, Fort Collins, CO; Chris Hayes, Olivia Carter, Whitney Cranshaw, Colorado State University, Fort Collins, CO

3:30
33.3
Landscape effects on the cannabis aphid, a vector of potato virus Y, Jacob Pitt, William.Pitt@colostate.edu, Department of Agricultural Biology, Colorado State University, Fort Collins, CO; Lisa Kairy, Department of Agricultural Biology, Colorado State University, Fort Collins, CO; Tess Christensen, Agro Engineering, Alamosa, CO; Punya Nachappa, Department of Agricultural Biology and Graduate Degree Program in Ecology, Colorado State University, Fort Collins, CO

3:45
33.4
Industrial hemp in Northeastern Oregon: Developing integrated pest management programs, Tiziana Oppedisiano, tiziana.oppedisano@gmail.com, Hermiston Agricultural Research and Extension Center, Oregon State University, Corvallis, OR; Silvia I. Rondon, Hermiston Agricultural Research and Extension Center, Oregon State University, Hermiston, OR and Oregon Integrated Pest Management Center, Oregon State University, Corvallis, OR

4:00
33.5
Evaluation of fungicides against greenhouse hemp powdery mildew in Tennessee, Rufus Akinrinoloa, rakinrin@vols.utk.edu, Department of Entomology and Plant Pathology, University of Tennessee, Knoxville, TN; Kimberly Gwinn, Toni Wang, Zachariah Hansen, University of Tennessee, Knoxville, TN

34
Cotton Insect Management in Water-Deficit Production Scenarios
Plaza Ballroom F

8:30
34.1
Pest Monitoring is the Key to Successful IPM Program: A Case Study of Silverleaf Whitefly Management in Cotton and Vegetable Production, Apurba K. Barman, akbarman@ucanr.edu, University of California Cooperative Extension, Imperial County, Holtville, CA; Michael D. Toews, University of Georgia, Tifton, GA

9:00
34.2
Management of Mid- and Late-Season Cotton Insects in Water-Deficit Production, Megha N. Parajulee, m-parajulee@tamu.edu, Texas A&M University AgriLife Research and Extension Center, Lubbock, TX; Dol. P. Dhakal, Abdul Hakeem, Katie L. Lewis, Suhas Vyavhare, Donna McCallister, Texas A&M AgriLife Research and Extension Center, Lubbock, Texas; Michael D. Toews, University of Georgia, Tifton, GA

9:30
34.3
Economics of Multiple Pest management in Water-Deficit Production Scenarios (Donna McCallister, donna.m.mitchell@ttu.edu, Department of Agricultural and Applied Economics, Texas Tech University, Lubbock, TX; Megha N. Parajulee, Texas A&M University AgriLife Research and Extension Center, Lubbock, TX; Michael D. Toews, University of Georgia, Tifton, GA

35

Managing Rodents Using Multiple Control Tactics
Plaza Ballroom F

8:30
35.1
Welcome and Introduction to Session, Janet Hurley

8:35
35.2
The Future of Rodent Management, Ed Dolshun, edolshun@catchmaster.com, AP&G/Catchmaster, Brooklyn, NY

8:50
35.3
Rats, rodenticides, and researching rats, Niamh Quinn, nmquinn@ucanr.edu, University of California Cooperative Extension, South Coast Research and Extension Center, Irvine, CA

9:05
35.4
Exclusion Essentials: Keys to Successful Rodent Control, Matt Frye, mjf267@cornell.edu, NYS IPM Program Cornell University, Elmsford, NY

9:20
35.5
Using Biosecurity Dogs to Manage and Control Rodents, Megan Vick, megan@nrpdogs.com, Natural Resource Protection Dogs, Chesapeake, VA

9:35
35.6
Using Corteva ActiveSense system to measure rodent activity a look at data and how you use in IPM, Janet Hurley, jahurley@ag.tamu.edu, Texas A&M AgriLife Extension Service, Dallas, TX

9.50
35.7
Mosquitoes, Rats and Flies–Oh My!, Claudia Riegel, criegel@nola.gov, City of New Orleans Mosquito, Termite and Rodent Control Board, New Orleans, LA