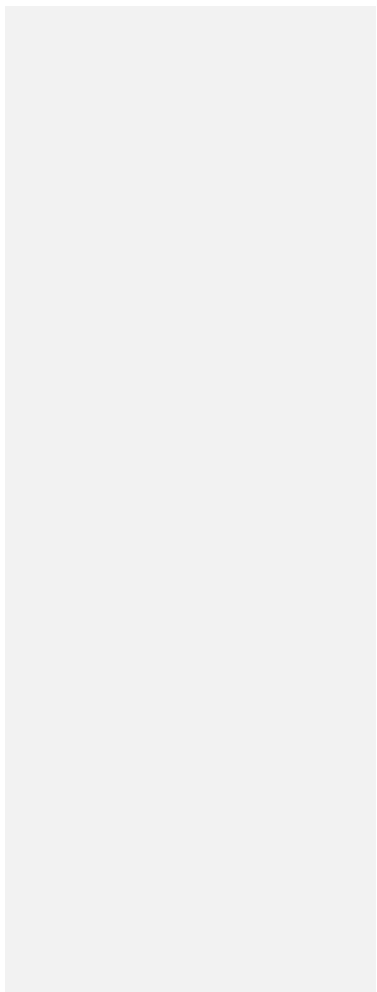


WSSA

**2027 Annual Meeting
February 8-11, 2027
Denver, CO**

**2028 Annual Meeting
January 17-20, 2028
Savannah, GA**



**WEED SCIENCE SOCIETY OF
AMERICA**

66th Meeting

2026 MEETING PROGRAM

Crabtree Valley Marriot

Raleigh, NC

February 9-12, 2026



WSSA Sustaining Members

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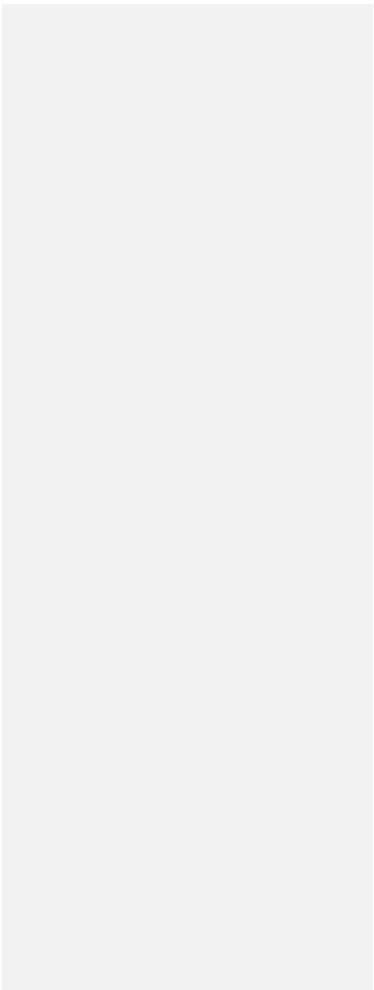
ABG Ag Services
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**66th Meeting
Weed Science Society of America**

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WSSA Sustaining Members Inside Front Cover

Local Arrangements Committee 2026 – Raleigh

Co-Chairs Charles Cahoon, Ramon Leon
Andrew Blyth, Dallas Taylor, Gaylon
Morgan, David Belles, Navdeep Godara



The WSSA 2026 Program

Welcome to the 2026 Weed Science Society of America (WSSA) Annual Meeting!

We are thrilled to gather at the Crabtree Valley Marriott in Raleigh, North Carolina. Nestled in Crabtree Valley, our venue offers the perfect balance of convenience and is situated adjacent to the Crabtree Valley Mall and just a short ride from the vibrant energy of downtown Raleigh.

Our program kicks off early with a **Pre-Conference Tour** of the Syngenta facilities in Greensboro on Monday morning (7:00 AM – 2:00 PM). For those looking to network early, the **Women in Weed Science Networking Event** will also be held Monday afternoon from 2:00 PM – 3:30 PM.

The **General Session** officially begins at 4:15 PM on Monday, February 24, 2026. We are honored to welcome our Keynote Speaker, **Dr. Garey Fox**, Dean of the College of Agriculture and Life Sciences at North Carolina State University. Following the keynote, President Hilary Sandler will deliver the Presidential Address, followed by our annual awards ceremony and a celebratory food-and-drink reception.

Student Engagement & Competition As always, the WSSA meeting is dedicated to the next generation of scientists. With 152 students competing in the Single Slide Talk (SST) and poster contests, the talent on display will be exceptional.

- **Tuesday:** Student Lunch and Business Meeting (12:00 PM) featuring a roundtable on "Careers in Emerging Ag-Tech and Startups."
- **Tuesday/Wednesday:** SST contests begin Tuesday afternoon, with the finals held Wednesday at 8:30 AM.
- **Wednesday:** A "Scientific Writing" workshop starts at 3:30 PM, followed by the Student Awards Ceremony at 5:30 PM.

Symposia and Science We are proud to offer three distinct symposia this year:

1. **Tuesday Morning:** "Bridging the Gap: Regulatory, Technical, and Industry Perspectives on Targeted and Autonomous Weed Control."
2. **Tuesday Afternoon:** "Re-framing the Discussion of Herbicide Resistance – Perspectives on Best Practices for Real-time Management in the Field."
3. **Wednesday Morning:** An interactive poster symposium hosted by the Herbicide Resistance Action Committee (HRAC).

Beyond the sessions, we invite you to join the **5K Puff Run/Walk** on the Raleigh Greenway Wednesday morning at 7:00 AM, or join the Tuesday night bus to the **Glenwood Avenue** restaurant district at 6:00 PM. We conclude on

Thursday with three exciting **Post-Conference Tours**: Cotton Incorporated, local BASF research facilities, and the North Carolina Museum of Natural History.

Special thanks to our local arrangements personnel Charles Cahoon, Ramon Leon, Dallas Taylor, Andrew Blythe, David Belles, Gaylon Morgan, and Navdeep Godara, and the WSSA Executive Secretary, Eric Gustafson, for keeping this program chair on course and organizing numerous events. We acknowledge guidance from WSSA Executive board members Dawn Refsell and Hilary Sandler; their input has been crucial in the development of the program. We thank our Contest Chair Darrin Dodds, along with all those who stepped up to be Section Chairs, Moderators, and Judges. We could not do it without you!!

Welcome to Raleigh and have a great meeting!

Ian Burke, WSSA Program Chair and President-Elect

2026 Program Committee

General Program Chair	Ian Burke
Vice Chair	Dawn Refsell
01. Agronomic Crops	Laura Smith
02. Horticultural Crops	Thierry Besancon
03. Turf and Ornamentals	Navdeep Godara
04. Pastures, Rangelands, Forests, and Rights of Way, and Wildlands	David Russell
05. Aquatic Invasives	Andrew Howell
06. Regulatory Aspects	Bianca Martins
07. Teaching and Extension	Sarah Lancaster
08. Formulation, Adjuvant, and Application Technology	Peter Berry
09. Weed Biology and Ecology	Aniruddha Maity
10. Biocontrol of Weeds	Cara McCauley
11. Physiology	David Belles
12. Soil and Environmental Aspects	Cameron Douglass
13. Integrated Weed Management	Nick Basinger
14. Sensing, Automation, and Precision Technologies	Michael Walsh
15. Genomics	Isabel Werle
16. Sustaining Member Exhibits	Kyle Kepner
17. Poster Sessions	Charles Cahoon
18. Student Contest	Darrin Dodds and Hannah Wright
Student Travel Enrichment Experience	Cara McCauley

Graduate Student Liaison Navdeep Godara

Local Arrangements Charles Cahoon,
Ramon Leon
Dallas Taylor
Andrew Blythe
David Belles
Gaylon Morgan
Navdeep Godara

Program Booklet and Abstracts

Please use the QR Code below to access a pdf copy of the program.

Commented [ICB1]: Insert QR Code

Posters and Sustaining Member Exhibits

All posters and Sustaining Member Exhibits will be on display in the Crabtree Ballroom from Tuesday at 7 am to Thursday at 8 am. Poster display times are not included in the program.

MEETING ROOM LOCATIONS

All meeting rooms are located on the first floor to the north and south of the hotel lobby.

CONDENSED PROGRAM

SUNDAY FEBRUARY 8

WSSA Board of Directors Meeting	7:30 AM-5:00 PM	City of Oaks (Dogwood, Magnolia)
GROW Meeting	2:00 PM-5:00 PM	Crabtree Ballroom
Graduate Student Drive Shack Networking Event	6:00 PM-10:00 PM	Off-Site, Pre- registration Required

*Sponsored by Bayer Crop Science
Graduate Students Only*

MONDAY FEBRUARY 9

TOUR Syngenta Greensboro	7:00 AM-1:30 PM	Lobby
Herbicide Resistance Education Committee	8:00 AM-10:00 AM	Capital
Terminology Committee	8:00 AM-9:30 AM	Creedmore
Sensing, Automation, and Precision Technologies Committee	10:00 AM-11:30 AM	Capital

IWSS Board Meeting	10:00 AM-11:30 AM	Creedmore
Publications Committee	10:00 AM-11:00 AM	Boardroom
Endangered Species Committee	11:00 AM-12:00 PM	Creedmore
Science Policy Committee	12:00 PM-2:00 PM	Creedmore
Registration	1:00 PM-4:00 PM	Raleigh
Formulation, Adjuvant, and Application Technology Committee	12:30 PM-2:00 PM	Capital
Herbicide Resistance Action Committee	2:00-3:30 PM	Capital
Poster Set-up	12:00 PM-4:00 PM	Crabtree Ballroom
Women in Weed Science	2:00 PM-3:45 PM	City of Oaks Ballroom
<i>Sponsored by Corteva</i>		
General Session	4:15 PM-7:00 PM	Glenwood Ballroom Salons I, II
Awards Reception	7:00 PM-9:30 PM	Glenwood Ballroom Salon III, IV & Glenwood Terrace

TUESDAY FEBRUARY 10

Judges Breakfast	6:00 AM - 7:00 AM	Creedmore
Puff 5K Run/Walk	6:30 AM-7:30 AM	Lobby
Finance Committee	7:00-9:00 AM	Capital
Posters (Odd- number authors present)	7:00 AM - 8:30 AM	Crabtree Ballroom

POSTER 00. Committee Reports; *In Memoriam*

POSTER 01. Agronomic Crops

POSTER 02. Horticultural Crops

POSTER 03. Turf and Ornamentals

POSTER 04. Pasture, Rangelands, Forests, and
Rights of Way

POSTER 05. Wildland and Aquatic Invasives

POSTER 07. Teaching and Extension

POSTER 08. Formulation, Adjuvants, and
Application Technology

POSTER 09. Weed Biology and Ecology

POSTER 10. Biocontrol of Weeds

POSTER 11. Physiology

POSTER 12. Soil and Environmental Aspects

POSTER 13. Integrated Weed Management

POSTER 14. Sensing, Automation, and Precision
Technologies

POSTER 15. Genomics

Registration	7:00 AM-4:45 PM	Raleigh
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Oral 1. Agronomic Crops	9:00 AM-5:30 PM	Glenwood Ballroom Salon I
Oral 11. Physiology	9:00 AM-11:45 AM	Glenwood Ballroom Salon III and IV
Symposium: Autonomous Weed Control	9:00 AM-12:00 PM	Glenwood Ballroom Salon II
Judge's Workroom	9:00 AM-4:30 PM	Creedmore
Graduate Student Luncheon	12:00 PM-1:30 PM	City of Oaks Ballroom
Symposium: Reframing the Discussion of Herbicide Resistance	1:30 PM-5:30 PM	Glenwood Ballroom Salon II
Oral 18. WSSA-SST MS Contest	1:45 PM-5:30 PM	Glenwood Ballroom Salon III
Oral 18. WSSA-SST PhD Contest	1:45 PM-5:30 PM	Glenwood Ballroom Salon IV
Coffee Break	3:00 PM-3:15 PM	Glenwood Ballroom Hall
IWSS General Session	5:30 PM-6:30 PM	Glenwood Ballroom Salon I
One-Way Shuttles to Downtown Raleigh	6:00 PM	Lobby

WEDNESDAY MORNING FEBRUARY 11

President's Breakfast	6:00 AM-7:30 AM	Creedmore
Posters (Even-number authors present)	7:00 AM-8:45 AM	Crabtree Ballroom
Registration	7:00 AM-4:00 PM	Raleigh
MRSPC-Herbicide Resistance Monitoring Network	7:00 AM-8:00 AM	Capital
SST Finals	8:30 AM-9:00 AM	Glenwood Ballroom Salon I
Judges Work Room	9:00 AM-3:00 PM	Creedmore
HRAC Poster Symposium	9:00-11:00 AM	City of Oaks Ballroom
Oral 09. Weed Biology and Ecology	9:00 AM-3:00 PM	Glenwood Ballroom Salon II
Oral 05. Aquatic Invasives	9:00 AM-3:00 PM	Glenwood Ballroom Salon III & IV
Oral 14. Sensing, Automation, and Precision Technologies	9:15 AM-12:00 PM	Glenwood Ballroom Salon I
International Weed Genomics	11:00 AM-12:00 PM	Capital

Consortium		
Oral 15. Genomics	1:30 PM-4:45 PM	Glenwood Ballroom Salon I
Agronomic Crops Business Meeting	2:00 PM-3:00 PM	Capital
Integrated Weed Management Business Meeting	2:00 PM-3:00 PM	Creedmore
Aquatic Invasives Discussion Section	3:15-4:15 PM	Capital
Weed Biology and Ecology Business Meeting	3:15-4:15 PM	Creedmore
Coffee Break	3:00 PM-3:15 PM	Glenwood Ballroom Hall
Oral 1. Agronomic Crops	3:15 PM-5:30 PM	Glenwood Ballroom Salon II
Oral 2. Horticultural Crops	3:15 PM-5:30 PM	Glenwood Ballroom Salon III & IV
Oral 10. Biocontrol of Weeds	4:45 PM-5:15 PM	Glenwood Ballroom Salon I
Graduate Student Workshop: Scientific Writing	3:30 PM-5:00 PM	City of Oaks Ballroom

WSSA Contest and Photo Awards	5:30 PM-6:30 PM	Glenwood Ballroom Salon I & II
WSSA Society Reception	6:30 PM-8:30 PM	Glenwood Ballroom Salon I

Sponsored by BASF

THURSDAY FEBRUARY 12

WSSA Breakfast Business Meeting	6:00 AM-7:45 AM	City of Oaks Ballrooms
Poster Take-Down	8:00-11:00 AM	Crabtree Ballroom
Oral 18. Travel Enrichment Experience and Science Policy Fellows	8:00-9:45 AM	Glenwood Ballroom Salon I
Oral 07. Teaching and Extension	8:00-10:00 AM	Glenwood Ballroom Salon I
Oral 13. Integrated Weed Management	8:00 -11:45 AM	Glenwood Ballroom Salon III & IV
Coffee Break	10:00-10:15 AM	Glenwood Ballroom Hall
Oral 12. Regulatory Aspects	10:15-11:00 AM	Glenwood Ballroom Salon I
Oral 03. Turf and Ornamentals	10:15-11:00 AM	Glenwood Ballroom Salon II

Oral 04. Pasture, Rangelands, Forests, Rights of Way, and Wildlands	11:15 AM-11:45 AM	Glenwood Ballroom Salon II
TOUR Cotton Incorporated	1:00-4:00 PM	Lobby
TOUR BASF	1:00-4:00 PM	Lobby
TOUR Self- guided North Carolina Museum of Natural History	1:00-4:00 PM	Lobby

PROGRAM

SUNDAY FEBRUARY 8

WSSA Board of Directors Meeting

LOCATION: City of Oaks (Dogwood,
Magnolia)
TIME: 7:30 AM-5:00 PM Eastern
MODERATOR: Hilary Sandler
UMass Cranberry Station
East Wareham, MA
CO-MODERATOR: Ian Burke
North Carolina State
University, Raleigh, NC

GROW Meeting

LOCATION: Crabtree Ballroom
TIME: 2:00 PM-5:00 PM Eastern
MODERATOR: Emily Ungelsbee
GROW
Rockville, MD

Graduate Student Drive Shack Networking Event

PRE-REGISTRATION REQUIRED

LOCATION: Drive Shack
6901 Play Golf Wy, Raleigh,
NC 27607
Transport departs 5:30 PM
TIME: 6:00-10:00 PM Eastern
MODERATORS: Navdeep Godara
North Carolina State University
Raleigh, NC

MONDAY MORNING FEBRUARY 9

TOUR-Syngenta

LOCATION: Meet in Lobby
TIME: 7:00 AM-1:30 AM Eastern
MODERATOR: David Belles
Syngenta Crop Protection
Goldsboro, NC

Terminology Committee

LOCATION: Creedmore
TIME: 8:00-9:30 AM Eastern
MODERATOR: Dawn Refsell
Corteva AgriScience
Johnston, IA

Herbicide Resistance Education Committee

LOCATION: Capital Room
TIME: 8:00-10:00 AM Eastern
MODERATOR: Jill Schroeder
Albuquerque, NM

IWSS Board of Directors Meeting

LOCATION: Boardroom
TIME: 9:00 AM-10:30 AM Eastern
MODERATOR: Do-Soon Kim
President, IWSS
Soeul, Korea

WSSA Publications Committee Meeting

LOCATION: Creedmore
TIME: 9:00-10:00 AM Eastern
MODERATOR: Chris Willenborg
University of Saskatchewan
Saskatoon, SK, Canada

MONDAY MORNING FEBRUARY 9

**Sensing, Automation, and Precision Technologies
Committee**

LOCATION: Capital
TIME: 10:00-11:30 AM Eastern
MODERATOR: Nathan Boyd
University of Florida
Wimauma, Florida

Endangered Species Act Committee

LOCATION: Creedmore
TIME: 11:00 AM-12:00 PM Eastern
MODERATOR: Bill Chism
Point of Rocks, MD

MONDAY AFTERNOON FEBRUARY 9

Science Policy Committee Meeting

LOCATION: Port McNeil
4th Floor, North Tower
TIME: 12:00-2:00 PM Eastern
MODERATOR: Lee Van Wychen
WSSA
Alexandria, VA

US-HRAC Committee Meeting

LOCATION: Pavillion Ballroom C
TIME: 2:00-3:30 PM Eastern
MODERATOR: David Belles
Syngenta
Greensboro, NC

MONDAY AFTERNOON FEBRUARY 9

**Formulation, Adjuvant, and Application
Technology Committee**

LOCATION: Pavillion Ballroom C
TIME: 2:00-3:30 PM Eastern
MODERATOR: Matthew Faletti
Precision Laboratories
Kenosha, WI

Registration

LOCATION: Junior Ballroom Foyer
TIME: 1:00-4:00 PM Eastern
MODERATOR: Eric Gustafson
WSSA Executive Secretary

Women in Weed Science

LOCATION: City of Oaks Ballroom
TIME: 2:00-3:30 PM Eastern
MODERATOR: Cara McCauley
Corteva Agriscience
Indianapolis, IN

Sponsored by Corteva Agriscience

MONDAY AFTERNOON FEBRUARY 9

General Session

LOCATION: Glenwood Ballroom
Salon I, II
TIME: 4:15-7:00 PM Eastern
CHAIR: Ian Burke
North Carolina State University
Raleigh, NC
MODERATORS: Hilary Sandler
University of Massachusetts
Cranberry Station,
17

E. Wareham, MA

*SPEAKER

- 4:15 PM Welcome to the 2026 WSSA Annual Meeting.** Ian C. Burke*, North Carolina State University, Raleigh, NC
- 4:20 PM Keynote.** Garey Fox*, Dean, College of Agriculture and Life Sciences, North Carolina State University, Raleigh, NC.
- 4:50 PM Washington, DC Update.** Lee Van Wychen*, WSSA, Alexandria, VA
- 5:05 PM IWSS Update.** Do-Soon Kim*, IWSS, Korea.
- 5:20 PM WSSA Presidential Address.** Hilary A. Sandler*, University of Massachusetts Cranberry Station, E. Wareham, MA
- 5:35 PM Awards Presentations.** Scott Senseman*, Oklahoma State University, Stillwater, OK.
- 6:30 PM Presentation of Honorary Members and Fellows.** Scott Senseman*, Oklahoma State University, Stillwater, OK.

MONDAY EVENING FEBRUARY 9

Awards Reception

LOCATION: Glenwood Ballroom
Salons III, IV, and Glenwood Terrace

TIME: 7:00-9:00 PM Eastern

Sponsored by Syngenta Crop Protection

TUESDAY MORNING FEBRUARY 10

Judges Breakfast

LOCATION: Creedmore

TIME: 6:00-7:00 AM Eastern

MODERATORS: Darrin Dodds

Mississippi State University
Starkville, MS

Registration

LOCATION: Raleigh
TIME: 7:00 AM-4:00 PM Eastern
MODERATOR: Eric Gustafson
WSSA Executive Secretary

Puff 5K Walk/Run

LOCATION: Meet in Lobby
TIME: Assemble: 6:45 AM
Eastern
7:00-8:00 AM
Eastern
MODERATOR: Dallas Taylor
BASF
Raleigh, NC

WSSA Finance Committee Meeting

LOCATION: Capital
TIME: 7:00-9:00 AM Eastern
MODERATOR: Lauren Lazaro

TUESDAY MORNING FEBRUARY 10

Poster Session-Odd Numbers

LOCATION: Crabtree Valley Ballroom
TIME: 7:00-9:00 AM Eastern
MODERATORS: Charles Cahoon
North Carolina State University
Raleigh, NC

Authors with odd-numbered posters will be present on Tuesday. Authors with even-numbered posters will be present on Wednesday.

POSTER PRESENTATIONS

POSTER - 01. Agronomic Crops

*PRESENTING AUTHOR
► WSSA STUDENT CONTEST

1. Clethodim Tank-Mixed with Auxinic Herbicides for Goosegrass and Sourgrass Control. Wallace Santini*¹, Roberto Saggin Visoto¹, Alice Lazzari¹, Alisson Hahn¹, Michelangelo Trezzi², Mauro Rizzardi³, Otavio Schaeffer³, Anderson Nunes Gabardo¹. ¹Agronomy, Federal Institute of Education Science and Technology of Rio Grande do Sul, Brazil, ²Agronomy, Federal University of Technology - Paraná, Brazil, ³Agronomy, Passo Fundo University, Brazil

2. Challenges in Italian Ryegrass Management in Brazil. Anderson Gabardo*¹, Alisson Hahn¹, Michelangelo Trezzi², Roberto Saggin Visoto¹, Wallace Santini¹, Mauro Rizzardi³. ¹Federal Institute of Education Science and Technology of Rio Grande do Sul, Brazil, ²Federal University of Technology - Paraná, Brazil, ³Passo Fundo University, Brazil

► 3. Elucidating Rice-Weed Competition Dynamics in Direct Seeded Rice Using Multispectral Remote Sensing. Reuben Senyo Kudiabor*¹, Panneerselvam Peramaiyan², Virender Kumar², Muthukumar Bagavathiannan¹, Amit Srivastava². ¹Texas A&M University, College Station, TX, ²International Rice Research Institute, Uttar Pradesh, India

4. Hyperspectral Field Spectrometry Reveals Reflectance Differences Between Rice and Weed Species. Panneerselvam

Peramaiyan¹, Reuben Senyo Kudiabor*², Virender Kumar¹, Muthukumar Bagavathiannan², Amit Srivastava¹. ¹*International Rice Research Institute, Uttar Pradesh, India*, ²*Texas A&M University, College Station, TX*

5. Multiplatform Remote Sensing (Unmanned Aerial Vehicle, Aircraft, Satellite) for Detecting Herbicide Injury in Cotton Using Thermal and Multispectral Data. Bismark Anokye*¹, Chenghai Yang², Muthukumar Bagavathiannan¹. ¹*Texas A&M University, College Station, TX*, ²*USDA-ARS Aerial Application Research Unit, College Station, TX*

► **6. Multi-State Survey Identifies Putative Herbicide-Resistant Kochia (*Bassia scoparia*) Populations Across the Great Plains.** Curtis Lefler*¹, Todd Gaines¹, Akamjot Brar¹, Daniel Guimaraes Abe², Caleb Dalley², Devanshi Desai³, Patrick Geier⁴, Brian Jenks², Jeremie Kouame⁴, Jeanne Falk Jones⁴, Timothy Seipel³, Lovreet Shergill¹. ¹*Colorado State University, Fort Collins, CO*, ²*North Dakota State University, Fargo, ND*, ³*Montana State University, Bozeman, MT*, ⁴*Kansas State University, Manhattan, KS*

7. Herbicide Selection for Perennial Grain Crop-Kernza. Adebisi Adeleke*¹, Isidor Ceperkovic¹, Katherine Bohn¹, Jacob Jungers¹, Debalin Sarangi¹. ¹*University of Minnesota, Saint Paul, MN*

8. Field Characterization of Root System Architecture in Diverse Cotton (*Gossypium* spp.) Lines. Varnika Kalaichelvan*¹, Grace McIntyre¹, Pandian Rajendran¹, Alvaro Sanz-Saez², Muthukumar Bagavathiannan¹, Nithya Subramanian¹. ¹*Texas A&M University, College Station, TX*, ²*Auburn University, Auburn, AL*

9. Agronomic Performance and Regional Suitability of Diverse Cereal Rye Germplasm in Texas: Implications for Weed Suppression. Kapil Chobhe*¹, Muthukumar Bagavathiannan¹. ¹*Texas A&M University, College Station, TX*

10. Stakeholder Readiness for Site-Specific Weed Control Technologies in Turfgrass. Bholuram Gurjar*¹, Madan Sapkota¹, Maxwel Coura Oliveira², Chase Straw³, Muthukumar Bagavathiannan¹. ¹*Texas A&M University, College Station, TX*, ²*Western São Paulo University*, ³*Pennsylvania State University, University Park, PA*

11. Agronomic Performance and Regional Suitability of Diverse Cereal Rye Germplasm in Texas: Implications for Weed Suppression. Kapil Chobhe*¹, Muthukumar Bagavathiannan¹. ¹*Texas A&M University, College Station, TX*

12. Decreased effectiveness of 2,4-D and Glufosinate Applied Alone or Mixed at Night. Eric Jones*¹, Sachin Dhandla¹, Jill

Alms¹, David Vos¹. ¹South Dakota State University, Brookings, SD

► **13. Evaluation of PRE Applied Clomazone and S-Metolachlor on Crop Safety and Winter Annual Weed Control in a North Carolina Brassica carinata System.** Avi Goldsmith*¹, Edmilson Almeida², Ramon Leon¹. ¹North Carolina State University, Raleigh, NC, ²The Federal University of Maranhão, Maranhão, Brazil

14. Chlorophyll Fluorescence as an Indicator of Phytotoxicity Induced by PSII Inhibitors in Micropropagated Sugarcane Plants. Rogelio Miranda-Marini*^{1, 2}, Valentín Alberto Esqueda-Esquivel², Nicacio Cruz-Huerta¹, Víctor Arturo González-Hernández¹, José Alfredo Carrillo-Salazar¹. ¹Colegio de Postgraduados-Campus Montecillo, Estado de México, México, ²Instituto Nacional de Investigaciones Forestales, Agrícolas y Pecuarias - Campo Experimental Cotaxtla, Veracruz, México

15. Managing Perennial Grass Species in Clearfield Rice. Maranda Hains¹, Connor Webster*¹, Gavin Sparks¹, Ben Stoker¹, Morgan Boone¹, Evelyn Williams¹, Ronnie Levy¹. ¹Louisiana State University Ag Center, Baton Rouge, LA

► **16. Optimization of Rapidicil® Dose and Adjuvant Type for Control of Palmer amaranth (*Amaranthus palmeri*), cheatgrass (*Bromus tectorum*), common ragweed (*Ambrosia artemisiifolia*), and Kochia (*Bassia scoparia*).** Ankit Yadav*¹, Garrison Gundy², Pat Clay², Amit Jhala¹. ¹University of Nebraska-Lincoln, NE, ²Valent U.S.A. LLC, San Ramon, CA

17. Epyrifenacil (Rapidicil®) Tank-Mixtures for Cover Crop Termination (Cereal Rye and Wheat) in No-Till Soybean and Corn Production. Randall Landry*¹, Pat Clay¹, Garrison Gundy¹, Matt Griffin¹, Sam Noe¹, Gregory Clarke¹, Nathan Drewitz¹, Ronald Estes¹, Mallory Everett¹, Jonathon Kohrt¹, Meador Chris¹, Eric Ott¹, Andrew Rodstrom¹, Hunt Sanders¹, Chad Smith¹, Jhonatan Barro¹, Lipi Parikh¹. ¹Valent U.S.A. LLC, San Ramon, CA

► **18. Yield and Developmental Impacts on Rice to Simulated Herbicide Carryover.** Ben Stoker*¹, Connor Webster¹, Ronnie Levy¹, Gavin Sparks¹, Maranda Hains¹, Eve Williams¹, Morgan Boone¹. ¹Louisiana State University Ag Center, Baton Rouge, LA

19. Cotton and Soybean Tolerance to Interline Mega Tank Mixtures with Group 15 Herbicides. Tristen Avent*¹, Ryan Bryant-Schlobohm¹, Jason Norsworthy², Peter Dotray³, Larry Steckel⁴, Prashant Jha⁵. ¹UPL Corporation Ltd., ²University of Arkansas System Division of Agriculture, Fayetteville, AR, ³Texas Tech and Texas A&M Agrilife Research & Extension Service, Lubbock, TX, ⁴University of Tennessee, ⁵Louisiana State University Ag Center, Baton Rouge, LA

20. Weed Control and Response of Grain Sorghum to a Premix of Encapsulated Saflufenacil and Pyroxasulfone. Sai Suvidh Maddela*¹, Amit J. Jhala¹. ¹University of Nebraska-Lincoln, Lincoln, NE

21. Designing Competitive Soybean [*Glycine max* (L.) Merr.] Through Cultural Practices and Plant Architecture for Improved Weed Management. Qasim Khan*¹, Michael Ostlie¹. ¹North Dakota State University Carrington REC, Carrington, ND

► **22. Characterization of Glufosinate Resistance in Waterhemp (*Amaranthus tuberculatus*) Populations from Illinois.** Cristiana Bernardi Rankrape*¹, Isabel Werle Noe², Logan Miller², Eduardo Lago¹, Rishabh Singh², Alexander Lopez², Aaron Hager², Karla Gage¹, Patrick Tranel². ¹Southern Illinois University, Carbondale, IL, ²University of Illinois Urbana-Champaign, Urbana-Champaign, IL

► **23. Aerial Off-target Movement of Ipriazopyrid to Soybean.** Cory Ketchum*¹, Jason Norsworthy¹, Cade Halbrook¹, Lane Pierce¹. ¹University of Arkansas Systems Division of Agriculture, Fayetteville, AR

► **24. Ipriazopyrid Mixed with Auxin Herbicides in Rice.** Gavin Sparks*¹, Connor Webster¹, Steven Stoker¹, Morgan Boone¹, Eve Williams¹, Maranda Hains¹, Ronnie Levy¹. ¹Louisiana State University, Baton Rouge, LA

► **25. Evaluation of Wheat Growth, Biomass, and Competitiveness as Affected by Seed Treatment and Italian Ryegrass (*Lolium multiflorum*) Infestation.** Sushmita Dey*¹, Brad Lindenmayer², Liberty Galvin¹. ¹Oklahoma State University, Stillwater, OK, ²Syngenta Crop Protection, Perkins, OK

26. Statewide Herbicide Resistance Assessment and Dose Response Characterization of Italian Ryegrass (*Lolium perenne* ssp. *multiflorum*) in Oklahoma Winter Wheat. Amna Dar*¹, Liberty Galvin¹, Ty Shreve¹. ¹Oklahoma State University, Stillwater, OK

► **27. Herbicide-Resistant Rhizome Johnsongrass (*Sorghum halepense*): An Emerging Challenge in Mid-South Cropping Systems.** Shahreen Mirza*¹, Prashant Jha¹, Bhupesh Dhaka¹, Daniel Stephenson², Stephen Ippolito². ¹Louisiana State University AgCenter, Baton Rouge, LA, ²Louisiana State University AgCenter, Alexandria, LA

28. Effective Herbicide Programs for Weed Control in Grain Sorghum in New York. Vipin Kumar*¹, Midhat Tugoo¹, Henrique Scatena¹, Preetaman Bajwa¹. ¹Cornell University, Ithaca, NY

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Kumari Sapna¹, Michael Walsh³, Muthukumar Bagavathiannan¹.
¹Texas A&M University, College Station, TX, ²University of
Copenhagen, Copenhagen, Denmark, ³Charles Stuart University,
Wagga Wagga, Australia

► **30. Comparing the Segment Anything Model (SAM) and U-Net for Weed Image Segmentation.** Navjot Singh*¹, Matthew Kutugata², Chris Reberg-Horton³, Steven Mirsky², Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX, ²USDA-ARS Sustainable Agricultural Systems Laboratory, Beltsville, MD, ³North Carolina State University, Raleigh, NC

► **31. Influence of Dicamba and 2,4-D on Glyphosate Control of Annual Grasses.** Brock Dean*¹, Charlie Cahoon¹, David Jordan¹, Zachary Taylor¹, Colden Bradshaw¹, Jackson Alsdorf¹, Diego Contreras¹. ¹North Carolina State University, Raleigh, NC

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► **35. Evaluating Late-Season Broadcasted Cereal Rye for Italian Ryegrass (*Lolium perenne* ssp. *multiflorum*) Suppression.** Colden Bradshaw*¹, Charlie Cahoon¹, Wesley Everman², Diego Contreras¹, Brock Dean¹, Jackson Alsdorf¹, Luke Szoch¹, Ronel Argueta¹, Zachary Taylor¹. ¹North Carolina State University, Raleigh, NC, ²Iowa State University, Ames, IA

► **36. Impact of Fluxofenim Seed Safener on Sugar Beet Response to Group 15 Herbicides Applied Preemergence.** Laura Rodriguez*¹, Joel Felix², Clarke Alder³, Albert Adjesiwo¹. ¹University of Idaho, Kimberly, ID, ²Oregon State University, Ontario, OR, ³Betaseed, Middleton, ID

► **37. Axant™ Flex Cotton Response to Tank-Mixtures Containing Topramezone, L-Glufosinate, and Group 15 Herbicides.** Matthew Woolard*¹, Peter Dotray¹, Adam Hixson², Andrea Sagiorato¹, Brad Guice³, Bobby Rodriguez². ³Texas Tech

and Texas A&M Agrilife Research & Extension Service, Lubbock, TX, ²BASF, Lubbock, TX, ³BASF, Winnsboro, LA

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¹North Carolina State University, Raleigh, NC

► **49. Response of Field-grown Sweet Corn to Herbicides.** Joe Reamsnyder*¹, Katherine Jennings¹, David Monks¹, Kai Goble¹, Colton Blankenship², Stephen Ippolito³, Hope Thome¹. ¹North Carolina State University, Raleigh, NC, ²Louisiana State University AgCenter, Hammond, LA, ³Louisiana State University AgCenter, Alexandria, LA

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► 63. Differential Sensitivity to Diquat within a Pseudo F2 Segregating Population of St. Augustinegrass (*Stenotaphrum secundatum*). Aliyah Jackson*¹, Susana Milla-Lewis¹, James Holland^{1, 2}, Acer VanWallendael¹, Ramon Leon¹. ¹*North Carolina State University, Raleigh, NC*, ²*USDA-ARS Plant Science Research Unit, Raleigh, NC*

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¹University of Florida, Gainesville, FL

66. Evaluation of Preemergence Doveweed Control Strategies in Florida. Pawel Petelewicz*¹, Lukasz Wnorowski¹, Katarzyna Gawron¹, Mikerly Joseph¹, Jayson Ging¹, Chase McKeithen¹, J. Bryan Unruh¹. ¹University of Florida, Gainesville, FL

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► **69. Evaluating Herbicide Tank Mixtures for False-Green Kyllinga (*Kyllinga gracillima*) Control in Bermudagrass using Machine-Vision-Guided Targeted Spraying.** Brooke Heikkila*¹, Navdeep Godara¹, Venkateswar Reddy Yelkur¹, Juan Romero², Michael Carlson². ¹North Carolina State University, Raleigh, NC, ²Ecorobotix, Pasco, WA

► **70. Evaluating Postemergence Herbicides to Control Bosc's Mille Graines (*Oldenlandia boscii*) in Warm-Season Sod Production.** Venkateswar Reddy Yelkur*¹, Raymond McCauley¹, Navdeep Godara¹. ¹North Carolina State University, Raleigh, NC

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73. Watts for Weed Control in Railways: Exploring Pulsed Electric Field Technology. Marcelo Moretti*¹, Jason Crisp², Randall Probstak³. ¹Oregon State University Corvallis, OR, ²Lisi Global, Richland, WA, ³University of Massachusetts Amherst, Amherst, MA

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► 76. A Review of Water Soldier (*Stratiotes aloides*): a High-Risk Invasive Aquatic Weed in the United States. Maria Grazia Corrales-Jimenez*¹, Kara Foley¹, Rob Richardson¹, Ramon Leon-Gonzalez¹. ¹North Carolina State University, Raleigh, NC

► 77. Response of *Vallisneria* Taxa to Combination Herbicide Treatment. Delaney Davenport¹, Kara Foley*¹, Jens Beets², Rob Richardson¹. ¹North Carolina State University, Raleigh, NC, ²USDA-ARS Invasive Species and Pollinator Health Research Unit, Albany, CA

► 78. Evaluation of Herbicide Mixtures for Control of Giant Salvinia (*Salvinia molesta*). Brady Dillingham*¹, Rob Richardson¹. ¹North Carolina State University, Raleigh, NC

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► 80. Evaluating Efficacy of Flumioxazin and Topramezone Combinations for Water Lettuce Control. Abigail Schulken*¹, Eli Russell¹. ¹University of Florida, Gainesville, FL

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► **94. Pyroxysulfone-Coated Fertilizers for Residual Control of Palmer Amaranth in Cotton.** John Kohler*¹, Peter Dotray^{1,2}, Charles Cahoon³, Matthew Woolard¹, Megan Singletary¹, Andrea Sagiorato¹, Holly Davis⁴, Bobby Rodriguez². ¹Texas Tech University, Lubbock, TX, ²Texas A&M AgriLife, Lubbock, TX, ³North Carolina State University, Raleigh, NC, ⁴FMC Corporation, Lubbock, TX

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► **98. Comparative Growth and Emergence Pattern of some Waterhemp and Palmer Amaranth Biotypes in Iowa.** Tunde Akanbi*¹, Alex Macvilay¹, Wesley Everman¹. ¹Iowa State University, Ames, IA

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► **100. Molecular Identification of Grass Endophyte *Epichloe* Spp. Using Translation Elongation Factor 1-alpha and Beta-Tubulin Gene in Herbicide Resistant Italian Ryegrass (*Lolium multiflorum*) Populations from Alabama.** Somak Hazra^{*1}, Rakesh Ghosh¹, Nisith Nishank Purohit¹, Precious Chukwubem¹, Anthony O Adesemoye¹, Aniruddha Maity¹. ¹Auburn University, Auburn, AL

► **101. Influence of Simulated Lunar Soil on Seed Germination and Seedling Growth of Palmer Amaranth (*Amaranthus palmeri*) and Italian Ryegrass (*Lolium perenne* ssp. *multiflorum*).** Gurwinder Singh^{*1}, Muthukumar Bagavathiannan², Aniruddha Maity¹. ¹Auburn University, Auburn, AL, ²Texas A&M University, College Station, TX

102. Spatial Variability of Weed Populations in Plasticulture Systems. Alex Rodriguez^{*1}, Renato Furlanetto¹, Arnold Schumann¹, Amr Abd-Elrahman¹, Ramdas Kanissery¹, Nathan Boyd¹. ¹University of Florida, Gainesville, FL

► **103. Carolina Geranium (*Geranium carolinianum* L.) Emergence Modelling in Florida Strawberry Fields.** Sudip Regmi^{*1}, Nathan S Boyd¹. ¹University of Florida, Gainesville, FL

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110. A High-Fidelity 3D Plant Phenotyping Approach to Elucidate Weed-Crop Competition Dynamics. Joe Johnson¹, Purushottam Gyawali*¹, Muthukumar V. Bagavathiannan¹. ¹Department of Soil and Crop Sciences, Texas A&M University, College Station, TX

► **111. Evaluating the Evolutionary Stability of Dioecy in the Genus *Amaranthus*.** Alexander Lopez*¹, Lucas Kopecky Bobadilla¹, Damilola Raiyemo¹, Isabel Werle Noe¹, Patrick Tranel¹. ¹University of Illinois Urbana-Champaign, Urbana Champaign, IL

► **112. Assessment of Preemergence Herbicide Resistance in North Carolina Italian Ryegrass.** Diego Contreras*¹, Jackson Alsdorf¹, Colden Bradshaw¹, Brock Dean¹, Luke Szoch¹, Zack Taylor¹, Charlie Cahoon¹, Wesley Everman². ¹North Carolina State University, Raleigh, NC, ²Iowa State University, Ames, IA

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► **114. Elucidating the Complexities of Multispecies Weed Competition in Wheat: Above- and Below-ground Interactions.** Purushottam Gyawali*¹, Christoph von Redwitz², Muthukumar V. Bagavathiannan¹. ¹Texas A&M University, College Station, TX, ²Institute for Plant Protection in Field Crops and Grassland, Julius Kühn Institute (JKI), Federal Research Centre for Cultivated Plants, Braunschweig, Germany

115. Collecting Weed Seedling Images to Generate A.I. Models. Marie-Josée Simard*¹, Etienne Lord¹, Benoit Lacasse¹, Robert Nurse², Martin Laforest¹, Shaun Sharpe³. ¹Agriculture and Agri-Food Canada, Saint-Jean-sur-Richelieu, QC, Canada, ²Agriculture and Agri-Food Canada, Harrow, ON, Canada, ³Agriculture and Agri-Food Canada, Saskatoon, SK, Canada

► **116. Weed Community Shifts in Organic Kernza® Production.** Natasha Djuric*¹, Antonio DiTommaso¹, Jacob Jungers², Prabin Bajgain³, Laura van der Pol⁴, Leonardo Deiss⁵,

Manbir Rakkar⁶, Jose Franco⁷, Matthew Ryan¹. ¹Cornell University, Ithaca, NY, ²University of Minnesota, St. Paul, MN, ³USDA-ARS, Prairie-du-Sac, WI, ⁴The Land Institute, Salina, KS, ⁵Colorado State University, Fort Collins, CO, ⁶The Ohio State University, Wooster, OH, ⁷Savanna Institute, Madison, WI

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► **118. Germination Rate of Nine Herbicide-Resistant South Carolina Palmer Amaranth Populations at Different Temperatures.** Gabriel Gava*¹, Michael W. Marshall¹, Fernando H. Oreja¹. ¹Clemson University, Clemson, SC

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124. Invasive Plants Alter the Soundscape of Urban Streams. Jacob Barney*¹, Gabrielle Ripa¹, Leighton Reid¹. ¹Virginia Polytechnic Institute and State University, Blacksburg, VA

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125. Weed Suppression by *Sorghum bicolor* Lines Differing in Sorgoleone Production: Insights from a Multi-Environment Study. Megan Schill*¹, Nithya Rajan¹, William Rooney¹,

Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX

► **126. Examining Various Formulations of Dogfennel (*Eupatorium capillifolium*) Extract on its Soil Activity for Pigweed (*Amaranthus* spp.) Suppression.** Ravneet Kaur*¹, Rakesh Kumar Ghosh¹, Aniruddha Maity¹. ¹Auburn University, Auburn, AL

127. Spatio-Temporal Dispersal of Mycoherbicide *Sclerotium rolfsii* in Controlling Herbicide Resistant *Monochoria vaginalis*. So-Won Koo¹, Do-Soon Kim*¹. ¹Seoul National University, Seoul, South Korea

► **128. Elucidating the Microbial Suppression of Weed Seedbanks: Decay Dynamics of Palmer Amaranth and Johnsongrass Seeds.** Ncomiwe Maphalala*¹, Sanjay Antony-Babu¹, Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX

129. Discovery and Development of Microbial Natural Products for Weed Control. Kara Talbott*¹, Brady Hirshfeld¹, Namrata Baruah¹, Pam Marrone¹, Jim Boyd¹, Amit Vasavada¹. ¹Invasive Species Corporation, Davis, CA

130. Tadpole Shrimp (*Triops longicaudatus*) Biocontrol of Rice (*Oryza sativa*) Weeds. Taiyu Guan*¹, Luis Espino¹, Ian Grettenberger², Troy Clark¹, Whitney Brim-DeForest¹. ¹University of California Cooperative Extension Sutter-Yuba, Yuba City, CA, ²University of California, Davis, CA

POSTER – 11 Physiology

*PRESENTING AUTHOR

► WSSA STUDENT CONTEST

► **131. Antioxidant and Detoxification Enzyme Responses to Glufosinate Treatment in *Eleusine indica*.** Gabriel Felipe Stulp*¹, Stéphanie Patel Pasqualotto², João Henrique Rocha Barion², João Vitor Dalbianco Panica², Rodrigo Orsini Pola², Emy Luiza Ishii Iwamoto², Franck Dayan¹, Rubem Silvério de Oliveira Jr.². ¹Colorado State University, Ft. Collins, CO, ²State University of Maringá, Maringá, Brazil

► **132. Investigating Dicamba Resistance in a Palmer Amaranth (*Amaranthus palmeri*) Population from Kansas.** Andre Lucas Simoes Araujo*¹, Sofia Marques Hill¹, Chandrashekar Aradhya², Aruna Varanasi², Franck Dayan¹, Todd Gaines¹. ¹Colorado State University, Ft. Collins, CO, ²Bayer Crop Science, St. Louis, MO

► **133. Evaluation of Multiple Herbicide Resistance in Barnyardgrass [*Echinochloa crus-galli* (L.) P. Beauv.] Populations from Texas.** Ravindra Babu Tanikonda*¹, Fidel González-Torralva², Neha Boora¹, Nithya Subramanian¹, Samer

Rustom¹, Muthukumar Bagavathiannan¹, Mithila Jugulam². ¹Texas A&M University, College Station, TX, ²Texas A&M AgriLife Research and Extension Center, Beaumont, TX

POSTER - 12. Soil and Environmental Aspects

***PRESENTING AUTHOR**

► WSSA STUDENT CONTEST

► 134. Influence of Biochar-Herbicide Interactions on Weed Control Efficacy in Alabama. Nisith Nishank Purohit^{*1}, Rakesh Kumar Ghosh¹, Yucheng Feng¹, Andrew Price², Aniruddha Maity¹. ¹Department of Crop, Soil and Environmental Sciences, Auburn University, AL, ²USDA-National Soil Dynamics Laboratory, Auburn, AL

► 135. Cover Crop Biomass and Rainfall Regime Interaction Effects on PRE Herbicide Efficacy. Gourav Chahal^{*1}, Carter Bonnell¹, Simer Virk¹, David Russell¹, Andrew Price². ¹Auburn University, Auburn, AL, ²USDA-National Soil Dynamics Laboratory, Auburn, AL

POSTER - 13. Integrated Weed Management

***PRESENTING AUTHOR**

► WSSA STUDENT CONTEST

136. Glufosinate Tank-Mixed with Carfentrazone Improves Control of Wild Poinsettia and Common Ragweed. Roberto Saggin Visoto^{*1}, Alice Lazzari¹, Michelangelo Trezzi², Wallace Santini¹, Mauro Rizzardì³, Anderson Nunes Gabardo¹. ¹Agronomy, Federal Institute of Education Science and Technology of Rio Grande do Sul, Sertão, Brazil, ²Agronomy, Federal University of Technology - Paraná, Pato Branco, Brazil, ³Agronomy, Passo Fundo University, Passo Fundo, Brazil

137. Integrating Multispectral and Hyperspectral Imagery with Machine Learning Models for Large-scale Weed Mapping and Classification. Bismark Anokye^{*1}, Chenghai Yang². ¹Texas A&M University, College Station, TX, ²USDA-ARS Aerial Application Research Unit, College Station, TX

138. Automated Sex Classification in Palmer Amaranth Using RGB Imaging and Machine Learning Techniques. Bismark Anokye^{*1}, Ubaldo Torres¹, Bholuram Gurjar¹, Navjot Singh¹, Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX

► 139. WeedGeoLocator: A Geospatial AI Tool for Weed Detection at Field-Scale. Rutvij Wamanse^{*1}, Vijay Singh¹. ¹Virginia Polytechnic Institute and State University, Painter, VA

140. Glyphosate Resistance Testing in Weedy Varieties of *Panicum miliaceum*. Emily Hochschild*¹. ¹North Carolina State University, Raleigh, NC

► **141. Uncovering the Multiple Weed Suppression Mechanisms of a Cereal Rye Cover Crop.** Gustavo Camargo Silva*¹, Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX

142. Design and Evaluation of the Open-Weed Locator (OWL) Camera Guided Sprayer for Precision Weed Management. Bholuram Gurjar*¹, Vijai Krishna¹, Guy Coleman², Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX, ²University of Copenhagen, Copenhagen, Denmark

143. Integrating Airborne Sensing and Deep Learning for Mapping *Sphenoclea zeylanica* Infestations in Philippine Rice Systems. Bholuram Gurjar*¹, Jerico Bigornia², Steve Klassen², Virender Kumar², Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX, ²International Rice Research Institute, Uttar Pradesh, India

144. Optimizing Flame Weed Control in Organic Cotton Production. Faeqa Mohsin*¹, Gabriela Elizarraras¹, Deepak Loura¹, Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX

► **145. Evaluation of Reduced Tillage in Combination with Alternative Weed Control Methods in Organic Cotton.** Faeqa Mohsin*¹, Nithya Rajan¹, Jake Mowrer¹, Katie Lewis¹, Joseph Burke¹, Peter Dotray², Megan Mills², Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX, ²Texas Tech and Texas A&M Agrilife Research & Extension Service, Lubbock, TX

► **146. Integrated Weed Management Using Cover Crops and Herbicides in Alabama Peanut Production Systems.** Wilfried Ouedraogo*¹, Aniruddha Maity¹, Andrew Ahlersmeyer¹. ¹Auburn University, Auburn, AL

147. Insights from On-Farm Evaluation of Weed Seed Impact Mills in Major US Cropping Regions. Sarah Chu*¹, Eli Russell², Eugene Law³, Mark VanGessel⁴, Wesley Everman⁵, Aaron Hager⁶, Prashant Jha⁷, Luis Avila⁸, Lauren Lazaro⁹, Debalin Sarangi¹⁰, Nicholas Basinger¹¹, Michael Walsh¹², Steven Mirsky¹³, Michael Flessner¹⁴, Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX, ²University of Florida, Gainesville, FL, ³Ohio State University, Columbus, OH, ⁴University of Delaware, Newark, DE, ⁵Iowa State University, Ames, IA, ⁶University of Illinois Urbana-Champaign, Urbana-Champaign, IL, ⁷Louisiana State University, Baton Rouge, LA, ⁸Mississippi State University, Starkville, MS, ⁹Former: Blue River Technology, Sunnyvale, CA, ¹⁰University of Minnesota, Minneapolis, MN, ¹¹University of Georgia, Athens, GA, ¹²Charles

Sturt University, Wagga Wagga, Australia, ¹³ USDA-ARS Sustainable Agricultural Systems Laboratory, Beltsville, MD, ¹⁴ Virginia Polytechnic Institute and State University, Blacksburg, VA

► **148. Improving Pre-Harvest Weed Control in Alabama Corn Through UAV-Delivered Herbicide Treatments.** Walter Martins*¹, Wilfried Ouedraogo¹, Aniruddha Maity¹. ¹Auburn University, Auburn, AL

149. Can We Reduce Herbicide Passes in Corn with Cover Crops? Jenna Beville*¹, Michael Flessner¹. ¹Virginia Polytechnic Institute and State University, Blacksburg, VA

150. Surtain™ Herbicide: Label Expansion for Weed Management in Popcorn and Processing Sweet Corn. Dallas Taylor*¹, Sandy Ethridge¹, Sam Willingham¹, Sanjeev Bangarwa¹, Josh Putman¹. ¹ BASF SE, Ludwigshafen, Germany,

► **151. Managing Palmer Amaranth (*Amaranthus palmeri*) Escapes with Sequential Applications of Glufosinate and 2,4-D Choline.** Lalit Mohan*¹, Sarah Lancaster¹, Victoria Johnson¹, Mithila Jugulum². ¹Kansas State University, Manhattan, KS, ²Texas A&M AgriLife Research and Extension Center, Beaumont, TX

► **152. Contrasting Cereal Rye Growth Windows Drive Biomass Differences and Residue-mediated Impacts on Weed Suppression and Soybean Yield.** Aleksandar Grujic*¹, Erin Haramoto¹, Matthew Allen¹, John M. Wallace². ¹University of Kentucky, Lexington, KY, ²Pennsylvania State University, University Park, PA

► **153. A Multi-Regional View of Planting Green and Early Season Weed Recruitment.** Grant Hoffer*¹, John Wallace¹, Mark VanGessel², Nicholas Basinger³, Aaron Hager⁴, Erin Haramoto⁵, Aleksandar Grujic⁵, Wesley Everman⁶, John Lindquist⁷, Eugene Law⁸, Mercy Odemba⁸, Karla Gage⁹, Eric Miller⁹. ¹Pennsylvania State University, University Park, PA, ²University of Delaware, Newark, DE, ³University of Georgia, Athens, GA, ⁴University of Illinois Urbana-Champaign, Urbana-Champaign, IL, ⁵University of Kentucky, Lexington, KY, ⁶Iowa State University, Ames, IA, ⁷University of Nebraska - Lincoln, Lincoln, NE, ⁸Ohio State University, Columbus, OH, ⁹Southern Illinois University, Carbondale, IL

► **154. Establishing Energy Thresholds for Laser Weed Control Across Weed Species and Growth Stages.** Thomas Rushing*¹, Bholuram Gurjar¹, Vijai Krishna¹, Muthu Bagavathiannan¹. ¹Texas A&M University, College Station, TX

155. Evaluating Palmer Amaranth Control in IWM Programs Using UAV-Based Multispectral Imaging. Usman Mohammed¹,

Prashant Jha*¹, Ivan Grijalva¹, Bhupesh Dhaka¹, Shahreen Mirza¹.
¹Louisiana State University AgCenter, Baton Rouge, LA

► **156. Allelopathic Potential of Grazing-type Winter Covers on Crop and Weed Emergence and Growth.** Yunzhu Chen*¹, Kapil Chobhe¹, Katie Lewis¹, Muthukumar Bagavathiannan¹.
¹Texas A&M University, College Station, TX

► **157. Targeting Perennial Grasses Using ACCase & ALS Inhibiting Herbicides.** Morgan Boone*¹, Gavin Sparks¹, Connor Webster¹, Evelyn Williams¹, Ben Stoker¹, Ronnie Levy¹, Maranda Hains¹. ¹Louisiana State University Ag Center, Baton Rouge, LA

158. Relay Intercropping of Wheat and Soybean in the Central U.S.: Opportunities and Challenges. Amar Godar*¹, Jason Norsworthy¹, Karla Gage², Rachel Cott³, Sarah Lancaster³, Thomas Butts⁴, Bryan Young⁴. ¹University of Arkansas - Fayetteville, AR, ²University of Southern Illinois, Carbondale, IL, ³Kansas State University, Manhattan, KS, ⁴Purdue University, West Lafayette, IN

159. Effect of Water Stress During Growth Stages on Growth and Fecundity of Palmer Amaranth. Gaganjot Singh Sodhi*¹, Dr. Sukhbir Singh¹, Dr. Rupinder Saini¹, Dr. Krishna Jagadish¹, Dr. Donna McCallister¹. ¹Texas Tech University, Lubbock, TX

► **160. Analyzing the Effect of Varying Intensities of Weed Control on Winter Wheat.** Claire Roche*¹, Desiree McGriff¹, Liberty Galvin¹, Connor Cox¹, Amanda De Oliveira Silva¹.
¹Oklahoma State University, Stillwater, OK

► **161. Effects of Rye Cover Crop, MSO Use, and Residual Herbicide on *Amaranthus palmeri* Control in Soybean.** Joaquin L. Enrria*¹, J. Anita Dille¹. ¹Kansas State University, Manhattan, KS

► **162. Integrated Management of Volunteer Corn in Corn.** Alex Chmielewski*¹, Amit Jhala¹, Mandeep Singh². ¹University of Nebraska Lincoln, Lincoln, NE, ²University of California Division of Agriculture and Natural Resources, Woodland, CA

► **163. Cereal Rye Cover Crop and Fall Residual Herbicides: Dual Strategy against Glyphosate- and ACCase-Resistant Italian ryegrass (*Lolium perenne* L. ssp. *multiflorum*).** Bhupesh Dhaka*¹, Prashant Jha¹, Donnie Miller², Connor McKoin¹, Shahreen Mirza¹. ¹Louisiana State University AgCenter, Baton Rouge, LA, ²Louisiana State University AgCenter, St. Joseph, LA

164. Optimizing Mid-Infrared Thermal Weed Control: Species- and Growth-Stage Responses in a Controlled Environment. Ryan Hamberg*¹, Patrick Jackson², Jon Jackson², Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX, ²Global Neighbor Inc., Xenia, OH

► **165. Time as a Tool: Does Planting Date Impact Weed Management in Dry Beans?** Jacob H. Felsman^{*1}, Brian J. Stiles II¹, Christy L. Sprague¹. ¹Michigan State University, East Lansing, MI

166. Impacts of Integrated Weed Management on Weed Density and Seedbank Reduction in Cotton-Corn Rotations. Sarah Chu^{*1}, Aradhya Chandrashekar², Gaylon Morgan³, Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX, ²Bayer Crop Science, St. Louis, MO, ³Cotton Incorporated, Cary, NC

► **167. Investigating Italian Ryegrass (*Lolium perenne* ssp. *multiflorum*) Suppression with Summer Cover Crops.** Jackson Alsdorf^{*1}, Diego Contreras¹, Brock Dean¹, Colden Bradshaw¹, Zachary Taylor¹, Wesley Everman², Charles Cahoon¹. ¹North Carolina State University, Raleigh, NC, ²Iowa State University, Ames, IA

► **168. Evaluating Chaff Lining for Post-Harvest Weed Seed Control in Ohio Row Crops.** Amber Emmons^{*1}, Daniel Doretto¹, Mercy Odemba¹, Ram Yadav¹, Alyssa Essman¹, Eugene Law¹. ¹The Ohio State University, Columbus, OH

169. Minimum Tillage in California Rice: Weed Population Dynamics Under Variable Winter Management Strategies. Whitney Brim-DeForest^{*1}, Bruce Linquist², Luis Espino³, Taiyu Guan¹. ¹University of California Division of Agriculture and Natural Resources, Yuba City, CA, ²University of California-Davis, Davis, CA, ³University of California Division of Agriculture and Natural Resources, Oroville, CA

170. Seedbank Response to Tillage and Cover Crops in Organic Vegetables. Dwayne Joseph^{*1}, Alan Leslie¹, Cerruti Hooks¹. ¹University of Maryland, College Park, MD

► **171. Reduced-Input Herbicide Programs for Cotton in the Texas Southern High Plains.** Andrea Sagiorato^{*1}, Peter Dotray¹, ²Matthew Woolard¹, Megan Singletary¹, John Kohler¹, Bobby Rodriguez², Gaylon Morgan³. ¹Texas Tech University, Lubbock, TX, ²Texas A&M Agrilife Research and Extension Service, Lubbock, TX, ³Cotton Incorporated, Cary, NC

172. How Much Energy is Enough? Defining Thresholds for Electrical Weed Control Across Species and Growth Stages. Ryan Hamberg^{*1}, Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX

173. Postemergence Suppression of Kura Clover (*Trifolium ambiguum*) Varies with Herbicidal Mode of Action. Vijay Varanasi^{*1}, Tulsi Kharel¹, Saseendran Anapalli¹. ¹USDA-ARS-Crop Production Systems Research Unit, Stoneville, MS

► **174. Winter Cover Crop Mixtures Reduce Early-Season Weed Pressure and Affect Morning Glory Performance in**

Soybean No-Till Systems. Hailey Haddock*¹, Fernando Oreja¹, Juan Brocca¹, Coleman Scroggs¹. ¹*Clemson University, Clemson, SC*

175. Efficacy and Crop Safety of Pre-Plant Herbicides for Guayule (*Parthenium argentatum*) Establishment in the Low Desert of California. Oli Bachie*¹. ¹*University of California Agriculture and Natural Resources, Holtville, CA*

POSTER - 14. Sensing, Automation, and Precision Technologies

***PRESENTING AUTHOR**

► WSSA STUDENT CONTEST

► 176. Use Case of ARA Ultra Precision Targeted Application Technology in Wisconsin Non-GMO Corn and Soybean Systems. Daniel Zhu*¹, Guilherme Alves¹, Sabeel Abuhakmeh¹, Abuhakmeh¹, Ryan DeWerff¹, Zaim Ugljic¹, Rodrigo Werle¹. ¹*University of Wisconsin Madison, Madison, WI*

► 177. Early-Stage Weed Detection Using Hyperspectral Imaging and Deep Learning. Mahmoud Rady*^{1, 2}, Matthew Cutulle¹, Brian Ward¹. ¹*Clemson University, Charleston, SC*, ²*Alexandria University, Alexandria, Egypt*

► 178. Evaluating Precision Herbicide Application Strategies During Summer Fallow in the Northern Great Plains. Devanshi Het Desai*¹, Het Samir Desai¹, Paul Nugent¹, Lovreet Shergill², Tim Seipel¹. ¹*Montana State University, Bozeman, MT*, ²*Colorado State University, Ft. Collins, CO*

179. Comprehensive Benchmarking of YOLO Models for Multi-Class Weed Detection in Soybean Fields Using UAV Imagery. Linyuan Wang*¹, Dong Chen¹, Haibo Yao², Te Ming Tseng¹, Xin Sun³, Yanbo Huang². ¹*Mississippi State University, Starkville, MS*, ²*USDA-ARS Genetics and Sustainable Agricultural Research Unit, Starkville, MS*, ³*North Dakota State University, Fargo, ND*

► 180. From Pixels to Predictions: Machine Learning for Herbicide Resistance Detection. Akhilesh Sharma*¹, Alejandro Perez-Jones², Chandrima Shyam², Lucia Acosta-Gamboa². ¹*Cornell University, Ithaca, NY*, ²*Bayer Crop Science, St. Louis, MO*

POSTER - 15. Genomics

***PRESENTING AUTHOR**

► WSSA STUDENT CONTEST

181. Improving Gene Annotations for Weed Genomes in IWGC Phase 2. Maria Antonia Rossatto Novelli*¹, Todd Gaines¹, Eric Patterson², Caio Brunharo³. ¹Colorado State University, Fort Collins, CO, ²Michigan State University, East Lansing, MI, ³Pennsylvania State University, University Park, PA

► 182. Characterization of the Genetic Diversity of Curlyleaf Pondweed (*Potamogeton crispus*). Mallory Kaiser*¹, Gregory Chorak², Ryan Thum², Ryan Wersal¹. ¹Minnesota State University, Mankato, MN, ²Montana State University, Bozeman, MT

► 183. Transgenerational Stress Plasticity Modulates Epigenetic and Transcriptional Herbicide Responses in *Arabidopsis thaliana*. Anais Mejia*¹, Caio Brunharo². ¹Colorado State University, Ft. Collins, CO, ²Pennsylvania State University, University Park, PA

► 184. Unraveling Resistance Mechanisms in a Field-Evolved Population of *Amaranthus palmeri*. Franck Dayan¹, Anais Mejia*¹, Todd Gaines¹, Dustin Moreno². ¹Colorado State University, Ft. Collins, CO, ²Universidad de Panama, Panama City, Panama

► 185. Tracing the Roots of Auxin Herbicide Selectivity Through AUX/IAA Evolution. Eric Moog*¹, Todd Gaines¹, Franck Dayan¹. ¹Colorado State University, Fort Collins, CO

186. Exploring the Next-Gen Weed Control: Gene Silencing Initiated by Topically Applied dsRNA. Hong Ma*¹, Ramon Leon¹. ¹North Carolina State University, Raleigh, NC

► 187. Revisiting RNAseq and QTL Mapping Analysis in an HPPD-Resistant Palmer Amaranth and Screening for Herbicide Multiple-Resistance. Eduardo Rudell*¹, Andre Simoes Araujo¹, Bianca Assis Barbosa Martins², Nawaporn Onkokesung², Frank Dayan¹, Todd Gaines¹. ¹Colorado State University, Ft. Collins, CO, ²Bayer Crop Science, St. Louis, MO

188. Genome-wide Identification and Comparative Analysis of Cytochrome P450 Genes in Asteraceae. Fatemeh Abdollahi*¹, Sofia Marques Hill¹, David R Nelson², Todd Gaines¹. ¹Colorado State University, Fort Collins, CO, ²University of Tennessee, Memphis, TN

► 189. Development of the First Agrobacterium-mediated Transformation Protocol for Proso Millet (*Panicum miliaceum*): Applications for Crop and Weed Research. Leigh Schwinden*¹, Acer VanWallendael¹, Kedong Da¹. ¹North Carolina State University, Raleigh, NC

190. Genetic Comparisons of Italian Ryegrass (*Lolium multiflorum*) Populations Across North Carolina. Audrey Fahey*¹, Nik Hay¹, Leigh Schwinden¹, Emily Hochschild¹, Acer VanWallendael¹. ¹*North Carolina State University, Raleigh, NC*

191. Unveiling the Mechanisms of Increased EPSPS Copy Number in Glyphosate-Resistant Italian Ryegrass (*Lolium multiflorum*). Adrian Veron*¹, Caio Brunharo¹. ¹*Pennsylvania State University, University Park, PA*

► **192. Genetic variation in Flowering Time Genes across North Carolina *Amaranthus palmeri* Populations.** Morgan Alexander*¹, Acer VanWallendael¹, Nikoli Hay¹. ¹*North Carolina State University, Raleigh, NC*

193. The Telomere-to-Telomere Genome of *Erigeron sumatrensis* and Reveal Insights into Herbicidal Target HPPD and Herbicide Activity. Zuren Li*¹, Yutong Liu¹, Meiliang Zhou², Lianyang Bai¹. ¹*Hunan Academy of Agricultural Sciences, Changsha, China*, ²*Chinese Academy of Agricultural Sciences, Beijing, China*

TUESDAY MORNING FEBRUARY 10

Judges Work Room

LOCATION: Creedmore
TIME: 9:00 AM-4:00 PM Eastern

ORAL - 01. Agronomic Crops

LOCATION: Glenwood Ballroom
Salon I
TIME: 9:00 AM-5:00 PM Eastern
MODERATORS: Craig Alford
Corteva AgriScience
Johnston, IA

***SPEAKER**

- 09:00 AM **200. Evaluating Metribuzin for Waterhemp (*Amaranthus tuberculatus*) Management in Corn across the North Central United States.** Eric Jones^{*1}, Jill Alms¹, David Vos¹, Tommy Butts², Leonard Piveta², Alyssa Essman³, Alyson Godwin³, Anthony Dobbels³, Wesley Everman⁴, Damian Franzenburg⁴, Alex Macvilay⁴, Aaron Hager⁵, Joseph Ikley⁶, Rodrigo Werle⁷, Ryan DeWerff⁷, Nikola Arsenijevic⁷. ¹South Dakota State University, Brookings, SD, ²Purdue University, West Lafayette, IN, ³The Ohio State University, Columbus, OH, ⁴Iowa State University, Ames, IA, ⁵University of Illinois Urbana-Champaign, Urbana-Champaign, IL, ⁶North Dakota State University, Fargo, ND, ⁷University of Wisconsin, Madison, WI
- 09:15 AM **201. BASF's Next Generation PPO Herbicide: Fendioxpyracil.** Liliana Parra Rapado^{*1}, Tobias Seisser¹. ¹BASF SE, Limburgerhof, Germany
- 09:30 AM **202. Preplant Burndown Weed Control with Epyrifenacil (Rapidicil®), a Novel Broad Spectrum PPO Herbicide.** Pat Clay^{*1}, Garison Gundy¹, Randall Landry¹, Griffin Matt¹, Noe Sam¹, Clarke Gregory¹, Nathan Drewitz¹, Estes Ronald¹, Mallory Everett¹, Jonathon Kohrt¹, Chris Meador¹, Eric Ott¹, Andrew Rodstrom¹, Hunt Sanders¹, Chad Smith¹, Jhonatan Barro¹, Lipi Parikh¹. ¹Valent U.S.A. LLC, San Ramon, CA
- 09:45 AM **203. Programs for Burndown Weed Control in No-Till Corn, Soybeans, and Wheat with Epyrifenacil (Rapidicil®).** Garrison Gundy^{*1}, Pat

Clay¹, Randall Landry¹, Matt Griffin¹, Sam Noe¹, Gregory Clarke¹, Nathan Drewitz¹, Ronald Estes¹, Mallory Everett¹, Jonathon Kohrt¹, Chris Meador¹, Eric Ott¹, Andrew Rodstrom¹, Hunt Sanders¹, Chad Smith¹, Jhonatan Barro¹, Lipi Parikh¹. ¹Valent U.S.A. LLC, San Ramon, CA

- 10:00 AM **204. Vyconic Soybeans: A Flexible Approach to Preemergent Weed Management with Acetochlor-Mesotrione Premix.** Carl Coburn*¹, Katilyn Price¹, Zewei Miao¹, Emily Scholting¹. ¹Bayer Crop Science, St. Louis, MO
- 10:15 AM **205. Response of Popcorn and Processing Sweet Corn Hybrids to a Premix of Saflufenacil and Pyroxasulfone (Surtain® herbicide) Applied Pre- and Early Post-Emergence.** Ankit Yadav*¹, John Frihauf², Amit Jhala¹. ¹University of Nebraska-Lincoln, Lincoln, NE, ²BASF Corporation, Raleigh, NC
- 10:30 AM **206. Impact of Application Timing and Residual Tank Mixtures on Postemergence Weed Control in Enlist Soybean.** Kurt Vollmer*¹, Jadon Cook¹. ¹University of Maryland, College Park, MD
- 10:45 AM **207. Postemergence Herbicides for the Control of Multiple-Herbicide-Resistant Canada Fleabane (*Conyza canadensis*) in Corn.** Nader Soltani¹, Isabelle Aicklen*¹, Christian Willems¹, Peter Sikkema¹. ¹University of Guelph, Guelph, ON
- 11:00 AM **208. Suspected Resistance of Common Cocklebur (*Xanthium strumarium*) from Illinois and Indiana to Glyphosate and Atrazine.** Alexander R. Mueth*¹, Julie M. Young¹, Bryan G. Young¹. ¹Purdue University, West Lafayette, IN
- 11:15 AM **209. Glyphosate Resistance in Goosegrass (*Eleusine indica*): Evidence from New Jersey Populations.** Carrie Mansue*¹, Thierry Besancon¹, Lynn Sosnoskie², Caio Brunharo³, Adrian Veron³. ¹Rutgers University, New Brunswick, NJ, ²Cornell University, Ithaca, NY, ³The Pennsylvania State University, College Park, PA
- 11:30 AM **210. Counties and Acreage Affected by Herbicide Resistant Weeds in Soybean, Corn, and Cotton in 2017.** Michael Flessner*¹, Nicholas Basinger², Zahoor Ganig³, Ian Burke⁴, Kara Pittman⁵. ¹Virginia Polytechnic Institute and State University, Blacksburg, VA, ²University of Georgia, Athens, GA, ³FMC, ⁴Washington State University,

Pullman, WA, ²Pennsylvania State University,
College Park, PA

12:00 PM LUNCH BREAK

- 01:15 PM **212. Evaluating Herbicide Resistance in Giant Ragweed (*Ambrosia trifida*).** Cristiana Bernardi Rankrape*¹, Isabel Werle Noe², Eduardo Lago¹, Patrick Tranel², Karla Gage¹. ¹Southern Illinois University, Carbondale, IL, ²University of Illinois Urbana-Champaign, Urbana-Champaign, IL
- 01:30 PM **213. Bayer's Weed Survey Project: A Comprehensive Update on Herbicide Sensitivity Trends in Waterhemp and Palmer Amaranth in the US.** Chandrima Shyam*¹, Drew Tyre¹, Alejandro Perez-jones¹, Jeffrey Herrmann¹, Chandrashekar Aradhya¹. ¹Bayer Crop Science, St. Louis, MO
- 01:45 PM **214. Characterization of Dicamba Efficacy in Selected Palmer amaranth and Waterhemp Populations.** Aruna Varanasi*¹, Chandra Aradhya¹. ¹Bayer Crop Science, St. Louis, MO
- 02:00 PM **215. Distribution of PPO inhibitor (Group 14)-resistant kochia (*Bassia scoparia*) in North Dakota and the Canadian Prairies.** Joseph Ikley*¹, Charles Geddes², Gaganpreet Dhariwal², Laura Kennedy², Lindsey Franssen³, Zack Bateson³. ¹North Dakota State University, Fargo, ND ²Agriculture and Agri-Food Canada, Lethbridge AB, ³National Agricultural Genotyping Center, Fargo, ND
- 02:15 PM **216. Resistance Breaking Capability of New-Generation PPO-Inhibiting Herbicides.** Sarah Stilgenbauer*¹, Aimone Porri¹. ¹BASF SE, Limburgerhof, Germany
- 02:30 PM **217. Increased Occurrence of Herbicide-Resistant Grasses in Louisiana Cropping Systems.** Shahreen Mirza*¹, Prashant Jha¹, Bhupesh Dhaka¹, Connor Webster¹, Daniel Stephenson², Donnie Miller³, Matt Foster⁴. ¹Louisiana State University AgCenter, Baton Rouge, LA, ²Louisiana State University AgCenter, Alexandria, LA, ³Louisiana State University AgCenter, St Joseph, LA, ⁴Louisiana State University AgCenter, St. Gabriel, LA
- 02:45 PM **218. Herbicide Use Pattern and Perceptions of Herbicide Resistance Among Rice Farmers in Quezon, Philippines.** Analiza Henedina Ramirez*¹,

Mary Joy Abit¹. ¹University of the Philippines Los Banos, Los Banos, Philippines

3:00 PM BREAK

- 03:15 PM **219. Resistance to ACCase- and ALS-inhibiting Herbicides in *Echinochloa glabrescens* Populations from Quezon, Philippines.** Mary Joy Abit*¹, Samantha Ann Bernice Manlutac¹, Vico Aaron Enriquez¹, Analiza Henedina Ramirez¹. ¹University of the Philippines Los Banos, Los Banos, Philippines
- 03:30 PM **220. Issues and Scope of Direct Seeded Rice as an Alternative to Puddled Transplanted Rice in North-Western India: Insights from Haryana.** Dharam Bir Yadav*¹, Ashok Yadav¹, Ankur Chaudhary¹, Virender Kumar², R. K. Malik³, Gurjeet Gill⁴. ¹CCS Haryana Agricultural University, Hisar, India, ²IRRI, Manila, Philippines, ³IRRI, India, ⁴University of Adelaide, Adelaide, Australia
- 03:45 PM **221. Viludo Seed Safener: A Novel Fenclorim Seed Treatment for Enhanced Rice Safety to Clomazone Applications.** Ryan Bryant-Schlobohm*¹, Jason Norsworthy², Tristen Avent¹, Ryan Henry¹, Cody Gray¹, Paul Johnson¹. ¹United Phosphorus, Inc., King of Prussia, PA, ²University of Arkansas, Fayetteville, AR
- 04:00 PM **222. Ip triazopyrid, a Novel Herbicide for US Rice Production.** Craig Sandoski*¹. ¹Gowan USA, Collierville, TN
- 04:15 PM **223. Ip triazopyrid: A Novel HPPD Herbicide for Rice.** Jason Norsworthy*¹, Cory Ketchum¹. ¹University of Arkansas, Fayetteville, AR
- 04:30 PM **224. Ip triazopyrid Use in Louisiana Rice.** Connor Webster*¹, Craig Sandoski², Maranda Hains¹, Ben Stoker¹, Gavin Sparks¹, Evelyn Williams¹, Morgan Boone¹, Ronnie Levy¹. ¹Louisiana State University, Baton Rouge, LA, ²Gowan USA, Collierville, TN
- 04:45 PM **225. Ip triazopyrid Mixed with Contact Herbicides in Rice.** Gavin Sparks*¹, Connor Webster¹, Morgan Boone¹, Eve Williams¹, Steven Stoker¹, Maranda Hains¹, Ronnie Levy¹. ¹Louisiana State University, Baton Rouge, LA
- 05:00 PM **226. Evaluation of Ip triazopyrid: A New HPPD-inhibiting Herbicide.** Ben Stoker*¹, Connor Webster¹, Ronnie Levy¹, Gavin Sparks¹, Maranda

Hains¹, Eve Williams¹, Morgan Boone¹. ¹ Louisiana State University, Baton Rouge, LA

- 05:15 PM **227. Effectiveness of Ipriazopyrid in Combination with Commonly Utilized Synthetic Auxins in Rice.** Cory Ketchum*¹, Jason Norsworthy¹, Noah Chandler¹, Rhett Baxley¹.
¹University of Arkansas, Fayetteville, AR

TUESDAY MORNING FEBRUARY 10

ORAL - 11. Physiology

LOCATION: Glenwood Ballroom
Salon III and IV
TIME: 9:00 AM-2:45 PM Eastern
MODERATORS: David Belles
Syngenta Crop Protection
Greensboro, NC

***SPEAKER**

- 09:00 AM **228. Plant Transcription Factor Responses to Herbicides.** Franck Dayan*¹, Srishti Gupta², Caleb Knepper³, Catarine Markus⁴, Aldo Merotto⁴, Luan Cutti⁵, Crystal Sparks¹, Martin Laforest⁶, Carlos Rigon⁷, Jim Brosnan⁸. ¹Colorado State University, Ft. Collins, CO, ²Duke University, Durham, NC, ³RiceTec Inc, ⁴Federal University of Rio Grande do Sul, Porto Alegre, Brazil, ⁵Michigan State University, East Lansing, MI, ⁶Agriculture and Agri-Food Canada, Saint-Jean-sur-Richelieu, QC, ⁷Corteva Agriscience, Indianapolis, IN, ⁸University of Tennessee, Knoxville, TN

- 09:15 AM **229. Rimisoxafen: The First Dual-Mode Herbicide Combining Two Distinct Mechanisms to Combat Global Weed Resistance.** Atul Puri*¹, Ryan Emptage¹, Il-Ho Kang¹, Chad Brabham¹, Ravishekhara Reddy¹, Marco Montagna¹. ¹FMC Corporation, Philadelphia, PA

- 09:30 AM **230. Phenotypic, Biochemical and Transcriptomic Analyses Uncover the Modes of Action of Cinnamaldehyde, a Potential New Botanical Herbicide.** Sofiene Ben Kaab*¹, Zoe Schroeder², Victoria Shema², Samuel Revolinski²,

Tomo Kawashima², Pan Zhiqiang³, Charles Cantrell³, Ikhlas Khan⁴, Steve Duke⁴, Joanna Bajsa-Hirschel³, Haissam Jijakli¹. ¹*Gembloux Agro-Bio Tech, University of Liege, Belgium*, ²*University of Kentucky, Lexington, KY*, ³*USDA-ARS Natural Products Utilization Research Unit, Oxford, MS*, ⁴*The University of Mississippi, Oxford, MS*

- 09:45 AM **231. The New HRAC Mode of Action Classification 2026 - Major Revision of Actives.** Jens Lerchl*¹, Matthias Witschel¹, Jens Frackenhohl², Bianca Martins², Hudson Takano³, Jeffrey Epp³, James Morris⁴, Gael Le Goupil⁴, Roland Beffa⁵. ¹*BASF SE, Ludwigshafen, Germany*, ²*Bayer AG, Leverkusen, Germany*, ³*Corteva Agriscience, Indianapolis, IN*, ⁴*Syngenta AG, Basel, Switzerland*, ⁵*HRAC Global*
- 10:00 AM **232. The New HRAC Mode of Action Classification 2026 - Shaping the Future.** Jens Lerchl*¹, Matthias Witschel¹, Bianca Martins², Jens Frackenhohl², Hudson Takano³, Jeffrey Epp³, James Morris⁴, Gael Le Goupil⁴, Roland Beffa⁵. ¹*BASF SE, Ludwigshafen, Germany*, ²*Bayer AG, Leverkusen, Germany*, ³*Corteva Agriscience, Indianapolis, IN*, ⁴*Syngenta AG, Basel, Switzerland*, ⁵*HRAC Global, Location?*
- 10:15 AM **233. How Mevalocidin Inhibits the Mevalonate Pathway to Kill Weeds.** Stephen Duke*¹, Amar Chittiboyina¹, Hemant Lata¹, Pankaj Pandey¹, Joanna Bajsa-Hirschel². ¹*University of Mississippi, Oxford, MS*, ²*USDA-ARS Natural Products Utilization Unit, Oxford, MS*
- 10:30 AM **234. Histone DeAcetylase (HDAC) Mediation as a New Herbicide Mode-of-Action.** Paul Zorner*¹, Anand Ray¹. ¹*Remote Epigenetics, Encinitas, CA*
- 10:45 AM **235. 2,4-D Metabolism in Palmer Amaranth (*Amaranthus palmeri*) and Waterhemp (*Amaranthus tuberculatus*): Comparative Profiling of Detoxification Pathways and Metabolite Identification.** Michael Ozolins*¹, Emma Kuhl¹, Jason Norsworthy², Erin Hill¹, Eric Patterson¹. ¹*Michigan State University, East Lansing, MI*, ²*University of Arkansas, Fayetteville, AR*

- 11:00 AM **236. Evaluating Multiple Herbicide Resistance in Kochia Against Synthetic Auxins and PPO-Inhibitors.** Chandrima Shyam*¹, Lucia Acosta-Gamboa¹, Jiani Yang¹, Kathryn Haydon¹, Ericka Havecker¹, Alejandro Perez-Jones¹. ¹*Bayer Crop Science, St. Louis, MO*
- 11:15 AM **237. Environmental Factors Influencing the Differential Response of Resistant and Susceptible Waterhemp (*Amaranthus tuberculatus*) Populations to Glufosinate-ammonium.** Isabel Werle Noc*¹, Logan Miller¹, Damilola A. Raiyemo¹, Alexander J. Lopez¹, Estéfani Sulzbach¹, Aaron G. Hager¹, Patrick J. Tranel¹. ¹*University of Illinois Urbana-Champaign, Urbana-Champaign, IL*
- 11:30 PM **Business Meeting**

TUESDAY MORNING FEBRUARY 10

SYMPOSIUM - 01. Bridging the Gap: Regulatory, Technical, and Industry Perspectives on Targeted and Autonomous Weed Control

LOCATION: Glenwood Ballroom
Salon 3 and 4
TIME: 9 AM-12:30 PM Eastern
MODERATORS: Lauren Lazaro

***SPEAKER**

- 09:00 AM **Introduction to Symposium.** Lauren Lazaro
- 09:05 AM **238. Novel Weed Control Technologies: Significant Opportunities but Considerable Challenges.** Michael Walsh*¹. ¹*Charles Stuart University, Wagga Wagga, NSW, Australia*
- 09:25 AM **239. Transforming Agriculture with Robotics and Deep Learning.** Chris Padwick*¹. ¹*John Deere, Menlo Park, CA*
- 09:45 AM **240. The Current State of HWSC and Where Autonomous Control Is Taking Us.** Dean Mayerle*¹. ¹*Redekop Manufacturing, Saskatoon, SK*

- 10:05 AM **241. Rewriting the Rules with Aim & Apply™.** Chad Yagow*¹. ¹*Veradnt Robotics, Hayward, CA*
- 10:25 AM **242. Targeted Application, Standardizing Performance: ASABE X665.** Adam Barlow*¹. ¹*John Deere, Des Moines, IA*
- 10:45 AM **243. Targeted Applications and Crop Protection Manufacturers: Implications, Challenges, and Opportunities.** R. Joseph Wuerffel*¹. ¹*Syngenta Crop Protection, Greensboro, NC*
- 11:05 AM **244. From Challenges to Opportunities: Collaborative Approaches from Agriculture Retailers to Enhance Sustainable Weed Control with Changing Agrotechnology's.** Jeff Bunting*¹, Terry Kipley². ¹*GROWMARK Inc, Mahomet, IL*, ²*Council of Producers and Distributors of Agrotechnology, Northport, NY*
- 11:25 AM **245. The Role of the EPA and the Impacts of Technology.** Kelly Tindall*¹, Melanie Biscoe¹, Julie Breeden-Alemi¹, Khue Nguyen¹, Andrew Shelby¹, Laura Bacon¹. ¹*U.S. Environmental Protection Agency, Washington, DC*
- 11:45 AM **Panel Discussion.** The symposium will culminate in a plenary panel discussion featuring all of the day's presenters.

TUESDAY AFTERNOON FEBRUARY 10

**SYMPOSIUM - 02. Re-framing the Discussion of
Herbicide Resistance – Perspectives on Best
Practices for Real-time Management in the Field**

LOCATION: Glenwood Ballroom
Salon II

TIME: 1:00-5:00 PM Eastern

MODERATORS: Charles Cahoon
North Carolina State University
Raleigh, NC

Cameron Douglas
Compliance Services
International
Lakewood, WA

Sarah Lancaster
Kansas State University
Manhattan, KS

***SPEAKER**

01:00 PM **Introduction.** Charlie Cahoon*¹. ¹*North Carolina State University, Raleigh, NC*

1:10 PM **Local Perspectives.** Charlie Cahoon*¹. ¹*North Carolina State University, Raleigh, NC*

1:40 PM **Moderated Panel Discussion on Local Perspectives.** Charlie Cahoon*¹. ¹*North Carolina State University, Raleigh, NC*

02:15 PM **246. Factors That Affect Resistance Management Decisions at the Farm Level.**
Steve Hoffman*¹. ¹*InDepth Agronomy, Manitowoc, WI*

02:30 PM **247. Re-framing the Discussion of Herbicide Resistance - Perspectives on Best Practices for Real-time Management in the Field: Commodity Group Perspective (Soybeans).**
Blake Barlowe¹, Katherine Stowe¹. ¹*United Soybean Board, Apex, NC*

- 02:45 PM **248. Addressing Herbicide Resistance: An Industry Perspective.** David Belles*¹.
¹Syngenta Crop Protection, Greensboro, NC
- 03:00 PM BREAK (15 MINUTES)**
- 03:15 PM **249. The Herbicide Resistance Monitoring Network (HeRMoN).** Eric Patterson¹, Sara Lancaster², Caio Brunharo³, Christy Sprague¹, Bryan Young⁴, Thomas Butts⁴, Patrick Tranel⁵, Rodrigo Werle⁶, Mithila Jugulam⁷, Luis Avila⁸, Jason Norsworthy⁹, Kevin Bradley¹⁰. *¹Michigan State University, East Lansing, MI, ²Kansas State University, Manhattan, KS, ³The Pennsylvania State University, College Park, PA, ⁴Purdue University, West Lafayette, IN, ⁵University of Illinois Urbana-Champaign, Urbana-Champaign, IL, ⁶University of Wisconsin-Madison, Madison, WI, ⁷Texas A&M University, College Station, TX, ⁸Mississippi State University, Starkville, MS, ⁹University of Arkansas, Fayetteville, AR, ¹⁰University of Missouri, Columbia, MO*
- 03:30 PM **250. EDDMapS: Managing, visualizing, and sharing data on weed presence and herbicide resistance.** Joseph LaForest*¹. *¹University of Georgia, Athens, GA*
- 03:45 PM **251. GROW Resources Empower Farmers to Combat Herbicide Resistance.** Michael Flessner*¹, Emily Unglesbee², Amy Sullivan², Mark VanGessel³, Muthukumar Bagavathiannan⁴, John Wallace⁵, Steven Mirsky⁶. *¹Virginia Polytechnic Institute and State University, Blacksburg, VA, ²GROW, ³University of Delaware, Newark, DE, ⁴Texas A&M University, College Station, TX, ⁵The Pennsylvania State University, College Park, PA, ⁶USDA-ARS Sustainable Agricultural Systems Laboratory, Beltsville, MD*
- 4:00 PM **252. A Social Science Perspective on Best Management Practices for Herbicide Resistance.** Nick Bergmann*¹. *¹Washington State University, Pullman, WA*

04:15 PM **253. Trust, Social Capital, and Community Adoption of Herbicide Resistance Best Management Practices.** Katherine Dentzman*¹.
¹Iowa State University, Ames, IA

04:15 PM **Moderated Discussion with Audience Members.** Sarah Lancaster*¹, Cameron Douglas. *¹Kansas State University, Manhattan, KS, ²Compliance Services International, Lakewood, WA*

TUESDAY AFTERNOON FEBRUARY 10

ORAL - WSSA - SST

M.S. Student Contest

LOCATION: Glenwood Ballroom
Salon III
TIME: 1:45-5:15 PM Eastern
MODERATOR: Darrin Dodds
Mississippi State University
Starkville, MS

***SPEAKER**

01:45 PM **254. Field Evaluation of Weed-Suppression Traits in Diverse Cotton (*Gossypium* spp.) Lines.** Varnika Kalaichelvan*¹, Pandian Rajendran¹, Fernando Aguiar Neves¹, Aniruddha Maity², Alvaro Sanz-Saez², Muthukumar Bagavathiannan¹, Nithya Subramanian¹. *¹Texas A&M University, College Station, TX, ²Auburn University, Auburn, AL*

01:49 PM **255. Influence of Poultry Litter and Nutrient Inputs on Effectiveness of Pre-Emergence Herbicides in Southeastern Cotton Production.** Gurwinder Singh*¹, Nisith Nishank Purohit¹, Rakesh Kumar Ghosh¹, Rishi Prasad¹, Aniruddha Maity¹. *¹Auburn University, Auburn, AL*

01:53 PM **256. Natural Host Range of Cotton Leafroll Dwarf Virus Across Seasons in Alabama, USA.** Kathleen Martin¹, Carter Bonnell*^{1,2}, Andrew Price², Steve Brown¹, Gourav Chahal¹, Karishma Khanal¹. *¹Auburn University, Auburn, AL, ²USDA-*

ARS National Soil Dynamics Laboratory, Auburn, AL

- 01:57 PM **257. Survey of Herbicide Resistance in Texas Palmer amaranth (*Amaranthus palmeri*).** Luke Schmitz*¹, Ryan Hamberg¹, Scott Nolte¹, Peter Dotray², Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX, ²Texas Tech and Texas A&M Agrilife Research & Extension Service, Lubbock, TX
- 02:01 PM **258. From 2,4-D to Dicamba: Is Waterhemp One Step Ahead?** Adebisi Adeleke*¹, Jerry Cohen¹, Eric Patterson², Navjot Singh¹, Debalin Sarangi¹. ¹University of Minnesota, Saint Paul, MN, ²Michigan State University, East Lansing, MI
- 02:05 PM **259. Delta T and Glufosinate Performance: Validation of Thresholds for Palmer Amaranth (*Amaranthus palmeri*) Control.** Lalit Mohan*¹, Sarah Lancaster¹, Jeremie Kouame², Igor Lima¹. ¹Kansas State University, Manhattan, KS, ²Agricultural Research Center, Hays, KS
- 02:09 PM **261. Balancing Cost and Control: Overlapping Residual Strategies for Waterhemp (*Amaranthus tuberculatus*) Management in Ohio.** Ella Poling*¹, Anthony Dobbels¹, Colin Barclay¹, Laura Lindsey¹, Stephanie Karhoff¹, Guilherme Signorini¹, Alyssa Essman¹. ¹The Ohio State University, Columbus, OH
- 02:13 PM **262. Palmer amaranth (*Amaranthus palmeri*) Control: The Role of Glufosinate Formulation, AMS rates, and Weather Conditions.** Caroline Wayhs Backes*¹, Zachary Howard¹, Scott Nolte¹. ¹Texas A&M University, College Station, TX
- 02:17 PM **263. The Space Between: Can Inter-planted Soybeans Improve Weed Management?** Zachary Ury*¹, Kevin Bradley¹. ¹University of Missouri, Columbia, MO
- 02:21 PM **264. Assessing Weed Pressure and Management Efficacy in an Agrivoltaic Soybean Cropping System.** Dana Russell*¹, Caroline Marschner¹, Jinwook Kim¹, Matthew Sturchio¹, Antonio DiTommaso¹. ¹Cornell University, Ithaca, NY

- 02:25 PM **265. Evaluation of Vegetation Index Performance Among Corn, Cotton, Peanut, and Weed Species.** Walter Martins*¹, Wilfried Ouedraogo¹, Aniruddha Maity¹. ¹*Auburn University, Auburn, AL*
- 02:29 PM **266. How Much Is Enough? Dose Response of *Hydrilla verticillata* to Endothall.** Samantha Bowen*¹, Kayla Eason², Benjamin Sperry³, Timothy Grey¹. ¹*University of Georgia, Tifton, GA*, ²*USDA-ARS Southeastern Watershed Research Unit, Tifton, GA*, ³*US Army Corps of Engineers, Gainesville, FL*
- 02:33 PM **267. Perennial Grass Control in Louisiana Rice using ALS and ACCase Herbicides.** Morgan Boone*¹, Evelyn Williams¹, Ben Stoker¹, Maranda Hains¹, Ronnie Levy¹, Gavin Sparks¹. ¹*LSU Ag Center, Baton Rouge, LA*
- 02:37 PM **268. Response of Rice Variety and Seeding Rate to Barnyardgrass (*Echinochloa crus-galli*) Competition.** Evelyn Williams*¹, Connor Webster¹, Ronnie Levy¹, Ben Stoker¹, Maranda Hains¹, Gavin Sparks¹, Morgan Boone¹. ¹*Louisiana State University, Baton Rouge, LA*
- 02:41 PM **269. Is Maleic Hydrazide a Viable Tool in Managing Volunteer Potatoes?** Nathan Welch*¹, Erin Burns¹. ¹*Michigan State University, East Lansing, MI*
- 02:45 PM **270. Optimizing Field Margin Management to Minimize Agricultural Weed Problems and Enhance Ecosystem Services.** Rebecca Stup*¹, Sophie Westbrook², Antonio DiTommaso¹. ¹*Cornell University, Ithaca, NY*, ²*Kansas State University, Manhattan, KS*
- 02:49 PM **271. Determine Crop-Weed Dynamics in a Sorghum-Cotton Rotation and Assess The Impact on System-Level Water Use.** Gaganjot Singh Sodhi*¹, Sukhbir Singh¹, Rupinder Saini¹, Dr. Krishna Jagadish¹, Donna McCallister¹. ¹*Texas Tech University, Lubbock, TX*
- 02:53 PM **272. Comparing Weed Control Efficacy following a Pre-emergent Herbicide Application**

from UAV and Ground Sprayer in Soybean.
Jesse Yount^{*1}, Kevin Bradley¹. ¹*University of Missouri, Columbia, MO*

03:00 PM BREAK (15 MINUTES)

03:15 PM **273. Comparison of Aerial Application Technologies: Spray Drone vs. Airplane for Fungicide Spray Deposition and Uptake in Corn (*Zea mays* L.).** Daniel Castaneda^{*1}, Steve Li¹, Juliana de Souza Rodrigues¹, Grayson Chew¹, Alejandra Bolanos¹. ¹*Auburn University, Auburn, AL*

03:19 PM **274. Drone Seeding: Farmers Tool for Cover Crop Success.** Kamana Pilaian^{*1}, Sydney Buffington¹, Ana Campos¹, Himani Ahlawat¹, Wesley Porter¹, Jodi Maynard¹, Nicholas Basinger¹. ¹*University of Georgia, Athens, GA*

03:23 PM **275. Assessing Targeted Sprayer Performance for Managing Tropical Signalgrass in Bermudagrass Under Varying Herbicide Approaches.** Katarzyna Gawron^{*1}, Lukasz Wnorowski¹, Mikerly Joseph¹, Sergio Gallo², Maria Cecilia Sanchez Quintanilla², Marco Schiavon², Pawel Petelewicz¹. ¹*University of Florida, Gainesville, FL*, ²*University of Florida, Davie, FL*

03:27 PM **276. Palmer Amaranth (*Amaranthus palmeri*) Control Utilizing Split-boom and Tank-mix Application Methods.** Colton Fuller^{*1}, Larry Steckel¹. ¹*The University of Tennessee, Knoxville, TN*

03:31 PM **277. Influence of Cover Crop Types and Termination Methods on Weed Suppression in Tomato Fields.** Ravneet Kaur^{*1}, Akashdeep Singh Brar¹, Aniruddha Maity¹. ¹*Auburn University, Auburn, AL*

03:35 PM **278. Impact of Cover Crop Residues on The Germination and Biomass of Troublesome Weed Species.** Karishma Khanal^{*1}, Gourav Chahal¹, Carter Bonnell¹, Andrew Price². ¹*Auburn University*, ²*USDA-ARS National Soil Dynamics Laboratory, Auburn, AL*

- 03:39 PM **279. The Grass is Not Always Greener on the Other Side: Comparing the Performance of Hairy Vetch (*Vicia villosa*) After Selective Cereal Rye (*Secale cereale*) Termination.** Jenna Beville*¹, Michael Flessner¹. ¹ *Virginia Polytechnic Institute and State University, Blacksburg, VA*
- 03:43 PM **280. Evaluating Cover Crop Mediated Palmer amaranth Suppression in Cotton-Corn Rotation System.** Himani Ahlawat*¹, Hannah Carol Lindell¹, Priscila Campos¹, Kamana Pilania¹, Peyton Worsham¹, Sydney Buffington¹, Matthew Levi¹, Nicholas Basinger¹. ¹ *University of Georgia, Athens, GA*
- 03:47 PM **281. Constitutive Hyperspectral Reflectance to Discriminate PPO-Resistant and -Susceptible Palmer amaranth (*Amaranthus palmeri*) Populations.** Diego A. Rodriguez*¹, Mario Soto¹, Juan C. Velasquez¹, Nilda Roma Burgos¹. ¹ *University of Arkansas, Fayetteville, AR*
- 03:51 PM **282. Selecting for Success: How Varietal Growth Habit Shapes Soybean Canopy Formation.** Sithin Mathew*¹, Henry J Nelson¹, Aaron Lorenz¹, Seth Naeve¹, Vasudha Sharma¹, Debalin Sarangi¹. ¹ *University of Minnesota, St. Paul, MN*
- 03:55 PM **283. Drop It Like It's H.O.T.: Herbicide Organic Treatments for Cotton Defoliation.** Megan Singletary*¹, Peter Dotray^{1,2}, Muthukumar Bagavathiannan³. ¹ *Texas Tech University, Lubbock, TX*, ² *Texas A&M AgriLife Research and Extension, Lubbock, TX*, ³ *Texas A&M University College Station, TX*
- 03:59 PM **284. Improving Cotton Tolerance to Pre-emergence Herbicides using Biochar.** Nisith Nishank Purohit*¹, Rakesh Kumar Ghosh¹, Yucheng Feng¹, Andrew Price², Aniruddha Maity¹. ¹ *Auburn University, AL*, ² *USDA-National Soil Dynamics Laboratory, Auburn, AL*
- 04:03 PM **285. Augmented Design Based Screening of a Large MG-III Soybean Panel, to Decipher Genetic Variants Underlying Metribuzin Tolerance.** Abdaal Ali*¹, Lichun Zhou¹, Zoe

Schroeder¹, Victoria Shema¹, Samuel Revolinski¹.
¹University of Kentucky, Lexington, KY

- 04:07 PM **286. Satellite-Based Identification and Quantification of Off-Target Dicamba Using Soybean (*Glycine Max* L.) Canopies in Central Illinois.** Dylan R Kerr*¹, Nicholas F Martin¹, Juan D Arbelaez¹, Aaron G Hager¹, Martin M Williams II¹. ¹University of Illinois at Urbana-Champaign, Urbana-Champaign, IL
- 04:11 PM **287. Determination of the Critical Period for Weed Control in Peanut Following Winter Cover Crops.** Gourav Chahal*¹, Carter Bonnell¹, Simer Virk¹, David Russell¹, Andrew Price². ¹Auburn University, Auburn, AL ²USDA-ARS National Soil Dynamics Laboratory, Auburn, AL
- 04:15 PM **288. Under the Influence: Cover Crop Influence on Herbicide Fate in Georgia Peanuts.** Hannah Lindell*¹, Samantha Bowen¹, Kayla Eason², Timothy Grey¹, Nicholas Basinger¹. ¹University of Georgia, Athens, GA, ²USDA-ARS Southeastern Watershed Research Unit, Tifton, GA
- 04:19 PM **289. Modeling Weed Induced Maize (*Zea mays* L.) Yield Losses with UAS Derived Aerial Imagery.** Avi Goldsmith*¹, Robert Austin¹, Charles Cahoon¹, Ramon Leon¹. ¹North Carolina State University, Raleigh, NC
- 04:23 PM **290. Comparing Drill and Drone Planting of Cereal Rye for Fall-Emerging Weed Control in Cotton.** Wilfried Ouedraogo*¹, Maity Aniruddha¹, Walter Jordao¹. ¹Auburn University, Auburn, AL
- 04:27 PM **291. Turning Drone Imagery into Spray Maps: Evaluating Pix4Dfields for Turfgrass Weed Management.** Amy Wilber*¹, James McCurdy¹. ¹Mississippi State University, Starkville, MS
- 04:31 PM **292. Enhancing Weed Identification Accuracy Using Diffusion-Based Super-Resolution of UAV Imagery.** Linyuan Wang*¹, Dong Chen¹, Haibo Yao², Te Ming Tseng¹, Xin Sun³, Yanbo Huang². ¹Mississippi State University, Starkville, MS, ²USDA-ARS, Environmental Microbial and Food

Safety Laboratory, Beltsville, MD, ³North Dakota State University, Fargo, ND

- 04:35 PM **293. Shocking the System: Weed and Soil Biological Responses to Zasso™ Electrical Weeding.** Aleah Butler-Jones*¹, Adam Thomas¹, Gregory Peck¹, Kyle Wickings¹, Brad Hanson², Marcelo Moretti³, Thierry Besançon⁴, Lynn Sosnoskie¹. ¹Cornell University, Ithaca, NY, ²University of California-Davis, Davis, CA, ³Oregon State University, Corvallis, OR, ⁴Rutgers University, New Brunswick, NJ

TUESDAY AFTERNOON FEBRUARY 10

ORAL - WSSA - SST

Ph.D. Student Contest

LOCATION: Glenwood Ballroom
Salon IV
TIME: 1:45-5:15 PM Eastern
MODERATOR: Darrin Dodds
Mississippi State University
Starkville, MS

- 01:45 PM **294. When Stress Becomes Strength: Palmer Amaranth's PPO Comeback.** Prakriti Dhaka*¹, Gulab Rangani¹, Aimone Porri², Ingo Meiners², Nilda Roma-Burgos¹. ¹University of Arkansas, Fayetteville, AR, ²BASF SE, Ludwigshafen, Germany
- 01:49 PM **295. Mechanisms Underlying Glufosinate Resistance in Waterhemp from Minnesota.** Navjot Singh*¹, André Lucas Simões Araujo², Franck E. Dayan², Todd A. Gaines², Roger L. Becker¹, Gregg A. Johnson¹, Debalin Sarangi¹. ¹University of Minnesota, Minneapolis, MN, ²Colorado State University, Ft. Collins, CO
- 01:53 PM **296. The Evolving Herbicide Resistance Trajectory of *Amaranthus palmeri* (Palmer Amaranth) in Tennessee.** Sally Reed*¹, Colton

Fuller¹, Larry Steckel¹. ¹*University of Tennessee, Knoxville, TN*

- 01:57 PM **297. Growth and Reproductive Biology of Glyphosate-Resistant Palmer amaranth in New York.** Midhat Tugoo*¹, Vipin Kumar¹, Antonio DiTommaso¹. ¹*Cornell University, Ithaca, NY*
- 02:01 PM **298. Development And Evaluation of Directed Energy System for Precision Weed Control.** Muhammad Usama Yaseen¹, John M. Long¹, Liberty Galvin¹. ¹*Oklahoma State University, Stillwater, OK*
- 02:05 PM **299. Genome-wide Signatures of Herbicide Resistance Positive Selection in Italian Ryegrass (*Lolium multiflorum*) across the United States.** Adrian Veron*¹, Caio Brunharo¹. ¹*Pennsylvania State University, University Park, PA*
- 02:09 PM **300. Multi-County Screen of Italian Ryegrass (*Lolium perenne* ssp. *multiflorum*) to Glyphosate and Clethodim in Tennessee.** Hayden Love*¹, Larry Steckel¹. ¹*The University of Tennessee, Knoxville, TN*
- 02:13 PM **301. Weed Emergence Dynamics Under Inter-row Mowing, Electrocutation, Seed Impact Mill, and Herbicide Programs.** Preetaman Bajwa*¹, Vipin Kumar¹, Christopher Pelzer¹, Matthew Ryan¹, Wendong Zhang¹, Antonio DiTommaso¹. ¹*Cornell University, Ithaca, NY*
- 02:17 PM **302. Herbicide Resistance Management via Fraise Mowing.** Logan Smith*¹, Greg Breeden¹, Jim Brosnan¹. ¹*University of Tennessee, Knoxville, TN*
- 02:21 PM **303. Dose-Response Metabolomics as a Complementary Tool to Disentangle Primary and Off-Target Effects of Toxins in Plants.** Gagandeep Kaur*¹, Elizabeth Leonard¹, Pawanjit Sandhu², Nishanth Tharayil¹. ¹*Clemson University, Clemson, SC*, ²*University of British Columbia-Okanagan, Okanagan, BC*
- 02:25 PM **304. Glyphosate And Aminomethylphosphonic Acid Contents in Soybean Field Soils Across the**

Americas: Contrast Between Brazil and Canada.

Celso Franca*¹, Laurianne Ladouceur², William Overbeek², Marc Lucotte², Matthieu Moingt², Rubem Oliveira Jr.³, Ednaldo Borgato¹. ¹*University of Florida, Gainesville, FL*, ²*Université du Québec à Montréal, Montréal, QC*, ³*Universidade Estadual de Maringá, Maringá, Brazil*

- 02:29 PM **305. Evaluating Cover Crops for Weed Management in Edamame [*Glycine max* (L.) Merr.].** Akashdeep Singh Brar*¹, Michael Flessner², Bo Zhang², Mark Reiter¹, Vijay Singh¹. ¹*Virginia Polytechnic Institute and State University, Blacksburg, VA Painter, VA*, ²*Virginia Polytechnic Institute and State University, Blacksburg, VA*
- 02:33 PM **306. Impacts of Sorghum-Barley Crop Rotation on the Chile Pepper Growing Season.** Ram Singh Insa*¹, Brian Schutte¹. ¹*New Mexico State University, Las Cruces, NM*
- 02:37 PM **307. Evaluation of Herbicide Programs and Crop Response for Effective Weed Control in Mung Bean (*Vigna radiata*).** Tunde Akanbi*¹, Elizabeth Tranel¹, Arti Singh¹, Wesley Everman¹. ¹*Iowa State University, Ames, IA*
- 02:41 PM **308. Sediment Composition Around Bear Lake and its Relationship to Milfoil Establishment.** Francielli Santos de Oliveira*¹, Corey Ransom¹, Eric Westra¹, Mirella Ortiz¹. ¹*Utah State University, Logan, UT*
- 02:45 PM **309. Salinity Stress Effects on Rice and Weeds in South Carolina Coastal Agroecosystems.** Gursewak Singh*¹, Brian Ward¹, Mahmoud Rady¹, Matthew Cutulle¹. ¹*Clemson University, Clemson, SC*
- 02:49 PM **310. Where Weeds Fall, Food Rises: Protecting Sweetpotato (*Ipomoea batatas*) for a Hungry World.** Alyssa Miller*¹, Te- Ming Tseng¹, Lorin Harvey¹, Maxwell Bloodworth¹. ¹*Mississippi State University, Starkville, MS*
- 02:53 PM **311. Yellow Nutsedge (*Cyperus esculentus*) Management Using Concentrated Organic Byproducts in Anaerobic Soil Disinfestation.**

Priyanka Gupta*¹, Matthew Cutulle¹, Bhupinder Jatana², Chandrasekar Kousik³. ¹*Clemson University, Coastal Research and Education Center, Charleston, SC*, ²*Clemson University, Edisto Research and Education Center, Blackville, SC*, ³*USDA-ARS U.S. Vegetable Laboratory, Charleston, SC*

02:57 PM **312. Investigating the Effects of Preemergence Herbicides on the Growth of Two Native Flowering Forb Species in Flowering Turfgrass Lawns.** Nikolay Minaev*¹, James D McCurdy¹, Edicarlo B. de Castro¹. ¹*Mississippi State University, Starkville, MS*

03:00 PM **BREAK**

03:15 PM **313. How Cool Are Living Mulches? Cool-Season Perennial Grasses for Weed Management in Cotton.** Priscila Campos*¹, Himani Ahlawat¹, Kamana Paliana¹, Sydney Buffington¹, Muthu Bagavathiannan², Gaylon Morgan³, Nicholas Basinger¹. ¹*University of Georgia, Athens, GA*, ²*Texas A&M University, College Station, TX*, ³*Cotton Inc., Cary, NC*

03:19 PM **314. Roots, Rhizosphere, and Resistance: Understanding Soil Communities in *Sorghum halepense* for Future Weed Suppression.** Connor Purvis*¹, Erin E. Burns¹. ¹*Michigan State University, East Lansing, MI*

03:23 PM **315. Wild Oat Hide-and-Seek: The Soil Depths Where Herbicides Win or Fail.** Sushmita Sharma Koirala*¹, Albert Adjesiwor¹. ¹*University of Idaho, Twin Falls, ID*

03:27 PM **316. Weed Suppression and Biological Nitrification Inhibition in Diverse Cereal Rye Germplasms.** Kapil Chobhe*¹, Nithya Rajan¹, Megan Leigh Schill¹, Nithya Subramanian¹, Sanjay Antony-Babu¹, Sakiko Okumoto¹, Muthukumar Bagavathiannan¹. ¹*Texas A&M University, College Station, TX*

TUESDAY AFTERNOON FEBRUARY 10

IWSS Meeting

LOCATION: Glenwood Ballroom
Salon I
TIME: 5:30-6:30 PM Eastern
MODERATOR: Do-Soon Kim

Raleigh Downtown One Way Shuttle

LOCATION: Lobby
TIME: 5:30-6:30 PM Eastern

WEDNESDAY MORNING FEBRUARY 11

Presidents' Breakfast

LOCATION: Creedmore
TIME: 6:30-8:00 AM Eastern
MODERATOR: Hilary Sandler
University of Massachusetts
Cranberry Station
E. Wareham, MA

**MRSPC- Herbicide Resistance
Monitoring Network**

LOCATION: Capital
TIME: 8:00-9:00 AM Eastern
MODERATOR: Eric Patterson
Michigan State University
East Lansing, MI

WEDNESDAY MORNING FEBRUARY 11

Poster Session - Even Numbers

LOCATION: Crabtree Ballroom
TIME: 7:00-9:00 AM Eastern
MODERATORS: Charles Cahoon
North Carolina State University
Raleigh, NC

Authors with odd-numbered posters will be present on Tuesday. Authors with even-numbered posters will be present on Wednesday.

WEDNESDAY MORNING FEBRUARY 11

SYMPOSIUM-03.

The Herbicide Resistance Action Committee

LOCATION: City of Oaks Ballroom
TIME: 9:00-11:00 AM Eastern
MODERATORS: Ian Burke
North Carolina State University
Raleigh, NC
Dawn Refsell
Corteva AgriScience
Johnston, IA

Join members of the Herbicide Resistance Action Committee (HRAC) for a dynamic symposium focused on bridging the gap between technical resistance research and field-level implementation. This session moves beyond the traditional poster gallery, utilizing each presentation as a focal point for expert-led table discussions.

Participants will explore the essential pillars of modern resistance management: the standardization of global terminology, the development of robust genetic repositories, and the refinement of validation criteria. The session also tackles the "human element" of weed science, discussing proven strategies for improving grower adoption of Integrated Weed Management (IWM). Engage directly with the HRAC Committee to discuss the tools, data, and collaborative frameworks necessary to stay ahead of evolving resistance challenges.

194. Speaking the Same Language: Standardizing Herbicide Resistance Terminology. Dawn Refsell¹, Greg Elmore². ¹Corteva AgriScience, Indianapolis, IN, ²Bayer Crop Science, St. Louis, MO

195. From Mode of Action Classification to Streamlined Access to HRAC Resources: Advancing Herbicide Resistance Strategies through Integrated Weed Management. Bianca Martins*¹, Jens Lerchl², Hudson Takano³, Gael Le Goupil⁴, Roland Beffa⁵, Laurent Cornette⁶. ¹Bayer AG, Leverkusen, Germany, ²BASF SE, Ludwigshafen, Germany, ³Corteva AgriScience, Indianapolis, IN, ⁴Syngenta AG, Basil, Switzerland, ⁵Senior Scientist Consultant, ⁶Gowan Company, Yuma, AZ

196. Engagement Forum with HRAC on Managing Herbicide Resistance. Craig Alford¹, Chandra Aradhya², Roland Beffa³, David Belles⁴, Ryan Bryant-Schlobohm⁵, Laurent Cornette⁶, Greg Elmore², Gael Le Goupil⁸, Jens Lerchl⁷, Ryan Lins⁴, Bianca Martins², Dawn Refsell¹, David Simpson¹, Hudson Takano*¹. ¹Corteva AgriScience, Indianapolis, IN, ²Bayer Crop Science, St. Louis, MO, ³Independent Researcher, ⁴Syngenta Crop Protection, Greensboro, NC, ⁵United Phosphorus Limited, Amarillo, TX, ⁶Gowan Company, Yuma, AZ, ⁷BASF SE, Ludwigshafen, Germany, ⁸Syngenta AG, Basil, Switzerland

197. Weed Resistance Database and Genetic Repository. Roland Beffa*¹. ¹European Weed Research Society

198. Resistance Testing and Validation Criteria. Craig Alford*¹, David Simpson¹. ¹Corteva Agriscience, Indianapolis, IN

199. Best Practices for Improving Grower Adoption of Integrated Weed Management. David Belles¹, Chandrashekar Aradhya², Ryan Bryant-Schlobohm³. ¹Syngenta Crop Protection, Greensboro, NC, ²Bayer Crop Science, St. Louis, MO, ³United Phosphorus Limited, Amarillo, TX

WEDNESDAY MORNING FEBRUARY 11

SST - Finals

LOCATION: Glenwood Ballroom
Salon I
TIME: 8:30-9:00 AM Eastern
MODERATOR: Darrin Dodds
Mississippi State University
Starkville, MS

Judges Work Room

LOCATION: Creedmore
TIME: 9:00 AM-5:00 PM Eastern

WEDNESDAY MORNING FEBRUARY 11

Oral 13. Weed Biology and Ecology

LOCATION: Glenwood Ballroom
Salon II
TIME: 9:00 AM-3:00 PM Eastern
MODERATORS: Aniruddha Maity
Auburn University
Auburn, AL

***SPEAKER**

- 09:00 AM **317. Weed Biology and Management in Changing Times: A Stakeholder Perspective from the Australian Grain Production Systems.** Ali Bajwa*¹, Bill Grant², Aakansha Chadha². ¹*La Trobe Institute for Sustainable Agriculture and Food, La Trobe University, Melbourne, Australia*, ²*Federation University, Victoria, Australia*.
- 09:15 AM **318. Michigan Common Ragweed Exhibits Multiple Mechanisms of Resistance to PPO Herbicides.** Sara Alvarez Rodriguez*¹, Michael Ozolins¹, Aimone Porri², Eric Patterson¹. ¹*Michigan State University, East Lansing, MI*, ²*BASF SE, Limburgerhof, Germany*
- 09:30 AM **319. Multiple Herbicide Resistance in Italian Ryegrass (*Lolium multiflorum*) Populations from Alabama.** Somak Hazra*¹, Nisith Nishank Purohit¹, Aniruddha Maity¹. ¹*Auburn University, Auburn, AL*
- 09:45 AM **320. Synthetic And Organic Herbicide Efficacies for Liverwort Control in Containerized Ornamental Production and Assay for Absorption and Translocation Of 14C Herbicides in Liverwort Thallus.** Manjot Sidhu*¹, Debalina Saha², Eric Patterson².

¹University of Maine, Orono, ME, ²Michigan State University, East Lansing, MI

10:00 AM

321. Understanding Weed Demographic Responses to Management Practices in the Midwest Through Density-Dependent Matrix Modeling. Mercy Odemba^{*1}, John Wallace^{2, 3}, Grant Hoffer², Mark VanGessel³, Nicholas Basinger⁴, Karla Gage⁵, Erin Haramoto⁶, John Lindquist⁷, Steven Mirsky⁸, Wesley Everman⁹, Aaron Hager¹⁰, Eugene Law¹. ¹The Ohio State University, Columbus, OH, ²The Pennsylvania State University, College Park, PA, ³University of Delaware, Newark, DE, ⁴University of Georgia, Athens, GA, ⁵Southern Illinois University, Carbondale, IL, ⁶University of Kentucky, Lexington, KY, ⁷University of Nebraska-Lincoln, Lincoln, NE, ⁸USDA-ARS Sustainable Agricultural Systems Laboratory, Beltsville, MD, ⁹Iowa State University, Ames, IA, ¹⁰University of Illinois Urbana-Champaign, Urbana-Champaign, IL

10:15 AM

322. Allelopathic Responses of Corn and Weeds to Cover Crop Extracts. Karishma Khanal^{*1}, Gourav Chahal¹, Carter Bonnell¹, David Russell¹, Steven Hague¹, Andrew Price². ¹Auburn University, Auburn, AL ²USDA-ARS National Soil Dynamics Laboratory, Auburn, AL

10:30 AM

323. Impact of Spring Burndown Herbicides Applied at Different Reproductive Stages on Control and Progeny Fitness of Glyphosate-Resistant Italian Ryegrass. Bhupesh Dhaka^{*1}, Prashant Jha¹, Donnie Miller², Connor McKoin¹, Shahreen Mirza¹. ¹Louisiana State University AgCenter, Baton Rouge, LA, ²Louisiana State University AgCenter, St. Joseph, LA

10:45 AM

324. Understanding Weed Suppression and Weed Communities in Cereal-Legume Intercropping. Natasha Djuric^{*1}, David Kottelenberg², Niels Anten², Jochem Evers², Lammert Bastiaans², Antonio DiTommaso¹, Matthew Ryan¹. ¹Cornell University, Ithaca, NY, USA, ²Wageningen University, Wageningen, The Netherlands

- 11:00 AM **325. An Invasive Species or A Weed? Managing Gazanias in Southern Australia.** Ali Bajwa*¹. ¹*La Trobe Institute for Sustainable Agriculture and Food, La Trobe University, Melbourne, Australia*
- 11:15 AM **326. Assessing Postemergence Herbicide Efficacy on Horseweed (*Conyza canadensis*) under Elevated Carbon Dioxide Condition.** Supti Saha Mou*¹, Debalina Saha¹. ¹*Michigan State University, East Lansing, MI*
- 11:30 AM **327. Environmental by Genotypic Drivers of *Parthenium hysterophorus* Photosynthesis and Phenotypic Plasticity.** Sarah Kezar*^{1,2}, Akhilesh Sharma², Magdalena Julkowska², Tim Setter², Antonio DiTommaso². ¹*University of Wisconsin-Madison, Madison, WI*, ²*Cornell University, Ithaca, NY*
- 11:45 AM **328. Sorgoleone: A Potential Chemical Ecology Driver of Invasiveness in *Sorghum halepense*.** Megan Schill*¹, Nithya Rajan¹, William Rooney¹, Sakiko Okumoto¹, Nithya Subramanian¹, Muthukumar Bagavathiannan¹. ¹*Texas A&M University, College Station, TX*
- 12:00 PM LUNCH BREAK**
- 01:15 PM **329. Germination Ecology of Italian Ryegrass (*Lolium multiflorum*) and Cheatgrass (*Bromus tectorum*) from the Pacific Northwest.** Chandra Montgomery¹, Albert Adjesiwor*¹, Joan Campbell¹, Traci Rauch¹, Victor Ribeiro². ¹*University of Idaho, Moscow, ID*, ²*Oregon State University, Corvallis, OR*
- 01:30 PM **330. Morphological, Reproductive and Stress Response Dynamics of Large Crabgrass (*Digitaria sanguinalis*) under Increasing Drought Intensity.** Supti Saha Mou*¹, Debalina Saha¹. ¹*Michigan State University, East Lansing, MI*
- 01:45 PM **331. Rapid Markers for Detecting Herbicide Resistance in Kentucky Weeds.** Zoe Schroeder*¹, Samuel Revolinski¹, Shahbaz Ahmed², Marija Savic². ¹*University of Kentucky,*

Lexington, KY, ²Washington State University,
Pullman, WA

- 02:00 PM **332. A GWAS to Reveal the Underpinnings of Metribuzin Tolerance in Oats.** Victoria Shema*¹, Samuel Revolinski², Zoe Schroeder². ¹University of Kentucky, Lexington, KY
- 02:15 PM **333. Weed Competition Drives Multigenerational Stress Memory in Wheat: Hormonal and Transcriptomic Insights.** Albert Kwarteng*¹, Albert Adjesiwor², Ian Burke³, Joseph Kuhl², Brenda Murdoch², Fangming Xiao². ¹Lincoln University of Missouri, ²University of Idaho, Moscow, ID, ³North Carolina State University, Raleigh, NC
- 02:30 PM **334. Potential Shift in Global Habitat Distribution of Italian ryegrass (*Lolium perenne* ssp. *multiflorum*) Under Changing Long-term Weather Irregularities.** Aniruddha Maity*¹, Pradeep Adhikari². ¹Auburn University, Auburn, AL, ²Hankyong National University, Anseong, Republic of Korea
- 02:45 PM **335. Climate-Driven Weed Shifts and Herbicide Resistance in Rainfed Agriculture in Northern Ghana.** Emmanuel Yennumi Wandaat*¹. ¹Environmental Protection Authority, Accra, Ghana

WEDNESDAY MORNING FEBRUARY 11

Oral 05. Aquatic Invasives

LOCATION: Glenwood Ballroom
Salon III & IV

TIME: 9:00 AM-3:00 PM Eastern

MODERATORS: Andrew Howell
North Carolina State University
Raleigh, NC

***SPEAKER**

09:00 AM **336. Update from the Aquatic Plant Management Society.** Lyn Gettys*¹. ¹Aquatic

*Plant Management Society President,
Gainesville, FL*

- 09:15 AM **337. Comparing Traditional and Technology-Based Methods to Enhance Submersed Weed Management.** Andrew Howell*¹, Kara Foley¹, Rob Richardson¹. ¹*North Carolina State University, Raleigh, NC*
- 09:30 AM **338. Taking Aquatic Weed Control to New Heights with Drones.** Rob Richardson*¹, Andrew Howell¹. ¹*North Carolina State University, Raleigh, NC*
- 09:45 AM **339. MilfoilMapper: A Web-Based Tool to Inform Eurasian Watermilfoil Management.** Ryan Thum*¹, Ashley Wolfe¹. ¹*Montana State University, Bozeman, MT*
- 10:00 AM **340. Methods and Aquatic Formulation Designs to Enhance Aquatic Herbicides in High Exchange Systems.** Ben Willis*¹. ¹*SePRO Corporation, Carmel, IN*
- 10:15 AM **341. Assessment of Aquatic Herbicide Degradation and *Hydrilla verticillata* Response.** Timothy Grey¹, Kayla Eason*², Samantha Bowen¹, Benjamin Sperry³. ¹*University of Georgia, Tifton, GA*, ²*USDA-ARS Southeastern Watershed Research Unit, Tifton, GA*, ³*US Army Corps of Engineers, Gainesville, FL*
- 10:30 AM **342. Assessing Growth Patterns and Management Efficacy of *Hydrilla verticillata* in Flowing Systems.** Brady Dillingham*¹, Kara Foley¹, Rob Richardson¹. ¹*North Carolina State University, Raleigh, NC*
- 10:45 AM **343. Hydrilla Management in Flowing Systems Utilizing Novel Injection System.** Rory Roten*¹. ¹*SePRO Corporation, Carmel, IN*
- 11:00 AM **344. Influence of Sediment and Water Nutrient Concentrations of the Growth of Three *Hydrilla verticillata* Biotypes.** Ramon Leon¹, Maria Grazia Corrales-Jimenez*¹, Kara

Foley¹, Rob Richardson¹. ¹*North Carolina State University, Raleigh, NC*

11:15 AM **345. Comparative Herbicide Response of Three *Hydrilla verticillata* Biotypes.** Kara Foley*¹, Andrew Howell¹, Jens Beets², Rob Richardson¹. ¹*North Carolina State University, Raleigh, NC*, ²*USDA-ARS Invasive Species and Pollinator Health Research Unit, Albany, CA*

11:30 AM **346. Evaluating Concentration Exposure Times of Different Herbicide Combinations for Hydrilla Control.** Eli Russell*¹, Jonathan Glueckert¹, Corrina Vuillequez¹, Amber Riner¹, Benjamin Sperry². ¹*University of Florida, Gainesville, FL*, ²*US Army Corps of Engineers, Gainesville, FL*

11:45 AM **347. Management of Northern Hydrilla (*Hydrilla verticillata* ssp. *lithuanica*) at East Twin Lake, CT using Fluridone.** Dominic Meringolo*¹. ¹*SOLitude Lake Management, Raleigh, NC*

12:00 PM **LUNCH BREAK**

1:15 AM **348. The Potential for Classical Biological Control of Connecticut River Hydrilla.** Jeremiah Foley*¹, Nate Harms². ¹*Connecticut Agricultural Experiment Station*, ²*United States Army Corp of Engineers, Vicksburg, MS*

01:30 PM **349. Field Testing the Performance and Selectivity of Discrete In-water Applications of Imazamox to control invasive Water Hyacinth (*Eichhornia (Pontederia) crassipes*).** Kelli Gladding*¹, James Leary². ¹*University of Florida IFAS FLREC, Davie, FL*, ²*South Florida Water Management District, West Palm Beach, FL*

01:45 PM **350. Three Years of Research Investigating the Effects of "Natural" Herbicides on Aquatic Plants.** Lyn Gettys*¹. ¹*University of Florida IFAS FLREC, Davie, FL*

02:00 PM **351. Screening Aquatic and Non-Aquatic Labeled Herbicides for Efficacy on Torpedograss.** Abigail Schulken*¹, Julie Stich¹,

Eli Russell¹. ¹University of Florida, Gainesville, FL

02:15 PM **352. Biology and Management of Invasive *Scleria lacustris* and *Scleria macrocarpa* in Florida.** Greg MacDonald*¹. ¹University of Florida, Gainesville, FL

02:30 PM **353. Plant Community Response to Aerial Herbicide Treatment of West Indian Marsh Grass.** Stephen Enloe*¹, James Leary², Alex Onisko², Rich Botta². ¹University of Florida, Gainesville, FL, ² South Florida Water Management District, West Palm Beach, FL

WEDNESDAY MORNING FEBRUARY 11

IWGC Meeting

LOCATION: Capital
TIME: 11:00 AM-12:00 PM Eastern
MODERATOR: Todd Gaines
Colorado State University
Fort Collins, CO

WEDNESDAY MORNING FEBRUARY 11

Oral 14. Sensing, Automation, and Precision Technologies

LOCATION: Glenwood Ballroom
Salon I
TIME: 9:30 AM-12:00 PM Eastern
MODERATORS: Michael Walsh
Charles Stuart University
Wagga Wagga, NSW
Australia

***SPEAKER**

09:30 AM **355. Bullseye on Weeds: How Verdant's Aim and Apply Targeted Spray Technology Affects Weed Control, Yield, and Quality of**

Fall Spinach. Thierry E. Besancon*¹, Lynn M. Sosnoskie², Chad Yagow³, John Purcell³.
¹Rutgers University, New Brunswick, NJ,
²Cornell University, Ithaca, NY, ³Verdant Robotics \, Hayward, CA

- 09:45 AM **356. Building A Targeted Spray Research Program: Lessons learned at the University of Florida.** Nathan Boyd*¹. ¹University of Florida, Gainesville, FL
- 10:00 AM **357. Design and Development of an Autonomous Weed Monitoring System for Florida Production Fields.** Renato Herrig Furlanetto*¹, Arnold Schumann², Nathan Boyd¹.
¹University of Florida - Gulf Coast Research and Education Center, Wimauma, FL,
²University of Florida - Citrus Research and Education Center, Lake Alfred, FL
- 10:15 AM **358. Innovative MOA for Controlling *A. Palmeri* Resistant using a drone application.** Ido Shwartz*¹, Tal Kerem¹, Amit Koch¹, Tarin Harpaz¹, Efrat Lidor Nili¹, Orly Noivrit Brick¹.
¹WeedOUT, Ness Ziona, Israel
- 10:30 AM **359. Performance of Organic Herbicides Using Broadcast and Pinpoint Spray Technology.** Clebson Gonçalves*¹. ¹University of California UC Cooperative Extension, Lakeport, CA
- 10:45 AM **360. Impact of Smart Spray Technology on Goosegrass (*Eleusine indica* L.) Control in Plasticulture Tomatoes.** Ana Claudia Buzanini¹, Renato Herrig Furlanetto¹, Arnold Walter Schumann¹, Nathan Boyd¹. ¹University of Florida, Gainesville, FL
- 11:00 AM **361. Advances in Precision Weed Management, 2026.** Vijay Singh*¹, Akash Brar¹, Fatemeh Esmailbeiki¹, Rutvij Wamanse¹, Robert Cooley¹, Daniel Martin². ¹Virginia Polytechnic Institute and State University, Blacksburg, VA, ²Pluvium, LLC, College Station, TX
- 11:15 AM **362. Predicting Spray Drift from Uncrewed Aerial Systems Using Machine Learning Models.** Vijay Singh¹, Fatemeh Esmailbeiki¹, Daniel Martin². ¹Virginia Polytechnic Institute and State University, Blacksburg, VA, ²Pluvium, LLC, College Station, TX

11:30 AM **363. Cover Crop Planting Using Uncrewed Aerial System.** Vijay Singh^{*1}, Rutvij Wamanse¹, Milos Viric¹, Akashdeep Singh Brar¹, ¹Virginia Polytechnic Institute and State University, Blacksburg, VA

WEDNESDAY AFTERNOON FEBRUARY 11

Oral 15. Genomics

LOCATION: Glenwood Ballroom
Salon I
TIME: 1:15 PM-4:30 PM Eastern
MODERATORS: Isabelle Noe
University of Illinois
Urbana-Champaign, IL

***SPEAKER**

- 01:15 PM **364. Establishment of a *Rhizobium rhizogenes*-Mediated Hairy Root Transformation System for Functional 15 Genomics in *Amaranthus palmeri*.** Mithila Jugulam^{*1}, Manikandan Ramasamy², Chi-Kuan Tu², Kranthi Mandadi², ¹Texas A&M University AgriLife, Weslaco, TX, ²Texas A&M AgriLife Research and Extension Center, Weslaco, TX
- 01:30 PM **365. The Parasitic Weed Egyptian Broomrape (*Phelipanche aegyptiaca*) Adapts Its Gene Expression to Integrated with Different Host Species.** James Westwood^{*1}, Jaret Arnold¹, Sukhmanpreet Kaur², Soyon Park³, ¹Virginia Polytechnic Institute and State University, Blacksburg, VA, ²Lawrence Berkley National Lab, Berkley, CA, ³University of Missouri, Columbia, MO
- 01:45 PM **366. An Annotated Telomere-to-Telomere Genome Assembly of Mayweed Chamomile (*Anthemis cotula*) Reveals Candidate Genes for Mechanisms of Local Adaptation.** Raissa Na-ah^{*1}, P. Jeff Maughan², Samuel Revolinski³, Subodh Adhikari⁴, Rick Jellan², P. Weston Maughan¹, Ian Burke⁵, Olivia Landau⁶, ¹Washington State University, Pullman, WA, ²Brigham Young University, Provo, UT, ³University of Kentucky, Lexington, KY, ⁴Utah State University, Logan, UT, ⁵North Carolina State University, Raleigh, NC, ⁶USDA-ARS

*Wheat Health, Genetics, and Quality Research
Unit, Pullman, WA*

- 02:00 PM **367. Genomic Basis of Rapid Herbicide Resistance Evolution from Recurrent Selection in *Lolium rigidum*.** Célia Neto*¹, Todd Gaines², Paul Neve¹. ¹*University of Copenhagen, Copenhagen, Denmark*, ²*Colorado State University, Ft. Collins, CO*
- 02:15 PM **368. Sorting Sorghum: Development of KASP Assay for Distinguishing *S. bicolor, halepense*, and their Hybrids.** Connor Purvis*¹, Eric L. Patterson¹, Erin E. Burns¹. ¹*Michigan State University, East Lansing, MI*
- 02:30 PM **369. Pooled Whole-Genome Sequencing for Assessing Herbicide Resistance Genetics.** Acer VanWalleendael*¹. ¹*North Carolina State University, Raleigh, NC*
- 02:45 PM **370. Survey of Weed Population Genetics Across North Carolina Field Stations.** Nikolai Hay*¹, Morgan Alexander¹, Audrey Fahey¹, Leigh Schwinden¹, Emily Hochschild¹, Acer VanWalleendael¹. ¹*North Carolina State University, Raleigh, NC*
- 03:00 PM BREAK**
- 03:15 PM **371. Trait Mapping Utilizing a Newly Constructed Genome for Allohexaploid Invasive Eurasian Watermilfoil *Myriophyllum spicatum* Reveals a Non-Target Site QTL Associated with Fluridone Resistance.** Gregory Chorak*¹, Del Hannay¹, Ryan Thum¹. ¹*Montana State University, Bozeman, MT*
- 03:30 PM **372. The Evolution of Sex Chromosomes in *Amaranthus*.** Damilola Raiyemo¹, Isabel Werle Noe¹, Ramandeep Kaur¹, Lauren Whitt², Sarah Carey², Haley Hale², Alex Harkess², Victor Llaca³, Kevin Fengler³, Eric Patterson⁴, Todd Gaines⁵, Patrick Tranel*¹. ¹*University of Illinois Urbana-Champaign, Urbana-Champaign, IL*, ²*HudsonAlpha, Huntsville, AL*, ³*Corteva AgriScience, Indianapolis, IN*, ⁴*Michigan State University, East Lansing, MI*, ⁵*Colorado State University, Ft. Collins CO*
- 03:45 PM **373. Genotyping by Sequencing Reveals Population Dynamics and Molecular Pathways Underlying the Adaptation of Kentucky Johnsongrass to the Appalachian**

Highlands. Lichun Zhou¹, Samuel Revolinski*¹, Jose Villanos¹, Zoe Shroeder¹, Melinda Yerka².
¹University of Kentucky, Lexington, KY,
²University of Nevada Reno, Reno, NV

- 04:00 PM **374. Dissecting Copy Number Variation as an Evolutionary Mechanism for Glyphosate Resistance.** Ivana Santos Moisinho*¹, Adrian Veron Zarate¹, Caio Brunharo¹. ¹The Pennsylvania State University, University Park, PA
- 04:15 PM **375. Identification and Functional Validation of Two Cytochrome P450 Genes Conferring Imazamox Resistance in Feral Rye.** Todd Gaines*¹, William Kramer¹, Fatemeh Abdollahi¹, Franck Dayan¹. ¹Colorado State University, Ft. Collins, CO
- 04:30 PM **376. Spray-On Gene Silencing in Weeds Using FANA Antisense Oligonucleotides.** Fatemeh Abdollahi*¹, Veenu Aishwarya², Todd Gaines¹. ¹Colorado State University, Fort Collins, CO, ²Aum LifeTech, Philadelphia, PA

WEDNESDAY AFTERNOON FEBRUARY 11

ORAL - 01. Agronomic Crops

LOCATION: Glenwood Ballroom
Salon II

TIME: 3:15-5:30 PM Eastern

MODERATORS: Craig Alford
Corteva AgriScience
Johnston, IA

***SPEAKER**

- 03:15 PM **377. Golden Pennycress (*Thlaspi arvense*) and Winter Camelina (*Camelina sativa*) Response to Herbicide Applied Preemergence.** Mark Bernards*¹. ¹Rosen's, Inc., Fairmont, MN
- 03:30 PM **378. Comparing Tillage Systems for Weed Control in Truvera Sugarbeet.** Michael Dodde*¹, Brian Stiles II¹, Christy Sprague¹. ¹Michigan State University, East Lansing, MI
- 03:45 PM **379. Evaluating PRE Herbicide Options With and Without Glufosinate POST in Triple-Stacked Herbicide-Resistant Sugarbeet in the**

Western United States. Andrew Kniss*¹, Jenna Meeks¹, Nevin Lawrence², Albert Adjesiwor³, Joel Felix⁴. ¹University of Wyoming, Laramie, WY, ²University of Nebraska-Lincoln, Lincoln, NE, ³University of Idaho, Twin Falls, ID, ⁴Oregon State University, Ontario, OR

- 04:00 PM **380. Weed Suppression in Continuous Cereal Monocultures Under Varied Management.** Vhuthu Ndou*¹, Fernando Oreja², Jennifer Gourlie¹, Stephen Machado¹, Francisco Calderón¹, Judit Barroso¹. ¹Oregon State University, Adams, OR, ²Clemson University, Clemson, SC
- 04:15 PM **381. Beyond Weed Control: Sub-lethal Herbicide Exposure Alters Aphid Infestation Dynamics in Cotton.** Purushottam Gyawali*¹, Ubaldo Torres¹, Gregory A. Sword¹, David L. Kerns¹, Muthukumar V. Bagavathiannan¹. ¹Texas A&M University, College Station, TX
- 04:30 PM **382. Does Short-Statured Corn Change Weed Control? Evaluating Herbicide Timing, Architecture, and Population.** Kyle Elizalde*¹, Erin Burns¹. ¹Michigan State University, East Lansing, MI
- 04:45 PM **383. Corrections in Adjuvant Use for Optimizing Herbicide Activity.** Richard Zollinger*¹, Kirk Howatt², Greg Armel¹. ¹AMVAC Chemical Company, Newport Beach, CA, ²North Dakota State University, Fargo, ND
- 05:00 PM **384. An Automated Pipeline for Weed Detection and Segmentation for the National Agricultural Image Repository.** Navjot Singh*¹, Chris Reberg-Horton², Matthew Kutugata³, Muthukumar Bagavathiannan¹, Steven Mirsky³. ¹Texas A&M University, College Station, TX, ²North Carolina State University, Raleigh, NC, ³USDA-ARS Sustainable Agricultural Systems Laboratory, Beltsville, MD
- 05:15 PM **385. An Evaluation of Four Open Source Artificial Intelligence Platforms for Use in Weed Control Decision Making.** Thomas Mueller*¹, Joe Beeler¹, Nicholas Basinger², Charles Cahoon³. ¹University of Tennessee, Knoxville, TN, ²University of Georgia, Athens, GA, ³North Carolina State University, Raleigh, NC

WEDNESDAY AFTERNOON FEBRUARY 11

ORAL - 02. Horticultural Crops

LOCATION: Glenwood Ballroom
Salon III & IV
TIME: 1:00-4:45 PM Eastern
MODERATORS: Thierry Besancon
Rutgers University
New Brunswick, NJ

***SPEAKER**

- 03:15 PM **386. Icafolin-Methyl - a New Molecule in the Chemical Class (Isoxazolin-Carboxamides) from Bayer CropScience.** Angela Kazmierczak^{*1}, Christopher Mansiere¹, Allan Kaastra¹, Lothar Lorentz¹. ¹*Bayer CropScience, St. Louis, MO*
- 03:30 PM **387. Onion Weed Control in North Dakota: A Five-Year Summary.** Harlene Hatterman-Valenti^{*1}, Collin Auwarter¹. ¹*North Dakota State University, Fargo, ND*
- 03:45 PM **388. Evaluating the Efficacy of Herbicide Programs for Weed Control in Columbia Basin Onion Production.** Sohaib Chattha^{*1}, Tim Waters², Rui Liu¹. ¹*Washington State University, Prosser, WA*, ²*Washington State University, Pasco, WA*
- 04:00 PM **389. One Beam, Many Benefits? Laser Weeding Impacts on Onion Vigor and Disease Pressure.** Lynn Sosnoskie^{*1}, Christy Hoeping¹, Brian Nault¹. ¹*Cornell University, Ithaca, NY*
- 04:15 PM **390. IR-4 Weed Science Update - Food Crops.** Roger B. Batts^{*1}. ¹*IR-4 Project, Raleigh, NC*
- 04:30 PM **391. The Minor Use Foundation: History, Development, and Results.** Dirk Drost^{*1}. ¹*Minor Use Foundation, Greensboro, NC*
- 04:45 PM **392. Use of Biodegradable Non-Woven Straw Mats for Annual Weed Control in Vegetable Crops.** Jonathan Gressel^{*1}. ¹*Hi-Cap Formulations (Israel) Ltd, Rehovot, Israel and Weizmann Institute of Science, Rehovot, Israel*

05:00 PM **393. Evaluating Herbicide Programs for Yellow Nutsedge Control in Pacific Northwest Potato Production.** Rui Liu*¹, Joel Felix², Tim Waters¹. ¹Washington State University, Prosser, WA, ²Oregon State University, Ontario, OR

WEDNESDAY AFTERNOON FEBRUARY 11

ORAL – 10. Biocontrol of Weeds

LOCATION: Glenwood Ballroom
Salon I
TIME: 4:45-5:15 PM Eastern
MODERATORS: Cara McCauley
Corteva AgriScience
Indianapolis, IN

***SPEAKER**

04:45 PM **394. Characterization and Control of Metolachlor-resistant NC Palmer Ecotypes in Controlled Environment Studies.** Wesley Everman*¹, Chad Brommer², Jiyi Zhang², Isabel Benson², Clint Blankenship², Diego Contreras³, Jackson Alsdorf³. ¹Iowa State University, Ames, IA, ²Harpe BioHerbicide, Raleigh, NC, ³North Carolina State University, Raleigh, NC

05:00 PM **395. Essential Oils as Multi-Target botanical Pesticides: A Fifteen-Year Journey from Laboratory to Market.** Sofien Ben Kaab¹, Jonas Hoffmann¹, Thomas Demortier¹, Estelle Bourgeois², Emma Voisin², Clément Burgeon¹, ²Simon Dal Maso², M. Haissam Jijakli*^{1, 2}. ¹Integrated and Urban Plant Pathology Laboratory, University of Liège, Gembloux Agro-Bio Tech, Gembloux, Belgium, ²APEO SRL (Agronomical Plant Extracts & Essential Oils) Gembloux, Belgium

11:45 AM Business Meeting

WEDNESDAY AFTERNOON FEBRUARY 11

WSSA Student Scientific Writing Workshop

LOCATION: City of Oaks Ballroom
TIME: 3:30-5:00 PM Eastern
MODERATORS: Navdeep Godara
North Carolina State University
Raleigh, NC

WSSA Student and Photo Awards

LOCATION: Glenwood Ballroom
Salon I & II
TIME: 5:30-7:00 PM Eastern
MODERATORS: Darrin Dodds
Mississippi State University
Starkville, MS

Society Social Reception

LOCATION: City of Oaks Ballroom
TIME: 7:00-9:00 PM Eastern

Sponsored by BASF Corporation

THURSDAY MORNING FEBRUARY 12

WSSA Business Meeting/Breakfast

LOCATION: City of Oaks Ballroom
TIME: 6:30-8:00 AM Eastern
MODERATOR: Hilary Sandler
UMass Cranberry Station
East Wareham, MA
CO-MODERATOR: Ian Burke
North Carolina State
University, Raleigh, NC

Registration

LOCATION: Creedmore
TIME: 6:30 AM-8:00 AM Eastern
MODERATOR: Eric Gustafson
WSSA Executive Secretary

Poster Take-Down

LOCATION: Crabtree Ballroom
TIME: 8:00 AM-11:00 AM Eastern

THURSDAY MORNING FEBRUARY 12

Travel Enrichment Experience and Science Policy Fellows

LOCATION: Glenwood Ballroom
Salon I
TIME: 8:00-9:45 PM Eastern
MODERATOR: Cara McCauley
Corteva Agriscience
Indianapolis, IN

***SPEAKER**

- 08:00 AM **396. How Crop Protection Products Are Developed: Insights from a Visit to FMC.** Francielli Santos de Oliveira*¹. ¹Utah State University, Logan, UT
- 08:15 AM **397. Weeds and Washington: Reflections on the WSSA Science Policy Fellowship Experience.** Aleah Butler-Jones*¹, Matthew Woolard², Lee Van Wychen³. ¹Cornell University, Ithaca, NY, ²Texas Tech University, Lubbock, TX, ³Weed Science Society of America, Alexandria, VA
- 08:30 AM **398. From Discovery to Product Support: Insights Gained Through My WSSA Travel Enrichment Experience at Syngenta.** Vipin Kumar*¹. ¹University of Nebraska Lincoln, Lincoln, NE
- 08:45 AM **399. Weeds in the Northeast: Insights from My Travel Enrichment Experience Across New Jersey and New York.** Ryan Hamberg*¹.

¹Texas A&M University, College Station, TX

- 09:00 AM **400. Travel Enrichment Experience: Syngenta Tour.** Matthew Woolard*¹. ¹Texas Tech University, Lubbock, TX
- 09:15 AM **401. Weed Science Society of America Science Policy Fellowship Experience.** Matthew Woolard*¹, Aleah Butler-Jones², Lee Van Wychen³. ¹Texas Tech University, Lubbock, TX, ²Cornell University, Geneva, NY, ³Weed Science Society of America, Alexandria, VA
- 09:30 AM **402. WSSA Travel Enrichment Experience: Corteva Agriscience, Indianapolis, IN.** Preetaman Bajwa*¹. ¹Cornell University, Ithaca, NY

THURSDAY MORNING FEBRUARY 12

ORAL – 07. Teaching and Extension

LOCATION: Glenwood Ballroom
Salon II

TIME: 8:00-10:00 AM Eastern

MODERATOR: Sarah Lancaster
Kansas State University
Manhattan, KS

***SPEAKER**

- 08:00 AM **403. Herbicide Resistance, Targeted Herbicide Applications, and Cover Crops: Updates from Wisconsin.** Rodrigo Werle*¹. ¹University of Wisconsin-Madison, Madison, WI
- 08:15 AM **404. Most Common and Troublesome Weeds in Broadleaf Crops, A Comparison Over Time.** Lee Van Wychen*¹, Cole Woolard², Aleah Butler-Jones³. ¹Weed Science Society of America, Alexandria, VA, ²Texas Tech University, Lubbock, TX, ³Cornell University, Ithaca, NY
- 08:30 AM **405. Situation Report: A Briefing on the War Against Weeds.** Sarah Lancaster*¹, Joseph Ikley², Alyssa Essman³. ¹Kansas State University, Manhattan, KS, ²North Dakota State University, Fargo, ND, ³The Ohio State University, Columbus, OH

- 08:45 AM **406. Things A Grad Ought to Know: Comparing Skill Preparation in European and US Weed Science Programs.** Theresa Reinhardt Piskackova*¹. ¹*Czech University of Life Sciences, Prague, Czech Republic*
- 09:00 AM **407. Where Are the Women in Weed Science? A National Profile of Faculty Rank, Training, and Career Progression.** Sirwan Babaei*¹, Maryam Babaei¹, Moein Javid¹, Eric C. Brevik¹, Amir Sadeghpour¹, Karla Gage¹. ¹*Southern Illinois University Carbondale, IL*
- 09:15 AM **408. Winged Water Primrose (*Ludwigia decurrens*): Spread and Mapping in California.** Whitney Brim-DeForest*¹, Jens Beets², Taiyu Guan¹, Luis Espino¹, Sarah Marsh Janish¹. ¹*University of California Division of Agriculture and Natural Resources*, ²*USDA-ARS Invasive Species and Pollinator Health Research Unit, Albany, CA*
- 09:30 AM **409. Advancing Weed Ecology Education in Kansas, Montana, and New York.** Sophie Westbrook*¹, Emma Kubinski², Fabian Menalled², Antonio DiTommaso³. ¹*Kansas State University, Manhattan, KS*, ²*Montana State University, Bozeman, MT*, ³*Cornell University, Ithaca, NY*
- 09:45 AM **410. What's Next if We Lose Glyphosate?** John Byrd*¹. ¹*Mississippi State University, Starkville, MS*

THURSDAY MORNING FEBRUARY 12

ORAL – 13. Integrated Weed Management

LOCATION: Glenwood Ballroom
Salon III & IV

TIME: 8:00-11:45 AM Eastern

MODERATORS: Nick Bassinger
University of Georgia
Athens, GA

***SPEAKER**

- 08:00 AM **411. The Good, the Bad, and the Ugly of Cover Crops: Lessons from the Upper Midwest.** Debalin Sarangi*¹, Eric Yu¹, Axel Garcia y Garcia¹, Anna Cates¹, Elizabeth Stahl¹, Sithin Mathew¹, Gregg Johnson¹. ¹University of Minnesota, Twin Cities, MN
- 08:15 AM **412. Effect Of Regenerative and Traditional Systems on Weed Growth and Population.** Paulo Watanabe Nakazama¹, Peter J Dittmar¹, Danielle Treadwell¹. ¹University of Florida, Gainesville, FL
- 08:30 AM **413. Impact of Cereal Rye Cover Crop Termination Timing on Soil Moisture Dynamics in Soybean.** Sithin Mathew*¹, Aaron Lorenz¹, Seth Naeve¹, Vasudha Sharma¹, Debalin Sarangi¹. ¹University of Minnesota, St. Paul, MN
- 08:45 AM **414. Cover Crop Residues Enhance the Susceptibility of Weeds to Postemergence Herbicide Applications.** Gustavo Camargo Silva*¹, Debora Neuberger^{1, 2}, Willian Larini^{1, 2}, Leticia Vilela Barbosa^{1, 3}, Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX, ²Federal University of Paraná, Paraná, Brazil ³Federal University of Lavras, Lavras, Brazil
- 09:00 AM **415. On-Farm Studies to Evaluate Cover Crop Termination Timing on Weed Suppression in Corn and Soybean Production.** Anita Dille*¹, Luke Chism¹, Isaac Barnhart¹, Kraig Roozeboom¹, Gretchen Sassenrath². ¹Kansas State University,

Manhattan, KS, ²Kansas State University,
Parsons, KS

- 09:15 AM **416. The Use of Mixed Cover Crops in Irrigated Orchards and Vineyards and Their Effects on Selected Ecosystem Services.** Connie Echaiz*¹, Héctor Valdés-Gómez¹, Léo Garcia², Fiorella Gattini³, Rodrigo Figueroa¹. ¹Pontificia Universidad Católica de Chile, Santiago, Chile, ²INRAE, Montpellier, France, ³Syngenta Crop Protection Chile, Santiago, Chile
- 09:30 AM **417. 5-Year 13 Integrated Weed Management Implementation for Palmer amaranth in Cotton.** Amar Godar*¹, Jason Norsworthy¹, L. Tom Barber². ¹University of Arkansas, Fayetteville, AR, ²University of Arkansas Cooperative Extension Service, Lonoke, AR
- 09:45 AM **418. Modeling Interaction Effects That Mediate Weed Responses to Cover Crop Surface Residues.** Lilly Sencenbaugh*¹, John Wallace¹. ¹The Pennsylvania State University, College Park, PA
- 10:00 AM BREAK (15 MINUTES)**
- 10:15 AM **419. Effectiveness of Directed Energy for Destroying Weed Seeds: A Harvest Weed Seed Control Strategy.** Sarah Chu*¹, Lauren Lazaro², Shuyang Zhen¹, Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX, ²Former Affiliation: Blue River Technology, Sunnyvale, CA
- 10:30 AM **420. Electrical Weeding in Cotton: Performance Optimization and Comparative Efficacy with Cultivation.** Ryan Hamberg*¹, Megan Singletary², Robert Hardin¹, Scott Nolte¹, Gaylon Morgan⁴, Peter Dotray²⁻³, Muthukumar Bagavathiannan¹. ¹Texas A&M University, College Station, TX, ²Texas Tech University, Lubbock, TX, ³Texas A&M AgriLife Research and Extension, Lubbock, TX, ⁴Cotton Incorporated, Cary, NC
- 10:45 AM **421. Overcoming Weed Resistance with Novel Modes of Action.** Laura Davies*¹, Shuji Hachisu¹. ¹Moa Technology, Oxford, UK
- 11:00 AM **422. Efficacy and Phytotoxicity of Herbicides in California Wild Rice (*Zizania palustris*) Systems.** Taiyu Guan*¹, Alex Ceseski¹, Rohith

Vulchi², Roger Batts³, Kari Arnold², Consuelo Baez Vega⁴, Whitney Brim-DeForest¹.
¹University of California Agriculture and Natural Resources, ²University of California, Davis, Davis, CA, ³NC State University, Raleigh, NC, ⁴California State University, Chico, CA

11:15 AM **423. Assessing Seed Retention in Downy Brome (*Bromus tectorum* L.): A Comparison of Three Seed-Collection Methodologies.** Noemi Codina-Pascual*¹, Vhuthu Ndou¹, Fernando H. Oreja², Jennifer A. Gourlie¹, Judit Barroso¹. ¹Oregon State University, Adams, OR, ²Clemson University, Clemson, SC

11:30 AM **424. Evaluating Corn Planting-Green in Cereal Rye Cover Crop for Palmer amaranth Seed Production, Corn Productivity, and Economic Returns.** Vipin Kumar*¹, Amit Jhala¹, Humberto Blanco-Canqui¹, Saleh Taghvaician¹, Sam Wortman¹. ¹University of Nebraska – Lincoln, Lincoln, NE

THURSDAY MORNING FEBRUARY 12

ORAL – 12. Regulatory Aspects

LOCATION: Glennwood Ballroom
Salon I
4th Floor, North Tower
TIME: 10:15-11:00 AM Eastern
MODERATOR: Bill Chism
EPA, Retired
Point of Rocks, MD

***SPEAKER**

10:15 AM **425. Establishing Pollinator Habitat to Protect Sensitive Species and Preserve the Use of Pesticides.** Taylor Randell-Singleton*¹, Nick McGhee², Richard Barrett². ¹University of Georgia, Athens, GA, ²USDA-NRCS Jimmy Carter Plant Materials Center, Americus, GA

10:30 AM **426. Endangered Species Act: What is the WSSA Committee Doing?** Bill Chism*¹, Cameron Douglass². ¹EPA Emeritus, Point of Rocks, MD, ²Compliance Services Inc., Lakewood, WA

10:45 AM **427. Prehistoric pesticide labels get a face lift.**
Stanley Culpepper*¹, Bill Chism². ¹University of Georgia, Tifton, GA, ²EPA Emeritus, Point of Rocks, MD

11:00 AM Business Meeting

THURSDAY MORNING FEBRUARY 12

ORAL – 03. Turf and Ornamentals

LOCATION: Glenwood Ballroom
Salon II
TIME: 10:15-11:00 AM Eastern
MODERATOR: Hannah S. Wright
University of Arkansas
Division of Agriculture
Little Rock, AR

***SPEAKER**

10:15 AM **428. Optimizing Weed Management Practices for Pollinator Protection and Understanding Foraging Behavior.** Suzannah Hale*¹, Navdeep Godara², Shawn Askew¹. ¹Virginia Polytechnic Institute and State University, Blacksburg, VA, ²North Carolina State University, Raleigh, NC

10:30 AM **429. Comparison of treatments for yellow nutsedge control.** Jeffrey Derr*¹. ¹Virginia Polytechnic Institute and State University, Virginia Beach, VA

10:45 AM **430. Exploring Factors Affecting Weed Detection in Bermudagrass Turf: Ground Resolution, Ambient Light Conditions, and Platform Speed.** Mikerly Joseph*¹, Lukasz Wnorowski¹, Katarzyna A. Gawron¹, Chang Zhao¹, Arnold W. Schumann¹, Gregory MacDonald¹, Nathan Boyd¹, Pawel Petelewicz¹. ¹University of Florida, Gainesville, FL

11:00 AM Business Meeting

THURSDAY MORNING FEBRUARY 12

**ORAL – 04. Pastures, Rangelands, Forests, and
Rights of Way**

LOCATION: Glenwood Ballroom
Salon II
TIME: 11:15-11:45 AM Eastern
MODERATOR: David Russell
Auburn University
Auburn, AL

***SPEAKER**

- 11:15 AM **431. Weed Control and Crop Tolerance in No-Till Orchardgrass (*Dactylis glomerata* L.) Establishment.** Hannah Wright-Smith*¹, Thomas Mueller¹, Will Phillips¹, Kimberlin Mann¹, Bruno Pedreira¹. ¹*University of Tennessee, Knoxville, TN*
- 11:30 AM **432. Effectiveness Of Integrated Approaches to Manage Woody Invasive Plants in Midwestern Forests.** Mark Renz*¹, Stefania Cartoni¹. ¹*University of Wisconsin-Madison, Madison, WI*
- 11:45 AM **Business Meeting**

THURSDAY AFTERNOON FEBRUARY 12

**TOURS – Cotton Incorporated, BASF, and
Museum of Natural History**

LOCATION: Meet in Lobby
TIME: 12:30-4:30 PM Eastern

Cotton Incorporated
Gaylon Morgan
Cotton Incorporated
Raleigh, NC

BASF
Dallas Taylor
BASF
Raleigh, NC

Museum of Natural History
Andrew Blythe
Corteva AgriScience
Raleigh, NC

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The following rules and standards of conduct have been developed for the safe and efficient operation of the WSSA and for the benefit and protection of the rights and safety of all. WSSA members are expected to observe the highest standards of professional conduct at all times, while at work or engaged in Society business.

1. Obey all laws, rules and regulations governing our business. The WSSA is subject to applicable federal laws in the state or country of the meeting or event. It is the policy of the WSSA that all laws, rules and regulations are complied with fully and completely. If it is unclear whether an action or activity is a legal or ethical violation, contact the WSSA President and/or Executive Secretary immediately for advice. Any incident or situation that violates the law or this policy should be immediately reported to the President and/or Executive Secretary; in person or via this contact information: info@wssa.net or 720-445-4789.

2. Be honest, truthful, fair and trustworthy in all WSSA activities and relationships. The WSSA expects each member to treat other members with respect and honesty. This includes providing information that is accurate, complete, objective, timely, relevant, and understandable.

3. Respect and protect WSSA assets. Assets are anything of value owned by the WSSA. All WSSA members are expected to be custodians of those assets. Members are responsible to maintain Society assets in good condition and to protect them from loss. This includes, but is not limited to, real assets and equipment as well as "soft assets" such as intellectual property, member lists, and other confidential information owned by the Society. WSSA assets of any kind should not be used for personal benefit.

4. Avoid all conflicts of interest between Society business and personal affairs. All WSSA members are expected to act with total objectivity regarding WSSA business. Accordingly, it is improper for a WSSA member to be in a position where their personal interests' conflict, or appears to conflict, with WSSA interests. WSSA members should not use their position within the WSSA to influence WSSA members or others for their personal benefit. If a member believes that a conflict of interest has developed or may develop, it should be promptly reported to the WSSA President and/or Executive Secretary. The Society's Conflict of Interest Policy is outlined in 5.8.

5. Promote a culture of respect for all WSSA members. The WSSA supports and adheres to laws and regulations dealing with fair member practices. Membership discrimination in our Society based on sex, race, age, religion, national origin, or sexual preference will not be tolerated. Sexual harassment will not be tolerated. Sexual harassment is defined as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature that explicitly or implicitly affects an individual's membership in the society, unreasonably interferes with an individual's activities within the society, or creates an intimidating, hostile or offensive society environment. This also includes inappropriate use of nudity and/or sexual images in public spaces (including within visual presentations, Twitter, and other online media); deliberate intimidation, stalking, or unwelcome following; harassing photography or recording; and sustained disruption of talks or other events.

6. Use your best efforts to maintain a safe environment and protect the Society. The WSSA believes in and supports the laws designated to keep our Society safe and designed to protect the environment. If you believe that an unsafe condition exists in our Society, bring it immediately to the attention of the President, a member of the Board, or Executive Secretary. If an accident takes place, report it pursuant to policy and immediately take action to address the problem. Any incident or situation that violates the law or this policy should be immediately reported to the President and/or Executive Secretary; in person or via this contact information: info@wssa.net or 720-445-4789.

7. Promote an ethical culture for all WSSA members. The WSSA always expects all of its members to conduct themselves ethically and to encourage and support that behavior in their fellow members. Members exercise integrity in scientific research activities and in the reporting of results.

8. Relation of professionals to the public. They shall not knowingly permit the publication of reports or other documents for any unsound or illegitimate undertaking.

9. Respect fellow WSSA members. Members shall freely give credit for work done by others to whom the credit is due and shall refrain from plagiarism in oral and written communication, and not knowingly accept credit rightfully due to another person.

10. Reporting alleged violations. Violation of the WSSA Code of Ethics and Conduct may subject a member to disciplinary action up to and including membership revocation. At the annual conference, when "Safe WSSA" members become aware of a complaint, they will seek out the alleged victim(s) and offender(s) separately and gather facts. Immediate responses at the conference may range from warning a harasser to cease his or her behavior immediately, to ending a speaker's talk early if

the speaker uses inappropriate language or images, to requiring a harasser to leave the conference immediately with no refund, to banning a harasser from future events "either indefinitely or for a certain time period." Law enforcement may be engaged if circumstances require.

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