

2026

North Central Weed Science Society
Northeastern Weed Science Society

Joint Annual Meeting

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www.ncwss.org

www.newss.org

December 7-10, 2026

Hyatt Regency Columbus
350 North High Street
Columbus, OH 43215

President's Welcome
2026 Joint Meeting of the North Central and Northeastern Weed Science Societies

Welcome to the 81st Annual Meetings of the North Central Weed Science Society (NCWSS) and the Northeastern Weed Science Society (NEWSS), held jointly for the first time this year at the Hyatt Regency in Columbus, Ohio. We are excited to share this meeting with our NEWSS colleagues and hope it brings new connections and collaborations across our two societies.

NCWSS President-Elect Fritz Koppatschek, NEWSS President-Elect Kurt Vollmer, and the Program Committees have organized a terrific meeting that we hope will stimulate many great discussions and help everyone leave with a few new ideas on how they might improve weed management in their sphere of influence. We are also very grateful to those who helped organize symposia, which include: "30 Years of Weed Science: What Changed, What Worked, and What Comes Next" focused on Graduate Student Development, "Planting Green for Weed Suppression and Ecosystem Services," and "What's New in Industry."

We are pleased to welcome special guest Dr. Jaye Hamby, the Director of USDA National Institute of Food and Agriculture. His address during the General Session Tuesday morning is titled, "From Discovery to Delivery: USDA's Extramural Research Investments."

We appreciate the diligent efforts and attention to detail of the Local Arrangements Committee, led by Alyssa Essman of The Ohio State University. We also appreciate the efforts of Eric Gustafson, NCWSS Executive Secretary, and Don Gossard, in helping with registration, website management, and numerous other details that enable a successful meeting.

The Annual Meeting is greatly enhanced by our Sustaining Members. We especially acknowledge the support of BASF hosting the Student Mixer Monday evening, Bayer Crop Science supporting the Women in Weed Science Breakfast Tuesday morning, Corteva sponsoring the Student Luncheon Tuesday at noon, and Syngenta Crop Protection sponsoring the Industry Breakfast on Thursday morning. Tuesday evening NEWSS Dessert is sponsored by UPL, BASF and ABG AG Services. The Wednesday evening mixer is supported by all Sustaining Members.

Our societies succeed when their members are engaged. We are all blessed by those who serve as contest judges, on committees, as moderators, and on the Board of Directors. If you are not yet serving

and wish to do so, please reach out to us, Mark Bernards, Fritz Koppatschek, or Angela Kazmierczak.

Thank you for the opportunity to serve as your Presidents! Have a great Annual Meeting!

Brett Miller
NCWSS President

Katelyn Venner
NEWSS President

Registration Hours

The registration desk is at County Foyer, and will be open Monday 3:00 to 6:30 pm, Tuesday 7:30 am to 4:00 pm, Wednesday 8 to 11 am, and 2:00 to 4:00 pm.

Meeting Rooms

All sessions and meetings will be in the Hyatt Regency Columbus. Additional meetings may be arranged any time during the conference by contacting Alyssa Essman, Local Arrangements Chair.

Proceedings

2026 NCWSS/NEWSS Proceedings will be available following the meeting online at the NCWSS and NEWSS website.

Sustaining Members

Sustaining members that have made prior arrangements with the Industry Chair may put up a display in the Exhibit area. No other displays are allowed.

Endowment Support Opportunity – Silent Auction & 50/50 Raffle

Please support both societies during the meeting. Silent auction items for both the NCWSS and NEWSS will be available for viewing and bidding in the Clark County Room until Wednesday at 3:00 pm. Auction item winners may pick up items beginning at 4:00 pm on Wednesday at the registration desk. Proceeds from the Silent Auction will be placed into the NCWSS or NEWSS Endowment Fund. NEWSS will also hold a 50/50 raffle. Tickets can be purchased at the Tuesday night dessert. The winner receives half of the pot, and the other half supports NEWSS endowment fund.

NCWSS/NEWSS General Program Information

Health and Safety

Attendees need to always wear meeting name badges. Please always keep your personal belongings with you. Smoking is allowed in designated areas only. In the event of any medical emergency, please contact hotel security as soon as possible through any public area house phone or by dialing the hotel operator and stating that you have a medical emergency.

Please contribute to the conference environment in which diverse attendees may learn, network, and enjoy the company of colleagues in a professional and harassment-free atmosphere.

The NCWSS and NEWSS believe in and support the laws designed to keep our Societies safe and designed to protect the environment. If you believe that an unsafe condition exists in our Societies, bring it immediately to the attention of the President, a member of the Board, or Executive Secretary. If an incident 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 Executive Secretary, in person or via this contact information: info@ncwss.org or 720-445-4789 (NCWSS)

NCWSS and NEWSS on Social Media

Keep up to date with the latest NCWSS news by following @NCWeedScience on X and @NE_WeedSci on X. Use the hashtag #NCWSSNEWSS2026 when sharing on LinkedIn, X, Instagram, or other social media platforms.

No photographs or videos

Do not take pictures or videos of any presentations without prior permission from the presenter. The posters will be available online after the conference.

Meal Functions of the Society 2026

Meal Functions

If you requested specific dietary needs during the meeting, please identify yourself and needs to the wait staff as they begin serving.

Breaks

Tuesday, 7:00 – 8:30 am	Union A
Tuesday, 3:00 – 4:00 pm	Union A
Wednesday, 9:30 – 9:45 am	Union A
Wednesday, 2:30 – 3:30 pm	Union A

Joint Presidential Reception

Open to 2026 Distinguished Award Winners, New and Current Fellows, Current Board Members, Past Presidents

Monday, 6:00 – 7:00 pm — Morrow

Joint Student Mixer

Sponsored by BASF Corporation – Open to all

Monday, 7:00 – 10:00 pm — Franklin ABCD

Women in Weed Science Networking Breakfast

Sponsored by Bayer – Open to all (preregistration required)

Tuesday, 6:30 – 8:00 am — Taft AB

Student Luncheon/Business Meeting

Sponsored by Corteva Agriscience – Open to all students

Tuesday, 12:00 – 1:15 pm — Taft AB

NCWSS/NEWSS Dessert and Mixer

Sponsored by BASF, UPL, ABG AG Services – Open to all
Desserts and cash bar, 50/50 for NEWSS Endowment

Tuesday, 9:00 – 11:00 pm — Delaware ABCD

NCWSS/NEWSS Awards Luncheon

Open to all (preregistration required)

Wednesday, 12:05 – 1:20 pm — Delaware ABCD

Society Social and Contest Awards

Sponsored by the Sustaining Members
Open to all

Wednesday, 5:30 – 7:00 pm — Delaware ABCD

Society Industry Breakfast

Sponsored by Syngenta – Open to all (preregistration required)

Thursday, 7:00 – 8:30 am Delaware ABCD

NCWSS/NEWSS Committee Meetings

Meetings will take place to conduct the business of each respective committee. Most meetings are open to members. Please contact the committee chair or attend the committee meeting if you are interested in serving the society by being a committee member. * Denotes committees that will elect a new Vice Chair to serve as Chair in 2027.

NCWSS Board of Directors

Monday, 1:00 – 2:00 pm Fayette

NCWSS/NEWSS Combined Board of Directors

Monday, 2:00 – 3:00 pm Fayette

NCWSS Finance, Steering & Policy Meeting

Monday, 3:30 – 4:30 pm Knox

NCWSS Resident Education, Summer Contest & Contest Rules Joint Meeting

Monday, 3:30 – 4:30 pm Madison

NEWSS Endowment Committee and Weed Contest Committee

Monday, 3:30 – 4:30 pm Marion

Paper and Poster Judges

Monday, 5:00 – 6:00 pm Marion

Resolutions & Necrology

Monday, 6:00 – 6:30 pm Fayette

NCWSS/NEWSS Program Committee & Section Chairs

Monday, 6:00 – 6:30 pm Knox

Nominating

Tuesday, 5:00 – 5:30 pm Madison

Fellows

Tuesday, 5:00 – 5:30 pm Knox

Student Contest Paper Judges

Tuesday, 5:30 – 6:30 pm Knox

Student Contest Poster Judges
Tuesday, 5:30 – 6:30 pm — Fayette

Distinguished Achievement Awards
Tuesday, 6:00 – 6:30 pm — Marion

Strategic Planning
Tuesday, 6:00 – 7:00 pm — Madison

Student Contest Paper Judges
Wednesday, 10:30 – 11:30 am — Madison

NEWSS Past Presidents Meeting
Thursday, 7:00 – 8:00 am — Knox

Industry
Thursday, 10:00 am (after What's New…) — Delaware ABCD

NEWSS Society Wide Business Meeting
Thursday, 10:30 – 11:30 am — Fairfield

NCWSS Board of Directors
Thursday, 10:30 am – 11:30 pm — Madison

Program Section Business Meetings

Horticulture, Specialty Crops, Turf and Ornamentals
Wednesday, 11:30 am — Franklin D

Integrated Weed Management and Cover Crops
Wednesday, 12:00 pm — Franklin C

Weed Biology and Ecology
Wednesday, 12:00 pm — Franklin C

Invasive Weeds Rangeland, Pasture and Vegetation
Wednesday, 12:00 pm — Franklin D

Weed Genetics and Herbicide Physiology
Wednesday, 2:30 pm — Marion

Herbicide Management
Wednesday, 3:00 pm — Franklin C

Extension
Wednesday, 4:00 pm — Marion

Industry
Thursday, 10:00 am (after What's New in the Industry?) — Delaware ABCD

Symposia

Graduate Student Symposium – 30 Years of Weed Science: What Changed, What Worked, and What Comes Next
Wednesday, 1:30-4:05 pm — Franklin AB

Planting Green for Weed Suppression and Ecosystem Services
Wednesday, 1:30-3:55 pm — Franklin D

What's New in the Industry?
Thursday, 8:30-10:00 am — Delaware ABCD

Condensed Program

Monday, December 7

Graduate Student Trip to Scotts	1:00-5:00 pm	Off-Site
Committee Meetings	1:00-6:30 pm	Various
NCWSS/NEWSS Presidential Reception	6:00-7:00 pm	Morrow
NCWSS/NEWSS Student Mixer	7:00-10:00 pm	Franklin ABCD

Tuesday, December 8

Women in Weed Science Breakfast	6:30-8:00 am	Taft AB
POSTER SESSION 1 – Student Contest	8:00-9:50 am	Union A-E
NCWSS/NEWSS General Session	10:00-11:50 am	Franklin ABCD
Student Luncheon	12:00-1:15 pm	Taft AB
NCWSS Student Contest Papers – IWM	1:30-5:15 pm	Franklin C
NCWSS Student Contest Papers – Weed Genetics & Herbicide Physiology	1:30-3:30 pm	Franklin A

NCWSS Student Paper Contest – Herbicide Applications for Weed Management, Session 1	1:30-4:45 pm	Franklin D
NEWSS Student Contest Papers – Ph.D.	1:30-4:30 pm	Fairfield
NCWSS Student Video Contest	4:00-5:30 pm	Union
NCWSS Student Contest Papers – Weed Biology & Ecology	4:15-5:30 pm	Franklin A
Committee Meetings	5:00-7:00 pm	Various
NCWSS/NEWSS Dessert and Mixer	9:00-11:00 pm	Delaware ABCD

Wednesday, December 9

POSTER SESSION 2 – Non-Contest Posters	7:00-8:30 am	Union A-E
NCWSS Student Contest Papers – Equipment & Application Methods	8:00-10:15 am	Franklin C
NCWSS Student Paper Contest – Herbicide Applications for Weed Management, Session 2	8:00-9:30 am	Franklin AB
Horticulture, Specialty Crops, Turf and Ornamentals	8:45-11:30 am	Franklin D
NEWSS Student Paper Contest – M.S.	9:15-10:45 am	Fairfield
Herbicide Management: Session 1	9:45-11:45 am	Franklin AB
Integrated Weed Management and Cover Crops	10:30-11:45 am	Franklin C
Invasive Weeds, Rangeland, Pasture and Vegetation	11:30 am-12:00 pm	Franklin D

Weed Biology and Ecology	11:45 am-12:00 pm	Franklin C
NCWSS/NEWSS Awards Luncheon	12:05-1:20 pm	Delaware ABCD
Graduate Student Symposium – 30 Years of Weed Science	1:30-4:05 pm	Franklin AB
Herbicide Management: Session 2	1:30-3:00 pm	Franklin C
Weed Genetics and Herbicide Physiology	1:30-2:30 pm	Marion
Symposium – Planting Green for Weed Suppression and Ecosystem Services	1:30-3:55 pm	Franklin D
Extension	2:45-4:00 pm	Marion
Alternative and Emerging Technological Weed Management	3:15-3:45 pm	Franklin C
Society Social and Contest Awards	5:30-7:00 pm	Delaware ABCD

Thursday, December 10

NEWSS Past Presidents' Meeting	7:00-8:00 am	Knox
NCWSS/NEWSS Industry Breakfast and Speaker	7:00-8:30 am	Delaware ABCD
What's New in the Industry?	8:30-10:00 am	Delaware ABCD
NEWSS Business Meeting	10:30-11:30 am	Fairfield
NCWSS Board Meeting	10:30 am-11:30 am	Madison

Poster Sessions

LOCATION: Union A-E

Poster Setup

Posters can be set up between 4:00 and 8:00 pm on Monday, December 7. All NCWSS/NEWSS posters will be on display on Tuesday, December 8 from 8:00 am until 7:00 pm and on Wednesday, December 9 from 7:00 am until 12:00 pm.

Students in the Poster Contest must be with their posters during the Poster Session on Tuesday morning for judging. Students in the NCWSS poster contest are required to bring at least 25 letter-sized copies of their posters to hand out.

Tuesday, December 8

8:00 – 9:50 am Poster Session I – Student Contest

Wednesday, December 9

7:00 – 8:30 am Poster Session II – Non-Contest Posters

Poster Removal

All posters must be removed by 4:00 pm on Wednesday, December 9.

NCWSS/NEWSS Sustaining Member Exhibitors

Tuesday & Wednesday County Foyer
Set up Monday afternoon

PROGRAM

TUESDAY MORNING DECEMBER 8

Women in Weed Science Breakfast

LOCATION: Taft AB
TIME: 6:30 AM – 8:00 AM EST
CHAIR: Cristin Weber
Syngenta Crop Protection

6:30 AM **Meal Served** (*Preregistration Required*)

TUESDAY MORNING DECEMBER 8

POSTER SESSION 1 – Student Contest

LOCATION: Union A-E
TIME: 8:00 AM - 9:50 AM EST
CHAIRS: Joe Ikley
North Dakota State University
Meaghan Anderson
Iowa State University

***PRESENTER**
† GRADUATE CONTEST
‡ UNDERGRADUATE CONTEST

All student contest participants (†, ‡) are to be at posters on Tuesday, 8:00 AM - 9:50 AM

All presenters not participating in the student contest are to be at posters on Wednesday, 7:00 AM - 8:30 AM

POSTER SECTION
Extension

Wisconsin Herbicide Resistance Update: Where are we at?. Luma Lorena Loureiro S. Rodrigues*[1], Ahmadreza Mobli[1], Felipe Faleco[2], David Stoltenberg[1]; [1]University of Wisconsin, [2]Exacto **(1)** **NCWSS**

The Wisconsin Extension Weed Management Workshop: Innovative and Interactive Weed Science Education for Wisconsin Clientele. Sam Bibby*[1], Dan Smith[1], Josh Kamps[1], Anastasia Kurth[1], Jordyn Sattler[1], Rodrigo Werle[1]; [1]University of Wisconsin Madison **(2)** **NCWSS**

2026 Most Common and Troublesome Weed Species in Grass Crops of the North Central Region. Jacob H. Felsman*[1], Sally Reed[2], Lee Van Wychen[3]; [1]Michigan State University, [2]University of Tennessee, [3]Weed Science Society of America **(3)** **NCWSS**

Connecting Research, Diagnostics, and Extension: Two Years of the Herbicide Resistance Monitoring Network (HERMON). Sara Alvarez Rodriguez*[1], Christy Sprague[1], Pat Tranel[2], Caio Brunharo[3], Rodrigo Werle[4], Bryan Young[5], Thomas Butts[5], Sara Ganske[6], Mithila Jugulam[7], Jason Norsworthy[8], Luis De Avila[9], Kevin Bradley[10], Eric Patterson[1]; [1]Michigan State University, [2]University of Illinois Urbana-Champaign, [3]Pennsylvania State University, [4]University of Wisconsin-Madison, [5]Purdue University, [6]Kansas State University, [7]Texas A&M University, [8]University of Arkansas, [9]Mississippi State University, [10]University of Missouri **(4)** **NCWSS**

Endangered Species Act: Bill Chism*[1]; [1]WSSA **(5)**

POSTER SECTION
Equipment and Application Methods

† **Machine learning based classification of drift reducing adjuvants and their impact on droplet size and morphology.** Fatemeh Esmaeilbeiki*[1], Vijay Singh[1]; [1]Eastern Shore Agricultural Research and Extension Center, Virginia Tech, Painter, VA, USA **(6)** **NEWSS**

Quantifying Adjuvant Performance Through Shikimic Acid Accumulation. Joshua Skelton*[1], Caroline Donaldson[1,2], Elizabeth Buescher[1]; [1]WinField United, [2]Purdue University **(7)** **NCWSS**

Effects of Adjuvant Selection on Epyrinacil Performance and Spray Deposition. Kasey Schroeder*[1], Vojin Milosevic[1], Breno Rodrigues[1], Renata Naves[1], Shrijana Poudel[1], Jeffrey Golus[1], Milos Zaric[1]; [1]University of Nebraska-Lincoln, North Platte, Nebraska, USA **(8)** **NCWSS**

† **Turning Weed Maps Into Herbicide Prescriptions: Precision Management or Unnecessary Complexity?.** Igor Rezende Lima*[1], Sarah Ganske[1], Yasir Parrey[1], Mariana De Oliveira Mota[1], Isadora Saldanha Balbinot[1], Sumya Binta Belayet[1], Mateo Kokic[1], Matheus Luiz de Paula[1], Milena Nero[1]; [1]Kansas State University **(9)** **NCWSS**

† **Are We on Target? Evaluating UAV Platforms for Targeted Spraying.** Jesse Yount*[1], Kevin Bradley[1]; [1]University of Missouri **(10)** **NCWSS**

‡ **A Comparison of Boom Height and Applicator Bar Design for Weed Electrocution.** Austin Wilson*[1], Jesse Yount[1], Simardeep Singh[1], Kevin Bradley[1]; [1]University of Missouri **(11)** **NCWSS**

† **Can Drones Replace Grain Drills for Seeding Cover Crops?.** Prudhvi Vulchi*[1], Akashdeep Singh Brar[1], Rutvij Wamanse[1], Vijay Singh[1], Mark S. Reiter[1]; [1]Virginia Tech **(12)** **NEWSS**

Evaluation of a Novel Nanocellulosic Adjuvant for Drift Reduction in Agrochemical Applications. Leonard Bonilha Piveta*[1], Joseph Batta-Mpouma[2], Maria CCR Souza[1], Emmanuel G Cooper[1], Nilda R Burgos[3], Julie M Young[1], Bryan G Young[1], Thomas R Butts[1]; [1]Purdue University, [2]CelluDot, LLC, [3]University of Arkansas **(13)** **NCWSS**

† **Effects of Drift-Reducing Agents on Dicamba Spray Coverage, Drift Potential, and Crop Safety.** Ana Laura Camachos de Oliveira*[1], Shrijana Poudel[1], Renata Naves[1], Vojin Milosevic[1], Rasmita Mainali[1], Breno Rodrigues[1], Gustavo Fujihara[1], Kasey Schroeder[1], Luka Milosevic[1], Jeffrey Golus[1], Milos Zaric[1]; [1]University of Nebraska-Lincoln **(14)** **NCWSS**

† **Effects of Glufosinate-L and Adjuvant Combinations on Weed Control, Corn Response, and Droplet Spectrum.** Gustavo Fujihara*[1], Breno Rodrigues[1], Vojin Milosevic[1], Stevan Knezevic[2], Jeffrey A. Golus[1], Milos Zaric[1]; [1]University of Nebraska-Lincoln, North Platte, Nebraska, USA, [2]University of Nebraska-Lincoln, Lincoln, Nebraska, USA **(15)** **NCWSS**

† **Influence of Nozzle Type and Spray Volume on Droplet Size, Deposition, and Epyrifenacil Efficacy.** Shrijana Poudel*[1], Vojin Milosevic[1], Breno Rodrigues[1], Renata Naves

Nascimento[1], Kasey Schroedar[1], Jeffrey A. Golus[1], Milos Zaric[1]; [1]University of Nebraska-Lincoln **(16)** **NCWSS**

† **Influence of Adjuvants and Wind Speed on Spray Droplet Characteristics in Ground and Aerial Applications.** Renata Naves*[1], Jeffrey A. Golus*[1], Milos Zaric*[1]; [1]University of Nebraska-Lincoln, North Platte, Nebraska, USA **(17)** **NCWSS**

Influence of Application Time of Day on a Glufosinate-Resistant Waterhemp (*Amaranthus tuberculatus*) Population. Jessie R. Lewis*[1], Julie M. Young[1], Bryan G. Young[1]; [1]Purdue University **(18)** **NCWSS**

† **Spray Drone Platforms vs. Ground Boom Equipment: Waterhemp (*Amaranthus tuberculatus*) Control and Spray Uniformity Using Multiple Droplet Sizes in Soybean.** Maria Carolina CR Souza*[1], Daniel Q Zhu[1], Kamryn R Frost[1], Emmanuel G Cooper[1], Leonard B Piveta[1], Julie M Young[1], Bryan G Young[1], Thomas R Butts[1]; [1]Purdue University **(19)** **NCWSS**

† **Novel Evaluation of Spray Deposition on Weeds from the Verdant Sharpshooter™ Targeted Application System.** Daniel Q. Zhu*[1], Kamryn R. Frost[1], Emmanuel G. Cooper[1], Maria C.C.R. Souza[1], Leonard B. Piveta[1], Evey Brooks[2], Will Hirschfeld[2], Bryan G. Young[1], Thomas R. Butts[1]; [1]Purdue University, [2]Becks Hybrids **(20)** **NCWSS**

† **Nozzle Selection and Spray Volume Effects for Liberty Ultra Efficacy on Giant Ragweed (*Ambrosia trifida*) and Waterhemp (*Amaranthus tuberculatus*).** Kamryn R. Frost*[1], Daniel Q. Zhu[1], Maria Carolina C.R Souza[1], Emmanuel G. Cooper[1], Leonard B. Piveta[1], Bryan G. Young[1], Thomas R. Butts[1]; [1]Purdue University **(21)** **NCWSS**

An Enzyme-Based Tank Additive Improves Control of Herbicide-Resistant Palmer Amaranth (*Amaranthus palmeri*) and Waterhemp (*Amaranthus tuberculatus*). Nathan Scinto-Madonich*[1], Dezi Elzinga[1], Hilary Mayton[1], Stephane Corgie[1], Caio Brunharo[2]; [1]Zymtronix Catalytic Systems, [2]The Pennsylvania State University **(22)** NEWSS

Research Experiences with Drone Herbicide Applications in Michigan Soybean. Brian Stiles II*[1], Christy Sprague[1]; [1]Michigan State University **(23)** **NCWSS**

† **Exploring Ultra-Precise Smart Sprayer (Ecorobotix ARA) for Weed Control in Dry Edible Bean.** Sithin Mathew*[1], David

Nicolai[1], Eric Yu[1], Seth Naeve[1], Debalin Sarangi[1]; [1]University of Minnesota **(24)** **NCWSS**

Water Conditioners and Glufosinate-Dicamba Tankmixes. Jeffrey Golus*[1], Renata Naves[1], Kasey Schroeder[1], Milos Zaric[1]; [1]University of Nebraska-Lincoln **(25)** **NCWSS**

Spray water pH: Does it make a difference in weed control?. Eric Yu*[1], Ryan Miller[1], Debalin Sarangi[1]; [1]University of Minnesota **(26)** **NCWSS**

Effect of Saflufenacil Spot-spray Application at Different Growth Stages and Spray Coverage Levels on Soybean Yield. Estefania Gomiero Polli*[1], Wesley Everman[1], Damian Franzenburg[1], Alex Macvilay[1], Rocco D'Antico[1]; [1]Iowa State University **(27)** **NCWSS**

Effects of Nozzle Type and Imazamox - Auxin Herbicide Mixtures on Droplet Characteristics, Spray Coverage, and Canopy Penetration. Jeremie Kouame*[1], Taylor Lambert[1], Atong Akom[1], Patrick Geier[1], Sarah Ganske[1], Augustine Obour[1], Gaurav Jha[1], Jeanne Falk-Jones[1], Sarah Sexton-Bowser[1], Tommy Butts[2]; [1]Kansas State University, [2]Purdue University **(28)** **NCWSS**

What's New with CPDA?. Gregory Dahl*[1]; [1]Council of Producers & Distributors of Agrotechnology **(29)**

Putting Precision Lasers to Work: A New Tool for Integrated Weed Management in Sugar Beet. Isidor Ceperkovic*[1], Sithin Mathew[1], Mark Bloomquist[2], David Mettler[2], Thomas Peters[1], Debalin Sarangi[1]; [1]University of Minnesota, [2]Beet Sugar Development Foundation **(30)** **NCWSS**

Assessing Weed Control, Crop Development, and Yield with ARA Ultra-High-Precision Smart Sprayer in Wisconsin Non-GMO Corn and Soybean Systems. Nikola Arsenijevic*[1], Dan Smith[1], Ryan DeWerff[1], Katerina Lee[2], Rodrigo Werle[1]; [1]University of Wisconsin-Madison, [2]Ecorobotix SA **(31)** **NCWSS**

Using Image-Based Phenotyping to Assess Herbicide Drift: A Case Study of Glyphosate on Bur Oak Saplings. Luka Milosevic*[1], Tala Awada[1], Stevan Knezevic[1], Milos Zaric[1]; [1]University of Nebraska - Lincoln **(32)** **NCWSS**

POSTER SECTION
Horticulture, Specialty Crops, Turf and Ornamentals

† **Influence of Maleic Hydrazide and Mesotrione on Daughter Tuber Production and Subsequent Volunteer Emergence.** Nathan Welch*[1], Erin Burns[1]; [1]Michigan State University **(33)** **NCWSS**

‡ **Beet the Weeds: AI-Targeted Herbicide Applications in Garden Beet with Verdant Robotics Sharpshooter.** Marian Hollenbeck*[1], Luke Mackara[1], Chad Yagow[2], Beth Ferguson[1], Lynn Sosnoskie[3], Thierry Besançon[1]; [1]Rutgers University, [2]Verdant Robotics, [3]Cornell **(34)** **NEWSS**

Responses of Garden Beet Varieties to *S*-metolachlor and Ethofumesate. Tong Zhen*[1], Luke Mackara[1], Jane Petzoldt[2], Michael Bohrer[2], Lynn Sosnoskie[2], Thierry Besançon[1]; [1]Rutgers University, [2]Cornell University **(35)** **NEWSS**

† **Response of Velvetleaf (*Abutilon theophrasti*) and Oats (*Avena sativa*) to POST Herbicides plus Peppermint (*Mentha* x *piperita*) Oil.** Jared Ponce*[1], Stephen Meyers[1], Nicolle Salamanca[1]; [1]Purdue University **(36)** **NCWSS**

† **Peppermint (*Mentha* × *piperita*) Response to Post-Harvest Applications of Tiafenacil and Saflufenacil Under Greenhouse Conditions.** Nicolle Salamanca*[1], Stephen Meyers[1], Jared Ponce[1]; [1]Purdue University **(37)** **NCWSS**

† **Specialty Crop Safety Following Simulated Bioherbicide Exposure.** Rasmita Mainali*[1], Ana Laura Camachos de Oliveira[1], Breno Rodrigues[1], Gustavo Fujihara[1], Jeff Golus[1], Kasey Schroeder[1], Milos Zaric[1]; [1]University of Nebraska Lincoln **(38)** **NCWSS**

† **Effects of Paclobutrazol, Phosphorus, and Rootzone pH on Creeping Bentgrass (*Agrostis stolonifera*)-Annual Bluegrass (*Poa annua*) Putting Green Population Dynamics.** Emmanuel U. Nwachukwu*[1], James A. Murphy[1], Matthew T. Elmore[1]; [1]Rutgers University **(39)** **NEWSS**

Carrot Seed Priming to Speed up Emergence and Canopy Closure. Maria Gannett*[1], Olivia Park[1]; [1]University of Massachusetts **(40)** **NEWSS**

† **Machine Vision-Guided Targeted Herbicide Applications for *Kyllinga* spp. Control in Turfgrass Systems.** Brooke Heikkila*[1], Navdeep Godara[1], Juan Romero[2], Venkateswar

Reddy Yelkur[1], Gram Grant[1], Aman Jakhar[3], Shawn Askew[3]; [1]North Carolina State University, [2]Ecorobotix, [3]Virginia Tech **(41)** **NEWSS**

† **Atrazine-Alternative Herbicide Programs for Postemergence Weed Control in Sweet Corn.** Newman Teye-Doku*[1], Lynn Sosnoskie[2], Dwight Lingenfelter[3], Thierry Besancon[4], Ramawatar Yadav[1]; [1]The Ohio State University, [2]Cornell University, [3]Penn State University, [4]Rutgers University **(42)** **NCWSS**

† **Turf Quality, Weed Control, and Cost of Vision-Guided Herbicide Programs in Bermudagrass.** Aman Jakhar*[1], Shawn Askew[1], Juan Romero[2], Navdeep Godara[3]; [1]Virginia Tech, [2]Ecorobotix, [3]NC State University **(43)** **NEWSS**

† **Seeing Weeds, Spraying with Precision: Targeted Weed Control in Tree Fruits.** Abraham Akuoko*[1], Joshua Miranda[1]; [1]Michigan State University **(44)** **NCWSS**

† **Herbicide Control of Goosegrass (*Eleusine indica* L.) Following Paclobutrazol Application.** Jace Heiman*[1], Quincy Law[1]; [1]Iowa State University **(45)** **NCWSS**

† **Effects of Preemergence and Postemergence Herbicides on Several Weeds in High Organic Matter Soils.** Andrea Velez Matute*[1], Ramawatar Yadav[1], Miriam Styer[1], Newman Teye-Doku[1]; [1]The Ohio State University **(46)** **NCWSS**

Preemergence Herbicides Reduce Marketable Stems of Tuberose (*Polianthes tuberosa*) Cut Flowers. Joseph Neal*[1], Christopher Harlow[1]; [1]North Carolina State University **(47)** **NEWSS**

Automating Mechanical Weed Management on Small Vegetable Farms. Fadi Ayoub[1], Kathryn Pevarnik*[2], Annika Anderson[2], Fernanda Krupek[2], Eugene Law[2]; [1]Department of Mechanical Engineering, University of Maryland Baltimore County, [2]Department of Horticulture & Crop Science, The Ohio State University **(48)** **NCWSS**

Impact of Metamitron on Weed Control and Crop Safety in Garden Beet. Ram Yadav[1], Catherine Herms*[1]; [1]Ohio State University **(49)** **NCWSS**

† **Clomazone Application Timing for Poa annua Control in Overseeded and Dormant Bermudagrass.** Samuel Crawford*[1], Shawn Askew[1], Michael Prudhomme[2]; [1]Virginia Tech, [2]Sipcam Agro USA **(50)** **NEWSS**

† **Unmanned Aerial Systems-based Spray Applications in Watermelon (*Citrullus lanatus*).** Gaganjot Singh Sodhi*[1], Akashdeep Singh Brar[1], Vijay Singh[2]; [1]Graduate Research Assistant, Department of Plant Pathology, Physiology and Weed Science, Virginia Tech, Painter, VA-23420, [2]Associate Professor and Extension Weed Specialist, Eastern Shore Agricultural Research and Extension Center, Painter, VA-23420 **(51)** **NEWSS**

† **Expanding Herbicide Options for Weed Management in Edamame (*Glycine max* (L.) Merr.).** Akashdeep Singh Brar*[1], Milos Viric[1], Michael Flessner[2], Bo Zhang[2], Mark Reiter[1], Vijay Singh[1]; [1]Eastern Shore Agricultural Research and Extension Center, Virginia Tech, [2]School of Plant and Environmental Sciences, Virginia Tech **(52)** **NEWSS**

† **Electricity Against Yellow nutsedge (*Cyperus esculentus*): Targeted Weed Control in Onion Row Middles.** Josue Cerritos-Garcia*[1], Joshua Miranda[1]; [1]Michigan State University **(53)** **NCWSS**

POSTER SECTION
Integrated Weed Management and Cover Crops

‡ **Impact of Cereal Rye Biomass and Postapplication Rainfall on Waterhemp Control with Soil-Residual Herbicides.** Sophia Bez Ribeiro*[1], Sabeel Abuhakmeh[1], Ahmadreza Mobli[1], Rodrigo Werle[1]; [1]University of Wisconsin **(54)** **NCWSS**

‡ **The Effectiveness of Pre-Emergence Herbicides with a Cover Crop for Weed Control in Corn.** Morgan Ourada*[1], Joaquin Enrria[1], Joey Rains[1], Anita Dille[1]; [1]Kansas State University **(55)** **NCWSS**

Palmer Amaranth Control with Hairy Vetch and Herbicides in Quizalofop-Resistant Sorghum. Sai Suvidh Maddela*[1], Stevan Knezevic[1], Milos Zaric[1], Amit J. Jhala[1]; [1]University of Nebraska Lincoln **(56)** **NCWSS**

† **Influence of Cereal Rye Biomass on Postemergence Spray Coverage Interception and Control of *Amaranthus tuberculatus*.** Livia Venturi*[1], Guilherme Chudzik[1], Ryan DeWerff[1], Ahmadreza Mobli[1], Nikola Arsenijevic[1], Rodrigo Werle[1]; [1]University of Wisconsin-Madison **(57)** **NCWSS**

† **Effects of Seeding Rate and Row Spacing on Weed Pressure and Economic Outcomes in Organic Corn (*Zea mays*) Production Systems.** Michael Ahiador*[1], Racquel Gorden[1], Moshen Shahrokhi[1], Lalit Pun Magar[1], Mercy

Odemba[1], Osler Ortez[1], Alyssa Essman[1], Eric Richer[1], Eugene Law[1]; [1]The Ohio State University **(58)** **NCWSS**

Cereal Rye Biomass Influences Emergence Dynamics of Common Wisconsin Summer Annual Weeds. Guilherme Chudzik*[1], Jose Jr Nunes[1], Sarah Kezar[1], Ryan DeWerff[1], Rodrigo Werle[1]; [1]University of Wisconsin-Madison **(59)** **NCWSS**

† **Cultural and Physical Seed Reduction Strategies for Managing Palmer amaranth Seed Production.** Adam Brown*[1], Amit Jhala[1], Milos Zaric[1]; [1]University of Nebraska-Lincoln **(60)** **NCWSS**

† **Effect of row spacing and overlapping residual herbicide programs on control and seed production of Palmer amaranth (*Amaranthus palmeri*) and waterhemp (*Amaranthus tuberculatus*) in irrigated soybean.** Ankit Yadav*[1], Kevin Bradley[2], Aaron Hager[3], Rodrigo Werle[4], Wesley Everman[5], Debalin Sarangi[6], Amit Jhala[1]; [1]University of Nebraska-Lincoln, [2]University of Missouri, [3]University of Illinois Urbana-Champaign, [4]University of Wisconsin-Madison, [5]Iowa State University, [6]University of Minnesota **(61)** **NCWSS**

† **Modeling Leaching Potential of Variable Rate PRE Flumioxazin and Imazapic Applications Based on Cover Crop Biomass Accumulation.** Avi Goldsmith*[1], Manuel Camacho[2], Ramon Leon[1]; [1]North Carolina State University, [2]University of Costa Rica **(62)** **NEWSS**

† **Impact of Soybean Preemergence Herbicides on Fall Establishment of Alternative Cover Crops.** Breawna Smith*[1], Ryan DeWerff[1], Guilherme Chudzik[1], Anastasia Kurth[1], Will Fulwider[1], Dan Smith[1], Sam Bibby[1], Rodrigo Werle[1]; [1]University of Wisconsin Madison **(63)** **NCWSS**

Community Composition, Not Diversity, Affect Weed Biomass in a Perennial Forage System. Allison Sakalosky*[1], Jason Kaye[1], Guojie Wang[1], Carolyn Lowry[1]; [1]Penn State University **(64)** **NEWSS**

† **Cereal Cover Crop Termination Time Influences Weed Control and Yield in Truvera Sugarbeet.** Michael R. Dodde*[1], Brian J. Stiles II[1], Christy L. Sprague[1]; [1]Michigan State University **(65)** **NCWSS**

‡ **Weed Management And Residual Herbicide Optimization In Wheat-Soybean Relay Intercropping Systems.** Matheus Luiz de Paula*[1], Sarah Ganske[1], Jason Norsworthy[2], Isaac Gonçalves[1], Mariana de Oliveira Mota[1], Mateo Kokic[1], Isadora

Saldanha Balbinot[1], Igor Rezende Lima[1]; [1]Kansas State University, [2]University of Arkansas **(66)** **NCWSS**

† **Innovative Cropping Systems for Managing Palmer amaranth (*Amaranthus palmeri*), Arthropods, Diseases and Soil Health in the Central US Great Plains.** Malemphane Mokoqola*[1], Amit Jhala[1]; [1]University of Nebraska-lincoln **(67)** **NCWSS**

Triticale Cover Crop Termination with Herbicide Programs Containing Epyrifenacil. Isaac Goncalves*[1], Sarah Ganske[1], Matheus Luiz De Paula[1], Mateo Kokic[1], Pat Clay[2], Garrison Gundy[2]; [1]Kansas State University, [2]Valent U.S.A., LLC **(68)** **NCWSS**

† **Evaluation of Inter-planting Soybeans for Early Season Weed Control.** Zachary Ury*[1], Kevin Bradley[1]; [1]University of Missouri **(69)** **NCWSS**

† **Comparison of Conventional and Alternative Weed Management Strategies in Soybean.** William Tice*[1], Kevin Bradley[1]; [1]University of Missouri **(70)** **NCWSS**

† **Controlling Waterhemp (*Amaranthus tuberculatus*) Using Novel Cover Crop, Herbicide, and Tillage Management Strategies in Soybeans.** Grace Milligan*[1], Eric Miller[1], Eric Brevik[1,2], Amir Sadeghpour[1], Karla Gage[1,3]; [1]School of Agricultural Sciences, [2]School of Earth Systems and Sustainability, [3]School of Biological Sciences **(71)** **NCWSS**

† **Effect of Spring-Planted Cover Crop Termination Timing and Herbicides on Weed Control in Corn.** Matthew Vredenburg*[1], FNU Muskan[1], David Karki[1], Peter Sexton[1], Eric Jones[1], Sachin Dhanda[1]; [1]South Dakota State University **(72)** **NCWSS**

† **Integrating Cover Crop Mixes and Residual Herbicides for Weed Control Before Late-Planted Corn.** Joaquin L. Enrria*[1], Josefina Lacasa[1], Gaurav Jha[1], J. Anita Dille[1]; [1]Kansas State University **(73)** **NCWSS**

† **Utilizing Multispectral Imagery to Evaluate Cover Crop Growth and Weed Suppression.** Steven Tri*[1], Estefania Polli[1], Fernando Marcos[1], Rocco D'Antico[1], Ethan Easter[1], Caroline Backes[1], Tunde Akanbi[1], Ithhiphonh Macvilay[1], Damian Franzenburg[1], Mark Licht[1], Wesley Everman[1]; [1]Iowa State University **(74)** **NCWSS**

Can Delayed Cover Crop Termination and Rolling Improve Weed Suppression Compared to Winter Fallow?. Michael

Flessner*[1], Mark VanGessel[2], John Wallace[3], Kurt Vollmer[4]; [1]Virginia Tech, [2]University of Delaware, [3]The Pennsylvania State University, [4]University of Maryland **(75)** **NEWSS**

Can yield zone stability maps inform zone-based IWM?. John Wallace*[1], Lilly Sencenbaugh[1], Melanie Kammerer[2]; [1]Penn State University, [2]Goldenrod Analytics LLC **(76)** **NEWSS**

† **Non-Chemical Weed Management Tools Influence In-Season Weed Density and Subsequent Weed Emergence in Soybean.** Preetaman Bajwa*[1], Vipan Kumar[1], Matthew Ryan[1], Antonio DiTommaso[1], Wendong Zhang[1]; [1]Cornell University **(77)** **NEWSS**

† **Investigating Summer Cover Crops for Italian Ryegrass (*Lolium perenne* spp. *multiflorum*) Suppression Following Corn Harvest.** Jackson Alsdorf*[1], Diego Contreras[1], Brock Dean[1], Zachary Taylor[1], Charles Cahoon[1], Wesley Everman[2]; [1]North Carolina State University, [2]Iowa State University **(78)** **NEWSS**

Alfalfa Reduces Herbicide Resistant Pigweed (*Amaranthus* spp) Populations. Mark Renz*[1], Sarah Kezar[1], Milos Viric[1], John Wallace[2], Mark Marsalis[3], Leslie Beck[3]; [1]University of Wisconsin Madison, [2]Penn State University, [3]New Mexico State University **(79)** **NCWSS**

POSTER SECTION
Row Crop Herbicide Management

‡ **Does Stacking Group 15 Herbicides with a Group 14 Herbicide Improve Early Season Residual Waterhemp Control in Soybean?.** Joao Pedro Smaniotto*[1], Daniel Smith[1], Ryan DeWerf[1], Nikola Arsenijevic[1], Ahmadreza Mobli[1], Rodrigo Werle[1]; [1]University of Wisconsin **(80)** **NCWSS**

HiFlex™ Label Expansion Project for Storen®, Acuron® GT, Acuron® Flexi, and Acuron® Brands: Will Provide Increased Flexibility for Building Weed Control Programs. Jose Nunes*[1], Scott Cully[1], Scott Payne[1], Mark Kitt[1]; [1]Syngenta Crop Protection **(81)** **NCWSS**

† **Efficacy of Mesotrione-Based PRE Programs for Early Season Residual Waterhemp Control in Vyconic™ Soybean.** Alice Lazzari*[1], Ryan DeWerff[1], Sabeel Abuhakmeh[1], Rodrigo Werle[1]; [1]UW-Madison **(82)** **NCWSS**

† **Evaluating Two-Way Tank Mixes for Postemergence Control of Herbicide-Resistant Waterhemp (*Amaranthus***

***tuberculatus*) in Corn.** Sabeel Abuhakmeh*[1], Ahmadreza Mobli[1], Rodrigo Werle[1]; [1]University of Wisconsin-Madison **(83) NCWSS**

† **Tiafenacil (Reviton) Based Herbicide Programs for Terminating Enlist Corn in Replant Situation.** Alex Chmielewski*[1], Brock Waggoner[2], Amit Jhala[1]; [1]University of Nebraska-Lincoln, Dept of Agronomy and Horticulture, [2]Helm Ag **(84) NCWSS**

Burcucumber (*Sicyos angulatus*): Control Recommendations in Corn and Soybean. Dwight Lingenfelter*[1]; [1]Penn State University **(85) NEWSS**

‡ **Palmer amaranth (*Amaranthus palmeri*) Control with Burndown or Residual Herbicides in Double-Crop Scenarios.** Brady Hoffman*[1], Marshall Hay[2], J. Anita Dille[1]; [1]Kansas State University, [2]Syngenta **(86) NCWSS**

‡ **Day vs. Night: Comparing the Effect of Herbicide Application Timing on Weed Control.** Katie Bernicky*[1], William Tice[1], Simardeep Singh[1], Kevin Bradley[1]; [1]University of Missouri **(87) NCWSS**

‡ **Two-Way Herbicide Tank-Mix Interactions for Control of Key Broadleaf Weeds.** Vojin Milosevic*[1], Ana Laura Camachos de Oliveira[1], Renata Naves Nascimento[1], Breno Rodrigues[1], Gustavo Fujihara[1], Shrijana Poudel[1], Kasey Schroeder[1], Jeffrey A. Golus[1], Milos Zaric[1]; [1]University of Nebraska Lincoln **(88) NCWSS**

† **Effect of Sequential Application Timing of Glufosinate Following 2,4-D on Weed Control.** Breno Rodrigues*[1], Milos Zaric[1], Ana Laura Camachos de Oliveira[1], Gustavo Fujihara[1], Kasey Schroeder[1], Rasmita Mainali[1], Shrijana Poudel[1], Renata Naves[1], Vojin Milosevic[1], Jeffrey Golus[1]; [1]University of Nebraska-Lincoln, North Platte, Nebraska, USA **(89) NCWSS**

Multiple applications of selected Group 15 herbicides do not adversely affect soybean. Eric Jones*[1], Jill Alms[1], David Vos[1], Diego Contreras[2], Wesley Everman[3], Damian Franzenberg[3], Alex Macvilay[3], Dwight Lingenfelter[4], Mark VanGessel[5], Barbara Scott[5]; [1]South Dakota State University, [2]North Carolina State University, [3]Iowa State University, [4]Pennsylvania State University, [5]University of Delaware **(90) NCWSS**

† **Influence of Application Timing for Dicamba and Glufosinate Applied Alone or in Mixture for Waterhemp (*Amaranthus tuberculatus*) Management.** Hunter Mitchell*[1],

Jill Alms[1], David Vos[1], Sachin Dhanda[1], Eric A.L Jones[1]; [1]South Dakota State University **(91)** **NCWSS**

‡ **Can PPO Herbicides Enhance Glufosinate Efficacy For Amaranthus Control?.** Eduardo Rodrigues de Moraes*[1], Mateo Kokic[1], Sarah Ganske[1], Isaac Gonçalves[1], Mariana de Oliveira Mota[1], Matheus Luiz de Paula[1]; [1]Kansas State University **(92)** **NCWSS**

‡ **Evaluation of Potential Herbicide Programs for Vyconic™ Soybeans: Crop Injury and Weed Control.** Milena Nero*[1], Isaac Goncalves[1], Matheus Luiz de Paula[1], Eduardo Rodrigues de Moraes[1], Mateo Andres Kokic[1], Sumya Binta Belayet[1], Isadora Saldanha Balbinot[1], Mariana de oliveira Mota[1], Igor Rezende Lima[1], Sarah Ganske[1], Yasser Parrey[1]; [1]kansas State University **(93)** **NCWSS**

Evaluating Herbicide Programs for Waterhemp (*Amaranthus tuberculatus*) Control. Sachin Dhanda*[1], FNU Muskan[1], Matthew Vredenburg[1], Eric Jones[1], Mark Bernards[2]; [1]South Dakota State University, [2]Rosen's Inc. **(94)** **NCWSS**

† **Residual Herbicides in Wheat to Reduce *Amaranthus* Pressure Prior to Inter-seeded or Double-Crop Soybean.** Larry "Joey" Rains*[1], Anita Dille[1], Rachel Cott[1], Romulo Lollato[1], Xuan Xu[1]; [1]Kansas State University **(95)** **NCWSS**

† **Linking Weed Control and Species Composition to Yield and Nutritive Value in Newly Seeded Alfalfa.** Mariana de Oliveira Mota*[1], Sarah Ganske[1], Doohong Min[1], Albert Adjesiwor[2], Igor Rezende Lima[1], Isaac Goncalves[1], Isadora Saldanha Balbinot[1], Mateo Kokic[1], Matheus Luiz de Paula[1], Sumya Binta Belayet[1]; [1]Kansas State University, [2]University of Idaho **(96)** **NCWSS**

† **Evaluation of Sequential Herbicide Applications for Weed Control in Corn.** Isadora Saldanha Balbinot*[1], Matheus Luiz de Paula[1], Isaac Goncalves[1], Sarah Ganske[1], Mateo Andres Kokic[1]; [1]Kansas State University **(97)** **NCWSS**

† **Efficacy, Persistence, and Relative Environmental Risks of Acetochlor Alternatives in Corn and Soybean.** Hanna Hekkanen*[1], Navjot Singh[1], Sachin Dhanda[2], Gregg Johnson[1], Debalin Sarangi[1]; [1]University of Minnesota-Twin Cities, Department of Agronomy and Plant Genetics, Saint Paul, MN, USA, [2]South Dakota State University-Department of Agronomy, Horticulture, and Plant Science, Brookings, SD, USA **(98)** **NCWSS**

Enclosa: Expanding the Residual Weed Control Toolbox for Soybean. Lucas Maia*[1], Kelly Backscheider[1], David Simpson[1], Kevin Johnson[1], Kristin Rosenbaum[1], Andrew Blythe[1], Lowell Sandell[1], Travis Keene[1], Claudio Vrisman[1]; [1]Corteva Agriscience **(99) NCWSS**

† **Beyond Herbicide Residues: When does Glufosinate Application Timing and Rate Influence Grain Yield in Glufosinate-Resistant Soybean?.** Anthony L. Perretta*[1], Kevin W. Bradley[2], Thomas R. Butts[1], Alyssa I. Essman[3], Karla L. Gage[4], Aaron G. Hager[5], Joseph T. Ikley[6], K. Badou-Jeremie Kouame[7], Sarah H. Ganske[7], Travis R. Legleiter[8], Eric J. Miller[4], Thomas C. Mueller[9], Jason K. Norsworthy[10], Leonard B. Piveta[1], Samuel R. Revolinski[8], Christy L. Sprague[11], Lawrence E. Steckel[9], Rodrigo Werle[12], Julie M. Young[1], Bryan G. Young[1]; [1]Purdue University, [2]University of Missouri, [3]The Ohio State University, [4]Southern Illinois University, [5]University of Illinois, [6]North Dakota State University, [7]Kansas State University, [8]University of Kentucky, [9]University of Tennessee, [10]University of Arkansas, [11]Michigan State University, [12]University of Wisconsin **(100) NCWSS**

† **Investigating Glufosinate + 2,4-D Interactions to Improve Waterhemp Control.** Caroline Wayhs Backes*[1], Tunde Akanbi[1], Steven Tri[1], Rocco D'Antico[1], Estefania Gomiero Polli[1], Brandon Benschoter[2], Iththiphonh Macvilay[1], Damian Franzenburg[1], Wesley Everman[1]; [1]Iowa State University, [2]Bayer Crop Science **(101) NCWSS**

† **Response of a Fomesafen-Resistant Waterhemp (*Amaranthus tuberculatus*) Population to Foliar Applications of Trifludimoxazin.** Shelby L Gillis*[1], Jessie R Lewis[1], Abigail N Norsworthy[1], Julie M Young[1], Bryan G Young[1]; [1]Purdue University **(102) NCWSS**

† **Winter Wheat Tolerance to HPPD-inhibiting Herbicides.** Yasir Parrey*[1], Sarah Ganske[1], Mohammad Asif[2], PV Vara Prasad[1], Mithila Jugulam[3], Allan Fritz[1]; [1]Kansas State University, [2]Heartland Plant Innovations, [3]Texas A&M AgriLife Research & Extension Center, Beaumont, Texas **(103) NCWSS**

Control of Italian Ryegrass (*Lolium perenne* ssp. *multiflorum*) Utilizing Sequential Spring Burndown Applications. Ramita Badu*[1], Abigail Connor[1], Disha Ande[1], Travis Legleiter[1]; [1]University of Kentucky **(104) NCWSS**

‡ **Evaluating glyphosate, paraquat, and diquat programs for annual ryegrass termination.** Jonathan Hildebrand*[1], Colin

Barclay[1], Anthony Dobbels[1], Alyssa Essman[1]; [1]Ohio State **(105)** **NCWSS**

† **Comparison of Herbicide Programs in 2,4-D Resistant Waterhemp in Michigan.** Lauryn E. Wishowski*[1], Christy L. Sprague[1]; [1]Michigan State University **(106)** **NCWSS**

The effects of variety, herbicide application timing, and herbicide program on annual ryegrass termination. Daniel Doretto*[1], Anthony Dobbels[1], Colin Barclay[1], Alyssa Essman[1]; [1]The Ohio State University **(107)** **NCWSS**

† **Evaluation of Postemergence Herbicides for Control of Glufosinate-Resistant Waterhemp in Kansas.** Sumya Binta Belayet*[1], Sarah Ganske[1], Igor Rezende Lima[1], Yasir Parrey[1], Mateo Andres Kokic[1], Milena Nero[1], Mariana De Oliveira Mota[1], Isadora Saldanha Balbinot[1], Isaac Goncalves[1], Matheus Luiz De Paula[1], Liam Vincent[2], Ingo Meiners[2], Aimone Porri[2]; [1]Kansas State University, [2]BASF Corporation **(108)** **NCWSS**

Stacking PPO Herbicides in Soybean: What to Expect. Mark VanGessel*[1], Dwight Lingenfelter[2], Barbara Scott[1]; [1]University of Delaware, [2]Penn State University **(109)** **NEWSS**

‡ **Improving Grain Sorghum Tolerance to Mesotrione Through Optimization of Fluxofenim Safener and Herbicide Rates.** Brenna Chism*[1], Yasir Parrey[1], Sarah Ganske[1]; [1]Kansas State University **(110)** **NCWSS**

† **Determining Length of Residual Control for Pre-Emergence Herbicides in Iowa.** Rocco D'Antico*[1], Wesley Everman[1], Damian Franzenburg[1], Ithhiphonh Alex Macvilay[1], Estefania Gomiero Polli[1], Tunde Akanbi[1], Caroline Wayhs Backes[1], Steven Tri[1]; [1]Iowa State University **(111)** **NCWSS**

† **Influence of Winter Wheat Residue on Preemergence Herbicide Programs Containing Diflufenican in Soybeans.** Madison Hackstadt*[1], Kaitlin Creager[1], Eric Miller[1], Brent Mansfield[2], Karla Gage[1]; [1]Southern Illinois University, Carbondale, [2]Bayer Crop Science **(112)** **NCWSS**

Fenclorim Seed Treatment Safening of Pyroxasulfone Across Wheat Varieties. Adam Aberle*[1], Ryan Bryant[1], Ryan Henry[1], Nanda Kumar[1], Cody Gray[1]; [1]UPL-Ltd **(113)** **NCWSS**

A Multistate Comparison of Glufosinate Formulation. Glenn Nice*[1], Oluseyi Ajani[2], Colin Barclay[3], Kevin Bradley[4], Matheus Luiz de Paula[5], Ryan DeWerff[6], Alyssa Essman[3], Karla Gage[7], Sarah Ganske[5], Aaron Hager[8], Jeremie Kouame[5], Travis Legleiter[9], Eric J Miller[7], Thomas C Mueller[10], Jason K

Norsworthy[2], Simardeep Singh[4], Christy Sprague[11], Larry Steckel[10], Rodrigo Werle[6], Bryan G Young[12], Caleb Wepprecht[8], Jesse Yount[4], Joseph Ikley[1]; [1]North Dakota State University, [2]University of Arkansas, [3]The Ohio State University, [4]University of Missouri, [5]Kansas State University, [6]University of Wisconsin - Madison, [7]Southern Illinois University, [8]University of Illinois, [9]University of Kentuckey, [10]University of Tennessee, [11]Michigan State University, [12]Purdue University **(256)**

POSTER SECTION
Weed Biology and Ecology

Germination Responses of Wisconsin Waterhemp (*Amaranthus tuberculatus*) Populations to Environmental Conditions. Ahmadreza Mobli*[1], Rodrigo Werle[1]; [1]University of Wisconsin- Madison **(114)** **NCWSS**

† **The Effect of Simulated Soybean Chaff Lines on Weed Seed Survival and Germination.** Amber Emmons*[1], Daniel Doretto[1], Mercy Odemba[1], Ram Yadav[1], Alssa Essman[1], Eugene Law[1]; [1]The Ohio State University **(115)** **NCWSS**

Advancing Soil Seedbank Characterization with Deep Learning-Based Weed Seed Detection and Identification. Emmanuel G Cooper*[1], Tianzhang Zhao[1], Julie M Young[1], Jian Jin[1], Bryan G Young[1], Thomas R Butts[1]; [1]Purdue University **(116)** **NCWSS**

† **Evaluation of Desiccants for Inducing Waterhemp (*Amaranthus tuberculatus*) Seed Shatter.** Rebecca Stup*[1], Rodrigo Werle[1], Milos Viric[1], Sarah Kezar[1]; [1]University of Wisconsin-Madison **(117)** **NCWSS**

‡ **Friend or Foe? What We Know about Chinese Fountain Grass in Missouri.** Ella Goldinger*[1], Jesse Yount[1], Simardeep Singh[1], Kevin Bradley[1]; [1]University of Missouri **(118)** **NCWSS**

Soil Microbiome Assembly by *Sorghum halepense* (Johnsongrass): Implications for Plant Performance and Invasion Success. Connor Purvis*[1], Chris Blackwood[1], Erin Burns[1]; [1]Michigan State University **(119)** **NCWSS**

Leveraging Waterhemp (*Amaranthus tuberculatus*) Emergence Timing to Enhance Management in Soybean. Mercy Odemba*[1], Mike Grimes[1], Kyle Ohanian[1], Eugene Law[1]; [1]The Ohio State University **(120)** **NCWSS**

† **Impact of Cropping-System Intensification on Germinable Weed Seedbanks Across U.S. Corn, Soybean, and Cotton Production Systems.** Atong Akoi Akom*[1], Taylor Lambert[1], Anita Dille[1], Augustine Obour[1], Brian Olson[1], Dorivar Ruiz Diaz[1], Dylan Williams[2], Jeremie Kouame[1]; [1]Kansas State University, [2]Mississippi State University **(121)** **NCWSS**

‡ **Determining Emergence Periodicity of Major Agronomic Weeds in Ohio.** Michael Grimes*[1], Daniel Doretto[1], Amber Emmons[1], Miriam Styer[1], Mercy Odemba[1], Ram Yadav[1], Eugene Law[1]; [1]The Ohio State University **(122)** **NCWSS**

Investigating Control options for Field horsetail (*Equisetum arvense* L.). George Oganda[1], Dr. Reid Smeda*[1], Caden O'Connor[1], Lidia Myers[1]; [1]University of Missouri- Columbia **(123)** **NCWSS**

‡ **Quantifying Response of Plant Communities to Landscape-Scale Farm Management Practices at Grace Drake Agricultural Laboratory (GDAL).** Kyle Ohanian*[1], Mercy Odemba[1], Michael Grimes[1], Daniel Doretto[1], Eugene Law[1]; [1]Ohio State University **(124)** **NCWSS**

† **Emergence Pattern and Comparative Growth of Waterhemp and Palmer Amaranth Biotypes with or without Competition with Soybean.** Tunde Akanbi*[1], Estefania Gomiero Polli[1], Rocco D'Antico[1], Steven Tri[1], Wesley Everman[1]; [1]Iowa State University **(125)** **NCWSS**

† **Competitive Interactions Between Hemp (*Cannabis sativa*) Populations and Rotational Crops.** Kaitlin E. Creager*[1], Eric J. Miller[1], Jose Franco Da Cunha Leme Filho[1], David J. Gibson[1], Karla L. Gage[1]; [1]Southern Illinois University-Carbondale **(126)** **NCWSS**

† **Varietal Differences in Competitive Effects of Barley (*Hordeum vulgare*) on Palmer Amaranth (*Amaranthus palmeri*) Seedlings.** Eduardo Lago*[1], Karla Gage[1]; [1]Southern Illinois University **(127)** **NCWSS**

† **Investigating Germination Ecology of Bosc's Mille Graines for Weed Management in Warm-Season Turfgrasses.** Venkateswar Reddy Yelkur*[1], Navdeep Godara[1]; [1]North Carolina State University **(128)** **NEWSS**

Responses of 10 Common Weed Species to Waterlogging Duration. Naomi Graseck*[1], Jinwook Kim[1], Caroline Marschner[1], Antonio DiTommaso[1]; [1]Department of Soil and Crop Sciences, Cornell University **(129)** **NEWSS**

† **Agrivoltaic system effects on weed community composition and management vary in response to seasonal abiotic conditions.** Dana Russell*[1], Jinwook Kim[1], Caroline Marschner[1], Naomi Graseck[1], Scott Morris[1], Antonio DiTommaso[1]; [1]Department of Soil and Crop Sciences, Cornell University **(130)** **NEWSS**

† **Macroevolutionary Patterns of Competition Response and Plasticity in *Amaranthus*.** Fay Siringoringo*[1], Katherine Waselkov[2], Julia Kreiner[3], Jeff Maughan[4], Patrick Tranel[5]; [1]Graduate Research Assistant, University of Illinois Urbana-Champaign, [2]Associate Professor, California State University, Fresno, [3]Assistant Professor, University of Chicago, [4]Professor, Brigham Young University, [5]Professor, University of Illinois Urbana-Champaign **(131)** **NCWSS**

† **Emergence, Growth, and Reproduction of Waterhemp (*Amaranthus tuberculatus*) Populations from Six U.S. States under New York Conditions.** Midhat Tugoo*[1], Vipan Kumar[1], Antonio (Toni) DiTommaso[1]; [1]Cornell University **(132)** **NEWSS**

† **Abundance of Non-Structural Carbohydrate in *Amaranthus* spp. that Could Influence Weed Regrowth.** Anna R. Phillips*[1], Jeffery J. Volenec[1], Mayara Rocha[1], Julie M. Young[1], Morgan E. Furze[1], Bryan G. Young[1]; [1]Purdue University **(133)** **NCWSS**

† **Shattercane (*Sorghum bicolor* ssp. *drummondii*) Emergence Patterns and Their Relevance to Infestations in Corn.** Lidia K. Myers*[1], Caden O'Connor[1], George Oganda[1], Reid J. Smeda[1]; [1]University of Missouri **(134)** **NCWSS**

† **Goosegrass (*Eleusine indica*) Emergence Patterns and Fecundity.** Caden O'Connor*[1], Reid J. Smeda[1], Lidia K Myers[1], George Oganda[1]; [1]University of Missouri **(135)** **NCWSS**

POSTER SECTION
Weed Genetics and Herbicide Physiology

‡ **Emerging Johnsongrass Infestations in Wisconsin: Monitoring for Herbicide Resistance.** Antonio de Lucena*[1], Ahmadreza Mobli[1], Sabeel Abuhakmeh[1], Josh Kamps[1], Daniel Smith[1], Rodrigo Werle[1]; [1]University of Wisconsin-Madison **(136)** **NCWSS**

† **Unraveling Vernalization Responses in Spring and Winter Annual Italian Ryegrass (*Lolium perenne* ssp. *multiflorum*) Using RNA Sequencing.** Disha Ande*[1], Samuel Revolinski[1], Travis Legleiter[1]; [1]University of Kentucky **(137)** **NCWSS**

‡ **Advancing Computer Vision Pipelines for High-Throughput Weed Phenotyping.** Jason Yang*[1], Lalit Magar[1], Alyssa Essman[1], Ram Yadav[1], Hari Subramoni[1], Eugene Law[1]; [1]Ohio State University **(138)** **NCWSS**

† **Computer Vision-based Herbicide Resistance Screening in Waterhemp (*Amaranthus tuberculatus*).** Lalit Pun Magar*[1], Jason Yang[2], Daniel Doretto[1], Matthew Thompson[3], Alyssa Essman[1], Ram Yadav[1], Sami Khanal[4], Hari Subramoni[2], Eugene Law[1]; [1]Department of Horticulture and Crop Science, The Ohio State University, [2]Department of Computer Science and Engineering, The Ohio State University, [3]Imageomics Institute, The Ohio State University, [4]Department of Food, Agricultural, and Biological Engineering, The Ohio State University **(139)** **NCWSS**

† **Screening for Herbicide Resistance in Kochia (*Bassia scoparia*) Populations from South Dakota.** FNU Muskan*[1], Matthew Vredenburg[1], Eric Jones[1], Sachin Dhanda[1]; [1]South Dakota State University **(140)** **NCWSS**

† **Pooled amplicon sequencing for the simultaneous detection of multiple target-site resistance mechanisms.** Yeong Shin*[1], Sara Alvarez Rodriguez[1], Michael Ozolins[1], Eric Patterson[1]; [1]Michigan State University **(141)** **NCWSS**

† **Quantifying the Biochemical Interactions Between HPPD- and PSII-Inhibitors.** Abigail N. Norsworthy*[1], Grant D. Isaacs[1], Joshua R. Widhalm[1], Thomas R. Butts[1], Bryan G. Young[1]; [1]Purdue University **(142)** **NCWSS**

† **Developing Hydroponic Screening Methods to Characterize Crop Sensitivity to Soil-Applied Herbicides.** Emma J. Lagerhausen*[1], Julie M. Young[1], Bryan G. Young[1]; [1]Purdue University **(143)** **NCWSS**

† **Inheritance of Glufosinate-Ammonium Resistance in a Waterhemp (*Amaranthus tuberculatus*) Population from Illinois.** Cristiana Bernardi Rankrape*[1], Eduardo Lago[1], Isabel Werle Noe[2], Patrick Tranel[2], Karla Gage[1]; [1]Southern Illinois University, [2]University of Illinois Urbana-Champaign **(144)** **NCWSS**

Confirmation and Characterization of Paraquat-Resistant Horseweed (*Erigeron canadensis*) in New Jersey Highbush Blueberry. Carrie Mansue[1], Beth Ferguson[1], Caio Brunharo[2], Adrian Veron[2], Lynn Sosnoskie[3], Thierry Besancon*[1]; [1]Rutgers University, [2]Penn State University, [3]Cornell AgriTech **(145)** **NEWSS**

† **Mechanisms of Auxinic Herbicide Resistance in Waterhemp (*Amaranthus tuberculatus*).** Adebisi Adeleke*[1], George Walker[1], Jerry Cohen[1], Michael Ozolins[2], Eric Patterson[2], Navjot Singh[1], Tom Peters[1], Debalin Sarangi[1]; [1]University of Minnesota, [2]Michigan State University **(146)** **NCWSS**

‡ **Environmental Impacts on 2,4-D Metabolism and Efficacy Across Diverse Midwestern Waterhemp (*Amaranthus tuberculatus*) Populations.** Emma Kuhl*[1], Michael Ozolins[1], Sara Alvarez Rodriguez[1], Eric Patterson[1]; [1]Michigan State University **(147)** **NCWSS**

Screening for herbicide resistance in Ohio waterhemp populations. Mohammad Vaheed*[1], Collin Barclay[1], Daniel Doretto[1], Alyssa Essman[1]; [1]The Ohio State University **(148)** **NCWSS**

† **AmaranthusDB: An Integrated Genomic Resource for Comparative Genomics in Amaranthus.** Ramandeep Kaur*[1], Ankush Sharma[2], Patrick Tranel[1]; [1]University of Illinois Urbana-Champaign, [2]University of Georgia **(149)** **NCWSS**

Bridging Spectral Signatures and Multi-Omics to Advance Understanding of Molecular Mechanisms and Plant Responses to Herbicides. Akanksha Singh*[1], Amanda Pendleton[1], Julie M. Young[1], Sungchan Oh[1], Kangyu Ji[1], Mearaj A. Shaikh[1], Yang Yang[1], Jian Jin[1], Joshua R. Widhalm[1], Bryan G. Young[1]; [1]Purdue University **(150)** **NCWSS**

TUESDAY MORNING DECEMBER 8

General Session

LOCATION: Franklin ABCD
TIME: 10:00 AM - 11:50 AM EST
CHAIR: Fritz Koppatschek
ABG Ag Services
Kurt Vollmer
University of Maryland

***SPEAKER**

10:00 AM **Welcome to the Joint NCWSS/NEWSS Meeting** Fritz Koppatschek, ABG AG Services, Toronto, SD

10:05 AM **Keynote address: From Discovery to Delivery: USDA's Extramural Research Investments.** Dr. Jaye Hamby, Director of USDA National Institute of Food and Agriculture Washington, DC

10:35 AM **NEWSS Presidential Address** Dr Kate Venner BASF, Raleigh, NC

10:50 AM **NCWSS Presidential Address.** Brett Miller Syngenta Crop Protection, Ellston, IA

11:05 AM **Washington, D.C., Science Policy Update.** Lee Van Wychen*; Weed Science Society of America, Alexandria, VA

11:30 AM **NCWSS Finance Update.** Eric Spandl, Treasure North Central Weed Science Society

11:35 AM **Remembering Members and Friends.** Chad Lammers; Midwest Research Inc, York, NE
Maria Gannett; University of Massachusetts

11:45 AM **Program Announcements.** Fritz Koppatschek, ABG AG Services, Toronto, SD

11:50 AM **Adjourn**

TUESDAY AFTERNOON DECEMBER 8

Student Luncheon and Business Meeting

LOCATION: Taft AB
TIME: 12:00 PM - 1:15 PM
CHAIRS: Abigail Norsworthy
Purdue University
Jacob Felsman
Michigan State University
Laurel Wellman
Penn State University
Jackson Alsdorf
NC State University

12:00 PM **Student Luncheon**
Sponsored by Corteva Agriscience – open to all graduate and undergraduate students

TUESDAY AFTERNOON DECEMBER 8

NCWSS Student Contest Papers – IWM

LOCATION: Franklin C
TIME: 1:30 PM – 5:15 PM EST
CHAIRS: Sachin Dhanda
South Dakota State University
Mark Bernards
Rosens, Inc.

***SPEAKER † GRADUATE CONTEST**

1:30 PM † **Optimizing Cover Crop Integration for Weed Management in Bell Pepper Production.** Miriam Styer*[1], Ramawatar Yadav[1], Newman Teye-Doku[1], Andrea Velez Matute[1]; [1]The Ohio State University **(151)**

1:45 PM † **Optimizing Cover Crop Termination for Soil Moisture and Weed Suppression.** Sithin Mathew*[1], Vasudha Sharma[1], Seth Naeve[1], Aaron Lorenz[1], Debalin Sarangi[1]; [1]University of Minnesota **(152)**

2:00 PM † **Effects of Cover Crops and Micro-Encapsulated Formulation on Acetochlor Runoff and Surface Water Contamination.** Hanna Hekkanen*[1], Navjot Singh[1], Jeffrey Vetsch[2], Gregg Johnson[1], Sachin Dhanda[3], Debalin Sarangi[1]; [1]University of Minnesota-Twin Cities, Department of Agronomy and Plant Genetics, Saint Paul, MN, USA, [2]University of Minnesota, Southern Research and Outreach Center, Waseca, MN, USA, [3]South Dakota State University, Department of Agronomy, Horticulture, and Plant Science, Brookings, SD, USA **(153)**

2:15 PM † **Responses of Waterhemp (*Amaranthus tuberculatus*) and Common Purslane (*Portulaca oleracea*) to Cereal Rye Cover Crop Biomass in Sweet Corn.** Newman Teye-Doku*[1], Ramawatar Yadav[1], Andrea Velez Matute[1], Miriam Styer[1]; [1]The Ohio State University **(154)**

2:30 PM † **Optimizing Cover Crop Termination Timing to Manage Waterhemp and Minimize Shade Avoidance in Soybean.** Steven Tri*[1], Estefania Polli[1], Rocco D'Antico[1], Ethan Easter[1], Caroline Backes[1], Tunde Akanbi[1], Iththiphonh Macvilay[1], Damian Franzenburg[1], Mark Licht[1], Wesley Everman[1]; [1]Iowa State University **(155)**

2:45 PM † **Carryover Potential and Sensitivity of Fall-Planted Cover Crop Species to Preemergence Applications of Diflufenican and Mesotrione.** Estevan G. Cason*[1], Alex R. Mueth[2], Leonard B. Piveta[1], Julie M. Young[1], Thomas R. Butts[1], Bryan G. Young[1]; [1]Purdue University, [2]Syngenta **(156)**

3:00 PM *Break*

3:15 PM † **Effects of Rye Cover Crop, Residual Herbicides, and MSO Use on Palmer amaranth (*Amaranthus palmeri*) Control in Soybean.** Joaquin L Enrria*[1], Josefina Lacasa[1], Gaurav Jha[1], J. Anita Dille[1]; [1]Kansas State University **(157)**

3:30 PM † **Building a Weed Management System: Assessing the Role of Residual Herbicides, Cereal Rye, Soybean Planting Date, and Targeted Herbicide Applications.** Daniel Q. Zhu*[1], Kamryn R. Frost[1], Emmanuel G. Cooper[1], Maria C.C.R

Souza[1], Leonard B. Piveta[1], Bryan G. Young[1], Thomas R. Butts[1]; [1]Purdue University **(158)**

3:45 PM † **Integrating Spring-Planted Cover Crops and Row Spacing with Herbicides for Weed Control in Soybean.** FNU Muskan*[1], Matthew Vredenburg[1], David Karki[1], Peter Sexton[1], Eric Jones[1], Sachin Dhanda[1]; [1]South Dakota State University **(159)**

4:00 PM † **Planting Date Effects on Weed Suppression in Dry Bean Across Three Growing Seasons.** Jacob H. Felsman*[1], Brian J. Stiles II[1], Christy L. Sprague[1]; [1]Michigan State University **(160)**

4:15 PM † **Influence of Row Width and Canopy Architecture on Weed Suppression in Winter Wheat.** Lauryn E. Wishowski*[1], Christy L. Sprague[1]; [1]Michigan State University **(161)**

4:30 PM † **Influence of mulch types and planting density on weed control and yield in transplanted edamame in a raised-bed system.** Ankit Yadav*[1], Sam Wortman[1], Amit Jhala[1]; [1]University of Nebraska-Lincoln **(162)**

4:45 PM † **Effects of Cereal Rye Fall Planting Date, Seeding Rate, Variety, and Termination Time on Spring Biomass Accumulation and Implications for Soybean Planting Green in Wisconsin.** Livia Venturi*[1], Guilherme Chudzik[1], Ryan DeWerff[1], Rodrigo Werle[1]; [1]University of Wisconsin-Madison **(163)**

5:00 PM † **Terminating Cereal Rye After Soybean Planting: When Should Residual Herbicides Be Applied?** Guilherme Chudzik*[1], Jose Jr Nunes[1], Ryan DeWerff[1], Karla Gage[2], Kevin Bradley[3], Larry Steckel[4], Jason K Norsworthy[5], Joe Ikley[6], Sarah Lancaster[7], Travis Legleiter[8], Christy Sprague[9], Alyssa Essman[10], Tommy Butts[11], Bryan G Young[11], Rodrigo Werle[1]; [1]University of Wisconsin-Madison, [2]Southern Illinois University, [3]University of Missouri, [4]University of Tennessee, [5]University of Arkansas, [6]North Dakota State University, [7]Kansas State University, [8]University of Kentucky, [9]Michigan State University, [10]Ohio State University, [11]Purdue University **(164)**

TUESDAY AFTERNOON DECEMBER 8

NCWSS Student Contest Papers – Weed Genetics & Herbicide Physiology

LOCATION: Franklin A
TIME: 1:30 PM – 3:30 PM EST
CHAIRS: Jesse Haarmann
Syngenta Crop Protection
Ahmadreza Mobli
University of Wisconsin-Madison

***SPEAKER † GRADUATE CONTEST**

1:30 PM † **Mechanism of Glufosinate Resistance in Waterhemp (*Amaranthus tuberculatus*).** Navjot Singh*[1], André Lucas Simões Araujo[2], Franck E. Dayan[2], Todd A. Gaines[2], Roger L. Becker[1], Gregg A. Johnson[1], Lisa Behnken[1], Debalin Sarangi[1]; [1]University of Minnesota, [2]Colorado State University **(165)**

1:45 PM † **Development of a Hydroponic Screening Method to Characterize Corn Hybrid Sensitivity to Amicarbazone and Metribuzin.** Emma J. Lagerhausen*[1], Julie M. Young[1], Ryan Henry[2], Bryan G. Young[1]; [1]Purdue University, [2]UPL NA Inc. **(166)**

2:00 PM † **Genetics Behind Post-Emergence Metribuzin Tolerance in MGIII Soybean.** Abdaal Ali*[1], Zoe Schroeder[1], Muhammad Jan Shamim[1], Victoria Shema[1], Samuel Revolinski[1]; [1]University of Kentucky **(167)**

2:15 PM † **Utility of a Rapid Physiological Assay for Determination of Waterhemp (*Amaranthus tuberculatus*) Resistance to Fomesafen.** Jessie R. Lewis*[1], Julie M. Young[1], Bryan G. Young[1]; [1]Purdue University **(168)**

2:30 PM † **AmaranthusDB: An Integrated Genomic Resource for Comparative Genomics in Amaranthus.** Ramandeep Kaur*[1], Ankush

Sharma[2], Patrick Tranel[1]; [1]University of Illinois Urbana-Champaign, [2]University of Georgia **(169)**

2:45 PM † **Screening for Glufosinate, 2,4-D, and Dicamba Resistance in Palmer Amaranth (*Amaranthus palmeri S. Watson*) in Nebraska.** Gustavo Fujihara*[1], Ana Laura Camachos de Oliveira[1], Breno Rodrigues[1], Rasmita Mainali[1], Kasey Schroeder[1], Amit Jhala[2], Jeffrey A. Golus[1], Milos Zaric[1]; [1]University of Nebraska-Lincoln, North Platte, Nebraska, USA, [2]University of Nebraska-Lincoln, Lincoln, Nebraska, USA **(170)**

3:00 PM † **Confirming Group 15 Herbicide Resistance in an IL Giant Foxtail Population.** Caleb Wepprecht*[1], Aaron Hager[1]; [1]University of Illinois **(171)**

3:15 PM † **Documenting the Extent of Resistance to Very-Long-Chain Fatty Acid Inhibitors in Waterhemp (*Amaranthus tuberculatus*) Populations across Illinois.** Rishabh Singh*[1], Travis Wilke[2], Caleb Wepprecht[3], Logan Miller[4], Isabel Noe[5], Tiffany Jamann[6], Aaron Hager[7], Patrick Tranel[7]; [1]Graduate Research Assistant, University of Illinois Urbana-Champaign, [2]Former Graduate Student, University of Illinois Urbana-Champaign, [3]Senior Research Specialist, university of Illinois Urbana-Champaign, [4]Research Specialist, University of Illinois Urbana-Champaign, [5]Postdoctoral Research Associate, University of Illinois Urbana-Champaign, [6]Associate Professor, University of Illinois Urbana-Champaign, [7]Professor, University of Illinois Urbana-Champaign **(172)**

TUESDAY AFTERNOON DECEMBER 8

NCWSS Student Contest Papers – Herbicide Applications for Weed Management - Session 1

LOCATION: Franklin D

TIME: 1:30 PM – 4:45 PM EST

NCWSS/NEWSS Program

CHAIRS: Ryan Bryant-Schlobohm
UPL
Rodger Farr
Bayer Crop Science

***SPEAKER † GRADUATE CONTEST**

1:30 PM † **Influence of Tank-Mix Partners and Spray Solution pH on Encapsulated Saflufenacil + Pyroxasulfone Injury in Corn.** Caden O'Connor*[1], Reid J Smeda[1], Lidia K Myers[1], George Oganda[1]; [1]University of Missouri **(174)**

1:45 PM † **Investigating the Impact of Glufosinate Tank Mixtures on Soybean Injury and Yield.** Anthony L. Perretta*[1], Kevin W. Bradley[2], Aaron G. Hager[3], Joseph T. Ikley[4], K. Badou-Jeremie Kouame[5], Sarah H. Ganske[5], Thomas C. Mueller[6], Jason K. Norsworthy[7], Christy L. Sprague[8], Lawrence E. Steckel[6], Julie M. Young[1], Bryan G. Young[1]; [1]Purdue University, [2]University of Missouri, [3]University of Illinois, [4]North Dakota State University, [5]Kansas State University, [6]University of Tennessee, [7]University of Arkansas, [8]Michigan State University **(175)**

2:00 PM † **Shattercane (*Sorghum bicolor ssp. drummondii*) Seed Production Following Late-Season Herbicide Applications in Corn.** Lidia K. Myers*[1], Caden O'Connor[1], George Oganda[1], Reid J. Smeda[1]; [1]University of Missouri **(176)**

2:15 PM † **A Greenhouse Evaluation of Jack O'Lantern Pumpkin Tolerance to a Five-Way Herbicide Mixture.** Nicolle Salamanca*[1], Stephen Meyers[1], Jared Ponce[1]; [1]Purdue University **(177)**

2:30 PM † **Weathering the Variability: Diflufenican Efficacy and Waterhemp (*Amaranthus tuberculatus*) Management Across Growing Seasons.** Madison Hackstadt*[1], Kaitlin Creager[1], Eric Miller[1], Brent Mansfield[2], Karla Gage[1]; [1]Southern Illinois University, Carbondale, [2]Bayer Crop Science **(178)**

2:45 PM † **The Efficacy of Corn Premix Programs and Application Timing with Reduced Atrazine Applications.** Alyson Godwin*[1], Colin Barclay[1],

Anthony Dobbels[1], Alex Lindsey[1], Osler Ortez[1], Alyssa Essman[1]; [1]The Ohio State University **(179)**

3:00 PM *Break*

3:15 PM † **Soybean Herbicide Strategies for Management of a Waterhemp (*Amaranthus tuberculatus*) Population Resistant to Glufosinate and Multiple Other Herbicide Groups.** Anna R. Phillips*[1], Jessie R. Lewis[1], Bryan G. Young[1]; [1]Purdue University **(180)**

3:30 PM † **Evaluating Two-Way Tank Mixes for Postemergence Control of Herbicide-Resistant Waterhemp (*Amaranthus tuberculatus*) in Current and Future Soybean Production Systems.** Sabeel Abuhakmeh*[1], Ahmadreza Mobli[1], Alice Lazzari[1], Ryan DeWerff[1], Rodrigo Werle[1]; [1]University of Wisconsin-Madison **(181)**

3:45 PM † **Investigating Asian Copperleaf Control in Corn with Pre- and Post-Emergence Herbicides.** Rocco D'Antico*[1], Meaghan Anderson[1], Wesley Everman[1], Damian Franzenburg[1], Iththiphonh Alex Macvilay[1], Estefania Gomiero Polli[1], Tunde Akanbi[1], Caroline Wayhs Backes[1], Steven Tri[1]; [1]Iowa State University **(182)**

4:00 PM † **Stakeholder Perceptions of Mesotrione Use and Stewardship in Vyconic™ Soybean Technology.** Alice Lazzari*[1], Guilherme Chudzik[1], Rodrigo Werle[1]; [1]UW-Madison **(183)**

4:15 PM † **Comparison of Fall and Spring Applied Pyroxasulfone and Flumioxazin for Waterhemp (*Amaranthus tuberculatus*) Control.** Drew Casavan*[1], Ryan DeWerff[2], Eric Jones[3], Debalin Sarangi[4], Rodrigo Werle[2], Joseph Ikley[1]; [1]North Dakota State University, [2]University of Wisconsin - Madison, [3]South Dakota State University, [4]University of Minnesota **(184)**

4:30 PM † **Post-Emergence Tank-Mixtures for Broadleaf Weed Control in Future Soybean Technologies.** Austin Weippert*[1], Caleb Dalley[1], Brian Jenks[1], Michael Ostlie[1], Joseph Ikley[1]; [1]North Dakota State University **(185)**

TUESDAY AFTERNOON DECEMBER 8

NEWSS Student Contest Papers – Ph.D.

LOCATION: Fairfield
TIME: 1:30 PM – 4:30 PM EST
CHAIRS: Thierry Besançon
Rutgers University

***SPEAKER**

1:30 PM † **Herbicide-Resistant Waterhemp (*Amaranthus tuberculatus*) in New York: Current Status and Alternative Herbicide Options for Management.** Midhat Tugoo*[1], Henrique Scatena[1], Vipan Kumar[1], Jatinder Aulakh[2], Lynn Sosnoskie[1], Antonio (Toni) DiTommaso[1]; [1]Cornell University, [2]Connecticut Agricultural Experiment Station **(186)**

1:45 PM † **Evaluating Spray Coverage for Unmanned Aerial System-Applied Preemergence Herbicides in Edamame (*Glycine max* (L.) Merr.).** Akashdeep Singh Brar*[1], Michael Flessner[2], Bo Zhang[2], Mark Reiter[1], Vijay Singh[1]; [1]Eastern Shore Agricultural Research and Extension Center, Virginia Tech, [2]School of Plant and Environmental Sciences, Virginia Tech **(187)**

2:00 PM † **Height-Dependent Spray Deposition from a Multirotor Drone and Recovery of Quinclorac Activity with a Drift-Reduction Adjuvant.** Samuel Crawford*[1], Shawn Askew*[1], Daewon Koo[2]; [1]Virginia Tech, [2]Moghu USA **(188)**

2:15 PM † **Understanding How Drought and Auxin Herbicides Influence Goosegrass (*Eleusine indica*) Control.** Brock Dean*[1], Charlie Cahoon[1], David Jordan[1], Josh Heitman[1], Erika Bucior[1], Zachary Taylor[1], Jackson Alsdorf[1], Diego Contreras[1]; [1]North Carolina State University **(189)**

2:30 PM † **Integrating Cover Crop Termination Timing and Herbicide Programs for Weed Control in New York Corn.** Preetaman Bajwa*[1], Vipan

Kumar[1], Matthew Ryan[1], Antonio DiTommaso[1], Wendong Zhang[1]; [1]Cornell University **(190)**

2:45 PM † **Rootzone pH Influences the Population Dynamics of Creeping Bentgrass (*Agrostis stolonifera*) in Annual Bluegrass (*Poa annua*) Putting Green.** Emmanuel U. Nwachukwu*[1], James A. Murphy[1], Matthew T. Elmore[1]; [1]Rutgers University **(191)**

3:00 PM *Break*

3:15 PM † **Electrical Weed Control and Cultivation Effects on Weed Communities and Soil Health in Organic Apple Orchards.** Aleah Butler-Jones*[1], Adam Thomas[1], Gregory Peck[1], Kyle Wickings[1], Thierry Besançon[2], Lynn Sosnoskie[1]; [1]Cornell University, [2]Rutgers University **(192)**

3:30 PM † **Planting Green Effects on Environmental Fate of Atrazine.** Noelle Connors*[1], Heather Karsten[1], Heather Preisendanz[1], Lou Saporito[2], John Wallace[1]; [1]Pennsylvania State University, [2]USDA-ARS **(193)**

3:45 PM † **Evaluating Genetic Shifts of Palmer Amaranth (*Amaranthus palmeri*) Populations Across North Carolina Between 2010 and 2022.** Jackson Alsdorf*[1], Acer VanWallendael[1], Brock Dean[1], Diego Contreras[1], Zachary Taylor[1], Charlie Cahoon[1], Wesley Everman[2]; [1]North Carolina State University, [2]Iowa State University **(194)**

4:00 PM † **Clomazone and S-metolachlor Efficacy and Crop Safety in Fall Planted Carinata (*Brassica carinata*).** Avi Goldsmith*[1], Edmilson Almeida[2], Ramon Leon[1]; [1]North Carolina State University, [2]Universidad Federal do Maranhão **(195)**

4:15 PM † **Do cultural practices affect oat-ragweed competition in reduced-tillage organic systems?** Emily McFadden*[1], Abbe Hamilton[1], Frances Buderman[1], Daniela Carrijo[1], John Wallace[1]; [1]Penn State University **(196)**

TUESDAY AFTERNOON DECEMBER 8

NCWSS Student Video Contest

LOCATION: Union
TIME: 4:00 PM – 5:30 PM EST
CHAIRS: Meaghan Anderson
Iowa State University
Eric Yu
University of Minnesota

***SPEAKER † GRADUATE CONTEST ‡ UNDERGRADUATE CONTEST**

4:00 PM † **Trust Your Spray? A Blacklight Self-Test.** Newman Teye-Doku*[1], Ramawatar Yadav[1]; [1]The Ohio State University **(197)**

4:05 PM † **Don't Get Stumped: Strategies for Managing Tree of Heaven (*Ailanthus altissima*).** Miriam Styer*[1], Ramawatar Yadav[1]; [1]The Ohio State University **(198)**

4:10 PM † **"Getting Glufosinate Right" for Better Weed Control.** Sithin Mathew*[1], Debalin Sarangi[1]; [1]University of Minnesota **(199)**

4:15 PM † **Why Does Glufosinate Application Timing Matter?** Sumya Binta Belayet*[1], Sarah Ganske[1], Matheus Luiz De Paula[1], Isaac Goncalves[1]; [1]Kansas State University **(200)**

4:20 PM † **Does Glufosinate Formulation Impact Grass Control?** Mariana de Oliveira Mota*[1], Sarah Ganske[1], Michael W. Marshall[2], Isaac Goncalves[1], Isadora Saldanha Balbinot[1], Mateo Kokic[1], Matheus Luiz de Paula[1], Milena Nero[1]; [1]Kansas State University, [2]Clemson University **(201)**

4:25 PM † **Herbicide Metabolism Matters: Understanding Insecticide-Herbicide Interactions.** Adebisi Adeleke*[1], Debalin Sarangi[1]; [1]University of Minnesota **(202)**

4:30 PM † **Innovative Technologies for Weed Management: Exploring Directed Energy for**

Flora Control. Isadora Saldanha Balbinot*[1], Sarah Ganske[1]; [1]Kansas State University **(203)**

4:35 PM † **From Field to Lab: Understanding the Process to Confirm Herbicide Resistance.** Jessie R. Lewis*[1], Bryan G. Young[1]; [1]Purdue University **(204)**

4:40 PM † **Make Every Drop Count: Understanding Adjuvant Performance.** Abigail N. Norsworthy*[1], Bryan G. Young[1]; [1]Purdue University **(205)**

4:45 PM † **Strip Tillage and Weed Management: Making the System Work For You.** Jacob H. Felsman*[1], Brian J. Stiles II[1], Christy L. Sprague[1]; [1]Michigan State University **(206)**

4:50 PM † **A Guide to Common Grass Weed Identification.** Hanna Hekkanen*[1], Debalin Sarangi[1]; [1]University of Minnesota-Twin Cities, Department of Agronomy and Plant Genetics, Saint Paul, MN, USA **(207)**

4:55 PM ‡ **Understanding Vyconic Soybean Technology and Its Role in Weed Management.** Milena Nero*[1], Isaac Goncalves[1], Matheus Luiz de Paula[1], Mateo Andres Kokic[1], Eduardo Rodrigues de Moraes[1], Igor Rezende Lima[1], Mariana de oliveira Mota[1], Isadora Saldanha Balbinot[1], Sumya Binta Belayet[1], Sarah Ganske[1], Yasir Parrey[1]; [1]kansas State University **(208)**

5:00 PM ‡ **Waterhemp Survivors: Resistance or Something Else?** Mateo Andres Kokic*[1], Sarah Ganske[1], Igor Rezende Lima[1], Milena Nero[1], Sumya Binta Belayet[1], Yasir Parrey[1], Isadora Saldanha Balbinot[1], Matheus Luiz de Paula[1], Liam Vincent[2], Ingo Meiners[2], Aimone Porri[2]; [1]Kansas State University, [2]BASF Corporation **(209)**

5:05 PM ‡ **Postemergence Glufosinate Tank Mixtures: Should Soybean Injury Be a Concern?** Matheus Luiz de Paula*[1], Sarah Ganske[1], Bryan G. Young[2], Anthony Louis Perretta[2], Isaac Gonçalves[1], Mateo Kokic[1], Isadora Saldanha Balbinot[1], Igor Rezende Lima[1], Mariana de Oliveira Mota[1]; [1]Kansas State University, [2]Purdue University **(210)**

5:10 PM † **Spray Deposition as Influenced by Application Method Across Soybean Growth Stages.** Breno

Rodrigues*[1], Milos Zaric[1], Ana Laura Camachos de Oliveira[1], Gustavo Fujihara[1], Jeffrey Golus[1], Kasey Schroeder[1], Rasmita Mainali[1], Shrijana Poudel[1], Renata Naves[1], Vojin Milosevic[1]; [1]University of Nebraska-Lincoln, North Platte, Nebraska, USA **(211)**

5:15 PM † **Cover Crops for Weed Suppression.** Ankit Yadav*[1], Adam Brown[1], Amit Jhala[1]; [1]University of Nebraska-Lincoln **(212)**

5:20 PM † **Making Spray Tip Decisions to Reduce Herbicide Drift.** Adam Brown*[1], Amit Jhala[1], Milos Zaric[1]; [1]University of Nebraska-Lincoln **(213)**

5:25 PM † **Palmer Amaranth Suppression and Nitrogen Credit from Hairy Vetch in Popcorn.** Sai Suvidh Maddela*[1], Amit J. Jhala[1]; [1]University of Nebraska Lincoln **(214)**

TUESDAY AFTERNOON DECEMBER 8

NCWSS Student Contest Papers – Weed Biology & Ecology

LOCATION: Franklin A
TIME: 4:15 PM – 5:30 PM EST
CHAIRS: Eugene Law
The Ohio State University
Sara Kezar
University of Wisconsin-Madison

***SPEAKER † GRADUATE CONTEST**

4:15 PM † **Weed Emergence Dynamics Under Tillage and Herbicide Management in High Organic Matter Soils.** Andrea Velez Matute*[1], Ramawatar Yadav[1], Miriam Styer[1], Newman Teye-Doku[1]; [1]The Ohio State University **(215)**

4:30 PM † **PRE Herbicides Reduce Weed Diversity and Alter Community Composition More Than Cereal Rye Termination Timing in No-Till**

Soybean. Aleksandar Grujic*[1], Erin Haramoto[1], Eugene Law[2], Matthew Allen[1]; [1]University of Kentucky, [2]The Ohio State University **(216)**

4:45 PM † **How is the Distribution of Germinable Weed Seeds in Soil Influenced by Cropping-System Management?** Atong Akoi Akom*[1], Taylor Lambert[1], Anita Dille[1], Augustine Obour[1], Brian Olson[1], Dorivar Ruiz Diaz[1], Dylan Williams[2], Jeremie Kouame[1]; [1]Kansas State University, [2]Mississippi State University **(217)**

5:00 PM † **Weed Community Assembly in Response to Corn Stature and Weed Control Duration[.** Nathan Welch*[1], Erin Burns[1]; [1]Michigan State University **(218)**

5:15 PM † **Root Architecture and Morphology of Palmer Amaranth, Waterhemp, and Common Lambsquarters.** Sai Suvidh Maddela*[1], Amit J. Jhala[1]; [1]University of Nebraska Lincoln **(173)**

WEDNESDAY MORNING DECEMBER 9

POSTER SESSION 2 – NON-STUDENT CONTEST POSTERS

LOCATION: Union A-E
TIME: 7:00 AM - 8:30 AM EST

All presenting authors not in the student poster contest are to be at their posters Wednesday, December 9, 7:00 – 8:30 AM. Posters are listed under Poster Session 1 by section.

WEDNESDAY MORNING DECEMBER 9

NCWSS Student Contest Papers – Equipment & Application Methods

LOCATION: Franklin C
TIME: 8:00 AM – 10:15 AM EST
CHAIRS: Ryan Edwards
WinField United
Jose De Sanctis
Bayer Crop Science

***SPEAKER † GRADUATE CONTEST ‡ UNDERGRADUATE CONTEST**

8:00 AM † **On-Farm Evaluation of Herbicide Application Strategies with See & Spray in Soybean.** Igor Rezende Lima*[1], Sarah Ganske[1], Yasir Parrey[1], Mariana de Oliveira Mota[1], Isadora Saldanha Balbinot[1], Sumya Binta Belayet[1], Mateo Kokic[1], Matheus Luiz de Paula[1], Milena Nero[1], Eduardo Rodrigues de Moraes[1], Isaac Gonçalves[1]; [1]Kansas State University **(219)**

8:15 AM † **Two Technologies, One Target: Electrical Weeding and Spot-Spraying in Orchards.** Abraham Akuoko*[1], Joshua Miranda[1]; [1]Michigan State University **(220)**

8:30 AM † **Italian Ryegrass (*Lolium perenne ssp. multiflorum*) Control Using UAV-Based Herbicide Applications.** Abigail Connor*[1], Travis Legleiter[1]; [1]University of Kentucky **(221)**

8:45 AM † **A New Electric Approach to Redroot Pigweed (*Amaranthus retroflexus*) Control in Carrots.** Josue Cerritos-Garcia*[1], Joshua Miranda[1]; [1]Michigan State University **(222)**

9:00 AM † **Comparison of Solinftec Solix Autonomous Targeted Applications with Conventional Broadcast Applications for Weed Control, Herbicide Volume Savings, and Grain Yield.** Kamryn R. Frost*[1], Daniel Q. Zhu[1], Maria Carolina C.R Souza[1], Emmanuel G. Cooper[1], Leonard B. Piveta[1], Thomas R. Butts[1]; [1]Purdue University **(223)**

9:15 AM † **A UAV-Enabled Decision Support Framework for Predicting Weed Mortality and Guiding Soybean Respray Applications.** Emmanuel G Cooper*[1], Maria CCR Souza[1], Leonard B Piveta[1], Julie M Young[1], Bryan G Young[1], Thomas R Butts[1]; [1]Purdue University **(224)**

9:30 AM *Break*

9:45 AM † **Assessing Nozzle Suitability for Targeted Bioherbicide Spray Systems Applications for Specialty Crops.** Rasmita Mainali*[1], Breno Rodrigues[1], Shrijana Poudel[1], Renata Naves Nascimento[1], Vojin Milosevic[1], Kasey Schroeder[1], Jeff Golus[1], Milos Zaric[1]; [1]University of Nebraska Lincoln **(225)**

10:00 AM † **Dicamba and Glufosinate with Drift-Reducing Agents: Weed Control and Crop Safety.** Ana Laura Camachos de Oliveira*[1], Rasmita Mainali[1], Breno Rodrigues[1], Gustavo Fujihara[1], Vojin Milosevic[1], Renata Naves[1], Shrijana Poudel[1], Kasey Schroeder[1], Jeffrey Golus[1], Milos Zaric[1]; [1]University of Nebraska-Lincoln **(226)**

WEDNESDAY MORNING DECEMBER 9

NCWSS Student Contest Papers – Herbicide Applications for Weed Management – Session 2

LOCATION: Franklin AB
TIME: 8:00 AM – 9:30 AM EST
CHAIRS: Ryan Bryant-Schlobohm
UPL
Rodger Farr
Bayer Crop Science

***SPEAKER † GRADUATE CONTEST**

8:00 AM † **Influence of Temperature, Relative Humidity, and Time of Day on the Efficacy of Glufosinate, 2,4-D, and Their Mixture for Waterhemp Control.** Tunde Akanbi*[1], Estefania Gomiero Polli[1], Rocco D'Antico[1], Steven Tri[1], Caroline

Waybs Backes[1], Ethan Easter[1], Wesley Everman[1]; [1]Iowa State University **(227)**

8:15 AM † **Asian Copperleaf (*Acalypha australis*) Response to Soybean Herbicides.** Caroline Waybs Backes*[1], Meaghan Anderson[1], Tunde Akanbi[1], Steven Tri[1], Rocco[1], Estefania Gomiero Polli[1], Damian Franzenburg[1], Ithhiphonh Macvilay[1], Wesley Everman[1]; [1]Iowa State University **(228)**

8:30 AM † **The Influence of Tillage and Application Timing on Residual Weed Control and Soybean Response from Diflufenican.** Abigail N. Norsworthy*[1], Julie M. Young[1], Bryan G. Young[1]; [1]Purdue University **(229)**

8:45 AM **Impact of fall-applied flumioxazin on Amaranthus control the subsequent growing season.** Paulo Henrique Mendes Nogueira*[1]; [1]University of Illinois Urbana-Champaign **(230)**

9:00 AM **Soybean Response to Mesotrione Across Different Herbicide-Tolerant Cultivars.** Vojin Milosevic*[1], Shrijana Poudel[1], Renata Naves Nascimento[1], Breno Rodrigues[1], Kasey Schroeder[1], Jeffrey A. Golus[1], Milos Zaric[1]; [1]University of Nebraska Lincoln **(231)**

9:15 AM † **Environmental Conditions and Adjuvants Influence Glyphosate Efficacy in Common Lambsquarters (*Chenopodium album*).** Adebisi Adeleke*[1], Michael Ozolins[2], Eric Patterson[2], Tom Peters[1], Jerry Cohen[1], Debalin Sarangi[1]; [1]University of Minnesota, [2]Michigan State University **(232)**

WEDNESDAY MORNING DECEMBER 9

Horticulture, Specialty Crops, Turf and Ornamentals

LOCATION: Franklin D
TIME: 8:45 AM – 11:30 AM EST
CHAIRS: Rohith Vulchi
FMC
Tate Castillo
Bayer Crop Science

***SPEAKER**

8:45 AM **Integrated Energy-Based Weed Control: Preliminary Results from Combined Electric and Laser Treatments in Specialty Crops.** Lynn Sosnoskie*[1], Thierry Besancon[2], Jane Petzoldt[1], Michael Bohrer[1], Mitchell Klicki[1], Valerie Alvarez[3], Fernando Ramirez[3], Miranda Slaven[4]; [1]Cornell University, [2]Rutgers University, [3]Carbon Robotics, [4]University of Western Australia **(233)**

9:00 AM **Breaking the Regrowth Cycle: Electrical Weed Control in New Jersey Highbush Blueberries.** Tong Zhen*[1], Aleah Butler-Jones[2], Luke Mackara[1], Lynn Sosnoskie[2], Thierry Besançon[1]; [1]Rutgers University, [2]Cornell University **(234)**

9:15 AM **Evaluating Bicyclopyrone Tank Mixtures for Weed Control in Fall Broccoli Production.** Kurt Vollmer*[1], Veronica Yurchak[1], Sudeep Mathew[2]; [1]University of Maryland, [2]Syngenta Crop Protection **(235)**

9:30 AM *Break*

9:45 AM **Preemergence Herbicide Timing in Field Nursery Systems.** Anthony Witcher*[1], Sam Marshall[2]; [1]Tennessee State University, [2]North Carolina State University **(236)**

10:00 AM **Evaluating Weed Control and Herbicide Efficiency in Snap Bean using an Ecorobotix Ultra High Precision Sprayer.** Jane Petzoldt*[1], Katerina Lee[2], Robert Charles Cooley[2], Mark VanGessel[3], Thierry Besançon[4], Lynn Sosnoskie[1];

[1]Cornell University, [2]Ecorobotix, [3]University of Delaware, [4]Rutgers University **(237)**

10:15 AM **Does Rolling Improve Early-Season Weed Control in Dry Bulb Onion.** Harlene Hatterman-Valenti*[1], Collin Auwarter[1], Heidi Eslinger[1]; [1]North Dakota State University **(238)**

10:30 AM **Evaluating Laser Weeding for Weed Control, Crop Safety, and Operational Efficiency in Cilantro, Spinach, and Kale.** Thierry Besancon*[1], Luke Mackara[1], Lynn Sosnoskie[2], Valerie Alvarez[3]; [1]Rutgers University, [2]Cornell AgriTech, [3]Carbon Robotics **(239)**

10:45 AM **Relative Herbicide Safety in Selected Vegetable Crops.** Mark VanGessel*[1], Barbara Scott[1]; [1]University of Delaware **(240)**

11:00 AM **Postemergence Herbicides for Perennial Weed Control in Field Grown Peony Cut Flowers.** Joseph Neal*[1], Christopher Harlow[1], Gene Fox[2]; [1]North Carolina State University, [2]NC Cooperative Extension **(241)**

11:15 AM **Optimizing seed treatments and tank mixtures to safen herbicides in green onion.** Matthew Cutulle*[1], Tyler Campbell[1]; [1]Clemson University **(242)**

11:30 AM **Business Meeting – Horticulture, Specialty Crops, Turf and Ornamentals**

WEDNESDAY MORNING DECEMBER 9

NEWSS Student Paper Contest - M.S.

LOCATION: Fairfield
TIME: 9:15 AM – 10:45 AM EST
CHAIR: Thierry Besançon
Rutgers University

***SPEAKER**

9:15 AM † **Response of Field-grown Sweetpotato to Herbicides.** Joe Reamsnyder*[1], Katherine Jennings[1], Kai Goble[1], David Monks[2], Colton Blankenship[3], Michael Kudenov[4], David Jordan[5]; [1]North Carolina State University Department of Horticultural Science, [2]North Carolina State University Extension, [3]Louisiana State University AgCenter, [4]North Carolina State University Department of Electrical and Computer Engineering, [5]North Carolina State University Department of Crop and Soil Sciences **(243)**

9:30 AM † **Postemergence Herbicide Programs for Bosc's Mille Graines Control in St. Augustinegrass and Zoysiagrass Sod Production.** Venkateswar Reddy Yelkur*[1], Navdeep Godara[1], Brooke Heikkila[1], Gram Grant[1]; [1]North Carolina State University **(244)**

9:45 AM † **Planting Green: A Weed and Water Management Tool.** Grant Hoffer*[1], Mark VanGessel[2], Nicholas Basinger[3], Aaron Hager[4], Erin Haramoto[5], Aleksandar Grujic[5], John Lindquist[6], Eugene Law[7], Karla Gage[8], Eric Miller[8], John Wallace[1]; [1]Pennsylvania State University, [2]University of Delaware, [3]University of Georgia, [4]University of Illinois, [5]University of Kentucky, [6]University of Nebraska, [7]The Ohio State University, [8]Southern Illinois University **(245)**

10:00 AM † **Influence of Travel Speed and Path Geometry on Spatial Accuracy of a Machine Vision Sprayer for Annual Bluegrass Control.** Aman Jakhar*[1], Suzannah Hale[1], Samuel Crawford[1], Shawn Askew[1]; [1]Virginia Tech **(246)**

10:15 AM † **Determining Weed Density Thresholds for Machine Vision-Guided Targeted Herbicide Applications in Bermudagrass.** Brooke Heikkila*[1], Navdeep Godara[1], Juan Romero[2], Venkateswar Reddy Yelkur[1], Gram Grant[1]; [1]North Carolina State University, [2]Ecorobotix **(247)**

10:30 AM ‡ **Targeted vs. Broadcast Application: Conserving Herbicide with Ecorobotix ARA Sprayer in Cabbage.** Marian Hollenbeck*[1], Robert Cooley[2], Katerina Lee[2], Luke Mackara[1], Beth Ferguson[1], Lynn Sosnoskie[3], Thierry Besançon[1]; [1]Rutgers University, [2]Ecorobotix, [3]Cornell **(248)**

WEDNESDAY MORNING DECEMBER 9

Herbicide Management: Session 1

LOCATION: Franklin AB
TIME: 9:45 AM – 11:45 AM EST
CHAIR: Ryan Bryant-Schlobohm
UPL
Rodger Farr
Bayer Crop Science

***SPEAKER**

9:45 AM **Endangered Species Act: Evolution from Draft Herbicide Strategy to Today.** Bill Chism*[1]; [1]WSSA **(249)**

10:00 AM **Empera Viragess™ Herbicide, a New Rapidicil Containing Premixture for Burndown and Residual Weed Control.** Sam Noe*[1], Pat Clay[1], Eric Ott[1], Garrison Gundy[1], Chad Smith[1], Nathan Drewitz[1], Matt Griffin[1], Ron Estes[1], Greg Clarke[1]; [1]Valent USA **(250)**

10:15 AM **Convintro™ Herbicide: A New Tool for Managing *Amaranthus* Species in Corn and Soybean.** Katilyn Price*[1], Paramita Deria[1], Carl Coburn[1], Emily Scholting[1]; [1]Bayer Crop Science **(251)**

10:30 AM **Vyconic™ Soybeans: A Flexible Approach to Future Weed Management.** Katilyn Price[1], Carl Coburn*[1], Emily Scholting[1]; [1]Bayer Crop Science **(252)**

10:45 AM **Evaluation of Versile™ Herbicide in Field Corn in the Upper Midwest.** Sarah Striegel-Engen*[1], Katilyn Price[1], Emily Scholting[1]; [1]Bayer Crop Science **(253)**

11:00 AM **Empera® and Empera Viragess™ - Weed Control and Stewardship for Herbicide Formulations Containing Rapidicil®.** Pat Clay*[1], Matt Griffin[1], Sam Noe[1], Eric Ott[1], Garrison Gundy[1], Chad Smith[1], Nathan Drewitz[1], Ron Estes[1], Greg Clarke[1]; [1]Valent U.S.A. LLC **(254)**

11:15 AM **Novel Fenclorim Seed Treatment Provides Enhanced Safety of Wheat to Pre-emergence Applications of Pyroxasulfone.** Ryan Bryant-Schlobohm*[1], Nanda Kumar[1], Jason Norsworthy[2], Ryan Henry[1], Cody Gray[1]; [1]UPL, [2]University of Arkansas Division of Agriculture **(255)**

11:30 AM **Characterizing the Response of Multiple Illinois Waterhemp (*Amaranthus tuberculatus*) Populations to S-metolachlor, Mesotrione, and 2,4-D.** Logan Miller*[1], Aaron Hager[1]; [1]University of Illinois at Urbana Champaign **(257)**

WEDNESDAY MORNING DECEMBER 9

Integrated Weed Management and Cover Crops

LOCATION: Franklin C
TIME: 10:30 AM – 11:45 AM EST
CHAIR: Sachin Dhanda
South Dakota State University
Mark Bernards
Rosens, Inc.

***SPEAKER**

10:30 AM **Weed Management with Perennial Groundcover in Corn.** Erin Haramoto*[1], Hallie Sandeen[1], Kiera Searcy[1]; [1]University of Kentucky **(258)**

10:45 AM **Influence of Tank-mix Partners on Empera® Herbicide for Cover Crop Termination.** Eric Ott*[1], Ron Estes[1], Sam Noe[1], Chad Smith[1], Garrison Gundy[1], Gregory Clarke[1], Nathan Drewitz[1], Pat Clay[1]; [1]Valent USA LLC **(259)**

11:00 AM **Cover Crop Effects on Waterhemp *(Amaranthus tuberculatus*) Population Structure Influence Glufosinate Efficacy.** Laurel Wellman*[1], John Wallace[1]; [1]Penn State **(260)**

11:15 AM **Integrated Weed Management in Truvera Sugarbeet: A Comparison of Tillage Systems.** Michael R. Dodde*[1], Brian J. Stiles II[1], Christy L. Sprague[1]; [1]Michigan State University **(261)**

11:30 AM **Residual Herbicide Activity in Cover Crop Residue: Sprayed Versus Dry Fertilizer Impregnation.** Michael Flessner*[1], Mark VanGessel[2], Kurt Vollmer[3], John Wallace[4]; [1]Virginia Tech, [2]University of Delaware, [3]University of Maryland, [4]The Pennsylvania State University **(262)**

11:45 AM **Business Meeting at 12:00, following Weed Biology and Ecology (Franklin C)**

WEDNESDAY MORNING DECEMBER 9

Invasive Weeds Rangeland, Pasture and Vegetation

LOCATION: Franklin D
TIME: 11:30 AM – 12:00 PM EST
CHAIR: Eric Jones
South Dakota State University

***SPEAKER**

11:30 AM **Group 1 Herbicides Have Shown Little Utility to Manage Established Reed Canarygrass (*Phalaris arundinacea*).** Art Gover*[1], Emily Rojik[1]; [1]Penn State University **(263)**

11:45 AM **Evaluating Soil Carbon and Nitrogen Stocks Following Invasive Woody Plant Control in Forests.** Stefania Cartoni-Casamitjana[1], Mark Renz*[1]; [1]University of Wisconsin Madison **(264)**

12:00 PM **Business Meeting – Invasive Weeds, Rangeland, Pasture and Vegetation**

WEDNESDAY MORNING DECEMBER 9

Weed Biology and Ecology

LOCATION: Franklin C
TIME: 11:45 AM – 12:00 PM EST
CHAIR: Eugene Law
The Ohio State University
Sara Kezar
University of Wisconsin-Madison

***SPEAKER**

11:45 AM **Light Up the Weed Seedbank: A Management Approach Using Photocontrol During Tillage.** Sarah Kezar*[1], Rodrigo Werle[1]; [1]University of Wisconsin-Madison **(265)**

12:00 PM **Business Meeting – Weed Biology and Ecology**

WEDNESDAY NOON DECEMBER 9

Society Awards Luncheon

LOCATION: Delaware ABCD
TIME: 12:05 PM - 1:20 PM

WEDNESDAY AFTERNOON DECEMBER 9

Graduate Student *Symposium* - 30 Years of Weed Science: What Changed, What Worked, and What Comes Next

LOCATION: Franklin AB
TIME: 1:30 PM – 4:05 PM EST
CHAIRS: Abigail Norsworthy
Purdue University
Jacob Felsman
Michigan State University

***SPEAKER**

1:30 PM **30 Years of Weed Science: What Changed, What Worked, and What Comes Next.** Abigail N. Norsworthy*[1], Laurell Wellman[2], Jacob H. Felsman[3], Jackson Alsdorf[4]; [1]Purdue University, [2]Penn State University, [3]Michigan State University, [4]North Carolina State University **(266)**

1:35 PM **Are Traditional Weed Management Recommendations Still Relevant Under Today's Weather Conditions?** Erin Burns*[1]; [1]Michigan State University **(267)**

1:50 PM **Weed Management and Climate Change.** Caroline Marschner*[1], Sharon Bachman[1], Isabella Colucci[1], Sophie Westbrook[2], Antonio DiTommaso[1]; [1]Cornell University, [2]Kansas State University **(268)**

2:05 PM **One Plant at a Time: Ai-Enabled Herbicide Applications in Vegetable Specialty Crops.** Thierry Besancon*[1], Luke Mackara[1], Lynn Sosnoskie[2]; [1]Rutgers University, [2]Cornell AgriTech **(269)**

2:20 PM **Integrated Weed Management Reimagined: Beyond Innovation, Toward Adoption at Scale.** Rodrigo Werle*[1]; [1]University of Wisconsin-Madison **(270)**

2:35 PM *Break*

2:50 PM **Can We Predict Resistance Before It Happens?** Eric Patterson*[1]; [1]Michigan State University **(271)**

3:05 PM **To What Extent Have Herbicide Formulations Improved Over 30 Years?** Cara McCauley*[1]; [1]Corteva Agriscience **(272)**

3:20 PM **Changes in Weed Science From An Extension Lens Over A 30 Year Career.** Aaron Hager*[1]; [1]University of Illinois **(273)**

3:35 PM **Have There Been Substantial Improvements In Adjuvants Over The Last 30 Years?** Jim Reiss*[1]; [1]Chemorse **(274)**

3:50 PM **The Role of Automation in Specialty Crops and Academia.** Lynn M. Sosnoskie*[1]; [1]Cornell University **(275)**

WEDNESDAY AFTERNOON DECEMBER 9

Herbicide Management : Session 2

LOCATION: Franklin C
TIME: 1:30 PM - 3:00 PM EST
CHAIRS: Ryan Bryant-Schlobohm
UPL
Rodger Farr
Bayer Crop Science

***SPEAKER**

1:30 PM **Comparison of Pre-Mix and Tank-Mix Components Containing Epyrifenacil on Droplet Characteristics, Deposition, and Weed Control.** Milos Zaric*[1], Garrison Gundy[2], Pat Clay[2], Nicholas Fleitz[3], Vojin Milosevic[1], Breno Rodrigues[1], Renata Naves[1], Shrijana Poudel[1], Kasey Schroeder[1], Jeffrey A. Golus[1]; [1]University of Nebraska-Lincoln, [2]Valent U.S.A LLC, [3]Pentair-Hypro **(276)**

1:45 PM **Changing the Message: An Analysis of 75 Years of Corn and Soybean Herbicide Advertising.** Kevin Bradley*[1]; [1]University of Missouri **(277)**

2:00 PM **Revisiting the Use of Group 15 Herbicides for Waterhemp (*Amaranthus tuberculatus*) Control in Soybean.** Rodrigo Werle*[1], Guilherme Chudzik[1], Ryan DeWerff[1], Christy Sprague[2], Sarah Ganske[3], Debalin Sarangi[4], Ryan Miller[4], Kevin Bradley[5], Joseph Ikley[6], Alyssa Essman[7], Colin Barclay[7], Amit Jhala[8], Eric Jones[9], Wesley Everman[10]; [1]University of Wisconsin-Madison, [2]Michigan State University, [3]Kansas State University, [4]University of Minnesota, [5]University of Missouri, [6]North Dakota State University, [7]Ohio State University, [8]University of Nebraska-Lincoln, [9]South Dakota State University, [10]Iowa State University **(278)**

2:15 PM **Characterizing herbicide-resistant waterhemp in Iowa.** Wesley Everman*[1], Ithhiphonh Macvilay[1], Tunde Akanbi[1], Carol Wayhs Backes[1], Rocco D'Antico[1]; [1]Iowa State University **(279)**

2:30 PM **Weed Management in Short-Stature Corn: A Multi-State Assessment of Best Management Practices.** Kyle Elizalde*[1], Erin Burns[1]; [1]Michigan State University **(280)**

2:45 PM **Evaluation of crop tolerance with diflufenican in dry bean.** Isabelle Aicklen*[1], Peter Sikkema[1]; [1]University of Guelph **(281)**

3:00 PM **Business Meeting – Herbicide Management**

WEDNESDAY AFTERNOON DECEMBER 9

Weed Genetics and Herbicide Physiology

LOCATION: Marion
TIME: 1:30 PM – 2:30 PM EST
CHAIR: Jesse Haarmann
Syngenta Crop Protection
Ahmadreza Mobli
University of Wisconsin-Madison

***SPEAKER**

1:30 PM **Assessing Cross-Resistance to Group 15 Herbicides in Waterhemp (*Amaranthus tuberculatus*) Using an Agar-Based Assay.** Luma Lorena Loureiro S. Rodrigues*[1], Rodrigo Werle[1]; [1]University of Wisconsin **(282)**

1:45 PM **Integrating Metabolomics and Transcriptomics to Dissect 2,4-D Resistance in Waterhemp (*Amaranthus tuberculatus*).** Michael Ozolins*[1], Emma Kuhl[1], Patrick J. Tranel[2], Erin Hill[1], Kevin Bradley[3], Todd Gaines[4], Eric Patterson[1]; [1]Michigan State University, [2]University of Illinois, [3]University of Missouri, [4]Colorado State University **(283)**

2:00 PM **Geographic Variation in Herbicide Sensitivity of *Sorghum halepense* (Johnsongrass) Biotypes**

Across the United States. Connor Purvis*[1], Michael Ozolins[1], Sarah Robinette[1], Eric Patterson[1], Erin Burns[1]; [1]Michigan State University **(284)**

2:15 PM **Tissue- and Stress-Specific Expression of Cytochrome P450 Monooxygenases in Waterhemp (*Amaranthus tuberculatus*) and Palmer Amaranth (*Amaranthus palmeri*).** Isabel Noe*[1], Alexander Lopez[1], Patrick Tranel[1]; [1]University of Illinois **(285)**

2:30 PM **Business Meeting – Weed Genetics and Herbicide Physiology**

WEDNESDAY AFTERNOON DECEMBER 9

Symposium: Planting Green for Weed Suppression and Ecosystem Services

LOCATION: Franklin D
TIME: 1:30 PM – 3:55 PM EST
CHAIR: Amit Jhala
University of Nebraska Lincoln

***SPEAKER**

1:30 PM **Planting Green for Weed Suppression and Ecosystem Services.** Amit Jhala*[1], Sachin Dhanda*[2], Sophie Westbrook*[3], Sarah Kezar*[4], Kurt Vollmer*[5], John Wallace*[6], Veronica Yurchak*[5]; [1]University of Nebraska-Lincoln, [2]South Dakota State University, [3]Kansas State University, [4]University of Wisconsin-Madison, [5]University of Maryland, [6]Pennsylvania State University **(286)**

1:50 PM **Mechanisms of Weed Suppression Under Planting Green.** Sophie Westbrooke*[1]; [1]Kansas State University **(287)**

2:05 PM **Effect of Planting Green on Seed Rain, Fecundity, and Seedbank Dynamics.** Sachin whDhanda*[1]; [1]South Dakota State University **(288)**

2:20 PM **Challenges and Risks: When Planting Green Can Backfire.** Sarah Kezar*[1]; [1]University of Wisconsin-Madison **(289)**

2:35 PM *Break*

2:50 PM **Effect of Planting Green on Herbicide Fate and Ecosystem Services.** John Wallace*[1]; [1]Penn State University **(290)**

3:10 PM **Spring-seeded Grass Cover Crops in Plasticulture Systems.** Kurt Vollmer*[1]; [1]University of Maryland **(291)**

3:25 PM **Living Mulches in Vegetable Production: Trade-offs, Challenges, and Management Strategies.** Veronica Yurchak*[1]; [1]University of Maryland **(292)**

3:40 PM **Planting Green: Summary and Future Research.** Amit Jhala*[1]; [1]University of Nebraska-Lincoln **(293)**

WEDNESDAY AFTERNOON DECEMBER 9

Extension

LOCATION: Marion
TIME: 2:45 PM – 4:00 PM EST
CHAIR: Meaghan Anderson
Iowa State University
Eric Yu
University of Minnesota

***SPEAKER**

2:45 PM **Addressing Weed Management Challenges in Wisconsin High Oleic Soybean Cropping Systems Through On-Farm Research and Education.** Daniel Smith*[1], Joao Pedro Smaniotto[1], Ryan DeWerff[1], Nikola Arsenijevic[1], Ahmadreza Mobli[1], Rodrigo Werle[1]; [1]University of Wisconsin-Madison **(294)**

3:00 PM **Weed Management Practices and Costs in Commercial Field Nursery Production in North**

Carolina and Tennessee. Sam Marshall*[1], Anthony Witcher[2]; [1]NC State University, [2]Tennessee State University **(295)**

3:15 PM **Can Spray Drones Provide Comparable Weed Control to Ground Boom Equipment in a Full-Season Herbicide Program?** Maria Carolina CR Souza*[1], Emmanuel G Cooper[1], Kamryn R Frost[1], Daniel Q Zhu[1], Leonard B Piveta[1], Julie M Young[1], Bryan G Young[1], Thomas R Butts[1]; [1]Purdue University **(296)**

3:30 PM **Using Field Demonstration Plots to Increase Confidence with Integrated Weed Management.** Josh Kamps*[1]; [1]UW-Madison Division of Extension **(297)**

3:45 PM **Evaluation of Metribuzin in Corn: A North Central Extension Effort.** Eric Jones*[1], Jill Alms[1], David Vos[1], Isabelle Aicklen[2], Kevin Bradley[3], Erin Burns[4], Thomas Butts[5], Leonard Piveta[5], Alyssa Essman[6], Alyson Godwin[6], Wesley Everman[7], Karla Gage[8], Eric Miller[8], Sarah Ganske[9], Isaac Goncalves[9], Aaron Hager[10], Logan Miller[10], Caleb Wepprecht Wepprecht[10], Joseph Ikely[11], Amit Jhala[12], Travis Legleiter[13], Debalin Sarangi[14], Rodrigo Werle[15], Ryan DeWerff[15]; [1]South Dakota State University, [2]University of Guelph, [3]University of Missouri, [4]Michigan State University, [5]Purdue University, [6]Ohio State University, [7]Iowa State University, [8]Southern Illinois University, [9]Kansas State University, [10]University of Illinois, [11]North Dakota State University, [12]University of Nebraska, [13]University of Kentucky, [14]University of Minnesota, [15]University of Wisconsin **(298)**

4:00 PM **Business Meeting – Extension**

WEDNESDAY AFTERNOON DECEMBER 9

Alternative and Emerging Technological Weed Management

LOCATION: Franklin C
TIME: 3:15 PM – 3:45 PM EST

***SPEAKER**

3:15 PM **Novel approaches for precision weed management.** Vijay Singh*[1], Fatemeh Esmaeilbeiki[1], Akashdeep Brar[1], Gaganjot Sodhi[1], Prudhvi Vulchi[1], Daniel Martin[2]; [1]Virginia Tech, [2]Pluvium LLC **(299)**

3:30 PM **Deep Learning-Based Detection of Palmer Amaranth (*Amaranthus palmeri*) in No-Till Dryland Grain Sorghum of Western Kansas: Implications for Real-Time and Edge-Based Weed Management.** Jeremie Kouame*[1], Atong Akom[1], Augustine Obour[1], Anita Dille[1], John Holman[1]; [1]Kansas State University **(300)**

WEDNESDAY EVENING DECEMBER 9

Joint Society Social and Student Awards

Sponsored by the Sustaining Members – Open to all attendees

LOCATION: Delaware ABCD
TIME: 5:30 PM – 7:00 PM EST

NCWSS Awards
NEWSS Awards

THURSDAY MORNING DECEMBER 10

NCWSS/NEWSS Industry Breakfast and Speaker

Sponsored by Syngenta Crop Protection

LOCATION: Delaware ABCD
TIME: 7:00 AM – 10:00 AM EST
CHAIR: Seth Strom
Syngenta Crop Protection

***SPEAKER**

7:00 AM **2026-2027 Weather Recap/Future Outlook & El Niño Pattern.** Dr. Aaron Wilson*[1]; [1]State Climatologist of Ohio **(301)**

8:30 AM **What's New in the Industry?**

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Western	Ben Westrich (2027) ben.westrich@syngenta.com

NCWSS Awards Program

Master of Ceremonies.....Mark Bernards
Student Travel Awards.....Mark Bernards
Distinguished Achievement Awards.....Mark Bernards
Fellows.....Mark Petersen
Presentation of New Officers.....Brett Miller

STUDENT TRAVEL AWARDS

These are awarded to qualifying graduate students for their first attendance at the NCWSS annual meeting. This travel grant program is intended to encourage graduate student involvement in the NCWSS annual meeting while students are in the early portion of their graduate program.

Breawna Smith, University of Wisconsin Madison
Hanna Hekkanen, University of Minnesota
Adam Brown, University of Nebraska-Lincoln
Yeong Shin, Michigan State University

NCWSS/NEWSS Recognitions

DISTINGUISHED ACHIEVEMENT AWARDS

SERVICE

Harlene Hatterman-Valenti, North Dakota State University



Harlene Hatterman-Valenti is a Professor and High-value Crops Specialist in the Plant Sciences Department at North Dakota State University. She has state-wide weed research responsibilities in many specialty crops. Harlene earned her M.S. in Horticulture from the University of Nebraska-Lincoln (1985) and Ph.D. from Iowa State University in Agronomy and Horticulture (1993). Prior to accepting her current position at NDSU, she was a Research Biologist with FMC at the Princeton, NJ facility, responsible for primary and pre-secondary herbicide evaluations in the Herbicide Discovery project. Since arriving at North Dakota State University in 2000, Harlene has found particular fulfillment in graduate student mentorship, guiding 46 graduate students to degree completion (40 MS, 6 PhD) with 11 more currently enrolled/almost done (6 MS, 5 PhD). Their research has included more than 20 different crop species and has generated more than 150 refereed publications. Harlene's service to the North Central Weed Science Society spans more than two decades and reflects her longstanding commitment to NCWSS and student development. She has held offices within the Board of Directors, served on several NCWSS interest group committees, numerous NCWSS standing committees, and several section program chairs. Yet the service she returns to year after year with the most enthusiasm is volunteering as a graduate student paper/poster judge providing constructive feedback that can shape how a young scientist thinks, communicates, and carries themselves forward in their weed science career.

NCWSS/NEWSS Recognitions

RESEARCH

Amit Jhala, University of Nebraska-Lincoln



Dr. Amit Jhala is a Professor and Extension Weed Management Specialist in the Department of Agronomy and Horticulture at the University of Nebraska-Lincoln. He also serves as an Associate Department Head and Integrated Pest Management Coordinator for the department. His responsibilities include developing and leading research and extension programs focused on integrated weed management in agronomic crops in Nebraska and beyond.

Dr. Jhala has authored 195 papers in international journals and 13 invited book chapters. He has served as Secretary/Treasurer of North Central Weed Science Society. His scholarly contributions have been recognized through numerous honors, including the Early Career Weed Scientist Award from the Weed Science Society of America, the US-HRAC Herbicide-Resistant Weed Management Award, the Outstanding Reviewer Award, and the Distinguished Achievement Young Weed Scientist Award from the North Central Weed Science Society. He recently honored with the Fellow of the Indian Weed Science Society and he serves as an Associate Editor for Weed Technology.

Dr. Jhala has secured more than $11.7 million in extramural funding, including $7.3 million as principal investigator, to support his weed science research and extension program. He has graduated 17 students (10 MS and 7 PhD) and supervised 6 postdoctoral fellows.

NCWSS/NEWSS Recognitions

PROFESSIONAL STAFF

Brian Stiles, Michigan State University



Brian Stiles is a Research Assistant in Dr. Christy Sprague's Weed Science Field Research Program at Michigan State University, where he has been a dedicated member of the team since April 2016. Originally from Durand, Michigan, Brian grew up on his family's centennial farm, where he continues to reside today. He earned his B.S. degree in Agribusiness from MSU in 2014. During that time, he also spent three years working as a student research assistant in both Weed Science and Soil Fertility, where he developed an interest in agricultural research that ultimately shaped his career.

In his current role, Brian plays an integral part in maintaining equipment and planning, implementing, and managing numerous research trials, both on campus and on cooperators' farms. His work focuses on weed management strategies in traditional and specialty field crops, including soybeans, sugarbeets, dry edible beans, and wheat. These research efforts evaluate a combination of traditional herbicide programs, tillage practices, and cover cropping systems to develop effective and sustainable weed management strategies.

His responsibilities extend beyond research plot management to include helping coordinate and supervise a crew of graduate and undergraduate students, mentoring new staff members, and ensuring research projects are successfully carried out throughout the growing season. Brian has been a member of the North Central Weed Science Society since 2016 and takes pride in contributing to the weed science community. One of the most rewarding aspects of his position is the opportunity to work with and mentor students. In recognition of his dedication and contributions, Brian received the MSU Department of Plant, Soil and Microbial Sciences Staff Employee of the Year Award in 2025.

Outside of his work at MSU, Brian and his wife, Casie, have two children, Juliette and Cooper, and are expecting their

third child, another son, in April 2027. Together, they own and operate Stiles Pumpkin Farm, where they produce sweet corn, pumpkins, cut flowers, soybeans, and field corn, in addition to operating a roadside stand. Brian enjoys combining his passion for agriculture with his family's farming tradition and sharing that passion with the people around him.

YOUNG SCIENTIST

Joe Ikley, North Dakota State University



Joe Ikley is an Associate Professor and Extension Weed Specialist for North Dakota State University. He has state-wide Extension responsibility for all crops except potato and sugarbeet. Management of herbicide resistant and problematic weeds are a primary focus of his Extension programming. He has delivered over 350 Extension presentations, 160 radio and television interviews, 130 Extension newsletters, and 50 popular press articles. His research program focuses on managing herbicide resistant weeds in corn, soybean, and dry edible beans, and also evaluation of herbicide and adjuvant formulations. Joe has served as major advisor to 2 Ph.D. and 6 M.S. students at NDSU.

Prior to joining NDSU, he received his M.S. degree from University of Maryland and Ph.D. from Purdue University. Joe has been an active member of NCWSS since 2012. He has served as Communications Editor, and also on the Resident Education Committee, and Nominating Committee for multiple years. Joe served as host of the summer weed contest at NDSU in 2021 and also led the farmer problems section for the summer contest when Purdue hosted in 2016. He has presented 3 symposium talks at NCWSS and has authored or co-authored 64 abstracts at the annual meetings. Joe is a co-founder of the War Against Weeds Podcast, which

has highlighted Weed Science research from over 100 guests over the last 5 years.

YOUNG SCIENTIST

Debalin Sarangi, University of Minnesota



Dr. Debalin Sarangi is an Associate Professor and Extension Weed Scientist at the University of Minnesota, with statewide responsibilities for addressing the emerging weed management challenges in agronomic crops, primarily corn and soybean. Raised in a semi-rural community near Kolkata, India, in an extended family of high school teachers and professors, he developed an early interest in academia. Dr. Sarangi earned his BS in Agriculture from BCKV (India), MS in Agronomy from PAU (India), and Ph.D. in Weed Science from the University of Nebraska–Lincoln. Before joining the University of Minnesota, he was an Assistant Professor at the University of Wyoming and a Postdoctoral Associate at Texas A&M University.

His research and Extension program addresses challenges associated with herbicide-resistant weeds and evaluates approaches to improving weed control while sustaining crop productivity and economic viability. His research emphasizes on weed biology, herbicide selection, cover crops, resistance mechanisms, and mitigating herbicide contamination to water resources. His recent work evaluates precision weed management technologies. He has authored or coauthored more than 40 peer-reviewed publications, secured over $9.5 million as lead PI or co-PI, and conducted more than 200 field trials.

Through traditional and digital Extension approaches, Dr. Sarangi connects research with stakeholder needs. Over the past five years, his in-person programs have reached an average of 1,100 participants annually. He has published seven peer-reviewed and 63 online Extension articles and

delivered 19 webinars and 68 invited Extension talks. Working with Extension Educators, he established a statewide weed science network in the state to conduct multilocation trials and rapidly deliver findings to stakeholders.

Mentoring future weed scientists is among his most valued responsibilities. He has served as major advisor to three master's and four doctoral students and mentored one Postdoctoral Associate. His mentees have pursued faculty, Extension, and industry scientist positions. He serves NCWSS and WSSA in various capacities, including as an Associate Editor for Weed Science, and contributes to GROW research and outreach efforts. In 2025, he received the University of Minnesota's Exemplary Early-Career Faculty Award (Borealis Award).

Outside of work, Dr. Sarangi enjoys watching English Premier League soccer, playing pickleball, photography, and spending time with his wife, Sreeparna, and their five-year-old daughter, Aadija. A two-time WSSA Photography Award recipient, he extends his enthusiasm for observation and discovery beyond his research and publications. He dedicates this award to his mentors, former and current lab members, colleagues, stakeholders, family and friends.

FELLOW AWARD

Fellow is the highest honor that the Society can confer to an individual member. Only individuals who have made outstanding contributions to weed science (no more than 0.5% of the membership) receive the award each year. Fellows are considered life-time members of the NCWSS.



Dr. Nader Soltani, University of Guelph

Dr. Nader Soltani is an adjunct professor in the Department of Plant Agriculture at the University of Guelph. He earned a bachelor's degree (1982) and a master's degree (1985) from California State University, Fresno, and a

Ph.D. from Utah State University in 1993. After serving as a research associate at Utah State University and as a research scientist with Agriculture and Agri-Food Canada in London, Ontario, he joined the University of Guelph Field Crop Weed Management Research Program in 2002.

During his career, Dr. Soltani has been involved in the development of phenological models for different crops, the use of soil amendments for the control of weeds and diseases in various crops and weed management in field and horticultural crops. Dr. Soltani has published more than 360 peer-reviewed papers in various national and international journals and has co-authored one book chapter. He has been the author or co-author of more than 200 oral and poster presentations at provincial, national, and international scientific conferences in the USA, China, Australia, the Czech Republic, Thailand, and Canada. Over the past 15 years, he has helped secure nearly $11 million in research funding through fifteen successful grant proposals.

Dr. Soltani has served on advisory committees within the Department of Plant Agriculture and has mentored more than 34 graduate students, contributing to the publication of over 108 peer-reviewed manuscripts. His professional service includes active participation in the Canadian Weed Science Society (CWSS), the North Central Weed Science Society (NCWSS), the Weed Science Society of America (WSSA), and the International Weed Science Society (IWSS). He has represented Ontario on the NCWSS Strategic Planning Committee for more than 12 years. Dr. Soltani's achievements have been recognized with the Canadian Weed Science Society Excellence in Weed Science Award in 2012, the Canadian Weed Science Society Fellow Award in 2025, and the NCWSS Distinguished Achievement in Research Award in 2019

NCWSS/NEWSS Recognitions

OUTSTANDING GRADUATE STUDENT AWARD

Navjot Singh, University of Minnesota



Navjot Singh is a Ph.D. candidate in the Department of Agronomy and Plant Genetics at the University of Minnesota, advised by Dr. Debalin Sarangi. Originally from northern India, Navjot grew up on a rice–wheat farm, where firsthand experiences with weed management challenges sparked his interest in weed science. He pursued an M.S. in Applied Plant Sciences at the University of Minnesota, focusing on characterizing herbicide-resistant waterhemp populations, investigating resistance mechanisms, and evaluating sustainable weed management strategies through laboratory, greenhouse, and field research.

Navjot has authored or co-authored nine peer-reviewed publications and 19 conference abstracts. He has served as a co-principal investigator on research grants totaling approximately $370,000. His extension contributions include 18 outreach presentations and multiple extension publications. He has also served as a teaching assistant for two weed science courses. His accomplishments have been recognized through several awards including first-place in weed identification and poster competitions at NCWSS and WSSA events. He has also received the Hayes Phillips Outstanding Graduate Student Award from the University of Minnesota.

Beyond research and extension, Navjot is actively involved in academic leadership and professional service. He served as Secretary of the Graduate Student Board at the University of Minnesota. Navjot feels immensely grateful for the mentors he had and served back as the co-chair of the matching committee for the college mentor program. He also served on the College Dean Search Committee and several other departmental committees. Additionally, he served on a local

arrangement committee for 2023 NCWSS meeting. He continues to support the weed science community as a judge at NCWSS and WSSA meetings and a reviewer for its scientific journals.

PRESIDENTIAL SERVICE AWARD

Joe Omielan, University of Kentucky

NEWSS Awards Program

NEWSS Awards Committee

Thierry Besançon (Chair), Erin Hitchner, Wesley Everman, Jacob Barney, Caren Schmidt

Awards of the Northeastern Weed Science Society

The **Fellow Award** (formerly Distinguished Member Award) is one of the highest honors the Society presents. The purpose of this award is to recognize those members, at any point in their tenure, who have made significant contributions to the NEWSS. Criteria for eligibility are simple: the recipient must have been a member of the NEWSS and have made significant contributions to the NEWSS and to Weed Science in the Northeast.

The **Award of Merit** recognizes career contributions to the NEWSS and weed management in the Northeast. Qualifications for the Award of Merit include: at least five years of participation at the annual meeting, service to the NEWSS on the executive committee or as a section chair, and presentation and authorship of papers at the annual meetings. The Award of Merit is normally awarded at or near an individual's retirement.

The **Outstanding Educator Award** was established to recognize outstanding contributions to outreach education or resident instruction in Weed Science and weed management. Accomplishments that may be considered include (but are not limited to) excellence in Cooperative Extension education, resident instruction, or other educational programs; or the development of novel and effective educational resources in Weed Science.

NCWSS/NEWSS Recognitions

The **Outstanding Researcher Award** was established to recognize NEWSS members for their outstanding research contributions, in the public or private sector, that have had (or have the potential to have) a significant impact on weed management practices in the Northeast.

The **Robert D. Sweet - Outstanding Graduate Student Awards** were established to recognize outstanding NEWSS students at the M.S. and Ph.D. levels for their work and contributions to the field of weed science in research, teaching, extension, and to society.

The **M. Garry Schnappinger - Service Recognition Award** was established to recognize outstanding service, above and beyond the call of duty, from someone who works in the area of weed science under the direction of university, federal, industry or private sector scientists. The nominee must demonstrate significant contributions to the field of weed science and/or to NEWSS.



NEWSS Fellow Award

Art Gover

Pennsylvania State University

Retired Vegetation Management Researcher and Educator

NEWSS President, 2020-2021

Art Gover earned his B.S. in Plant Science from Pennsylvania State University in 1985 and began his professional career working with Dr. Nathan Hartwig on agronomic weed management and living mulch systems. In 1988, he joined Penn State's Roadside Vegetation Management Research Project, where he conducted applied research on brush control, herbicide efficacy, plant growth regulators, and groundcover establishment. Beginning in 2009, his work increasingly focused on invasive plant management in Pennsylvania's state parks, providing technical assistance and training on invasive plant identification, vegetation management, and the restoration of native plant communities.

NCWSS/NEWSS Recognitions

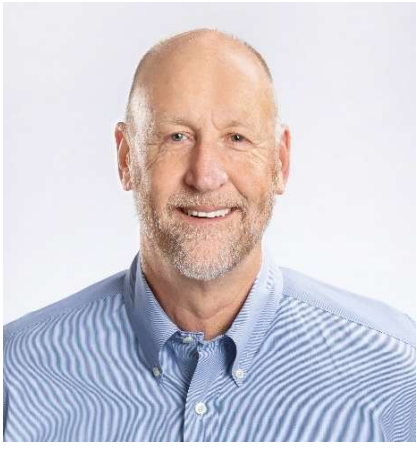
Throughout his 36-year career at Penn State, Art developed extensive expertise in managing vegetation along roadsides, rights-of-way, industrial sites, forests, and natural areas. His research and educational activities helped land managers adopt practical, integrated approaches to weed control and habitat restoration. Beyond Penn State, he served as President of the Mid-Atlantic Exotic Pest Plant Council and contributed to numerous conservation and natural resource management initiatives.

Art has been an active member of the Northeastern Weed Science Society (NEWSS) since the 1980s, contributing nearly four decades of leadership, mentorship, and professional service. He served two terms on the NEWSS Board of Directors and held several leadership positions, including Research and Education Chair, Society Editor, Vice President, President-Elect, President (2020–2021), and Past President. During his presidential tenure, he helped modernize the annual meeting schedule and evaluate future meeting locations to better serve the membership. He also chaired numerous technical sessions, symposia, and committees, including the NEWSS Futures Committee.

Art has been particularly dedicated to supporting students and fostering the next generation of weed scientists. He helped organize the NEWSS Weed Science Contests hosted by Penn State in 1996 and 2014 and has participated in collegiate weed science contests as a contestant, coach, organizer, or volunteer since the first contest in 1983. He continues to support student competitions, the Society's Endowment activities, and the Archive Committee.

Art's longstanding commitment to applied weed science, professional education, student mentorship, and service to NEWSS has made a lasting contribution to the Society and weed science throughout the Northeast.

NCWSS/NEWSS Recognitions



NEWSS Award of Merit

Steve Pyle

Syngenta Crop Protection

Retired Head of Biological Research & Development

Former WSSA Representative to NEWSS

Steve Pyle retired from Syngenta Crop Protection in 2026, following a distinguished 41-year career in agricultural research and development. Throughout his career, he held numerous technical and leadership positions, including Field Scientist, Technical Service Representative, Technical Product Lead, Technical Crop Manager, and Head of Biological Research and Development for the Eastern and Western Horticultural Regions. His professional responsibilities encompassed herbicide development, product registration, technical training, and the evaluation of new crop protection technologies across a wide range of cropping systems.

As Head of Biological Research and Development, Steve led teams of field scientists responsible for evaluating and advancing new chemistries and biological solutions. Over the past 19 years, nearly every Syngenta Crop Protection product brought to market passed through his research organization. His technical expertise, particularly in herbicide development, dicamba stewardship, herbicide volatility, and physical drift, contributed to improved weed management practices and the development of crop protection solutions for agricultural producers throughout North America.

Steve has been a dedicated member and supporter of the Northeastern Weed Science Society (NEWSS) for several decades. He served for many years on the NEWSS Executive Committee, including as the Weed Science Society of America (WSSA) Representative, and extended his service beyond his original term. He also encouraged collaboration between NEWSS and the Canadian Weed Science Society and consistently supported the Society's annual meetings and

educational activities.

One of Steve's most significant contributions to NEWSS has been his commitment to supporting students and developing future weed science leaders. He has been a longtime advocate and volunteer for the annual NEWSS Collegiate Weed Science Contest, helping provide opportunities for students to develop practical skills and professional connections. Through his leadership at Syngenta, he encouraged and supported numerous colleagues in participating in NEWSS meetings, serving on committees, and assuming leadership responsibilities within the Society. His sustained encouragement of early-career scientists has helped strengthen the organization's membership and leadership.

Steve's exceptional career, technical expertise, mentorship, and longstanding dedication to NEWSS have made a lasting contribution to weed science and the Society.



Outstanding Educator Award

Dr. Kurt M. Vollmer

University of Maryland Extension

Senior Agent and Weed Management State Specialist

Kurt Vollmer grew up in Richlands, Virginia, and earned his B.S. in Biology from Emory & Henry College in 2006. He received an M.S. in Agronomy from the University of Florida in 2010 under Dr. Greg MacDonald and a Ph.D. in Weed Science from Virginia Tech in 2014 under Dr. Henry Wilson. Following his doctoral studies, he worked as a postdoctoral researcher with Dr. Mark VanGessel at the University of Delaware before joining the University of Maryland Extension in 2019 as the Weed Management State Specialist.
Since joining the University of Maryland, Kurt has developed an extensive Extension education program addressing weed

management in agronomic, vegetable, and fruit crops. His activities emphasize herbicide resistance, integrated weed management, and practical solutions for agricultural producers. Through 2025, Kurt delivered presentations at 162 educational events reaching 14,752 participants across Maryland. Surveys indicated that more than 95% of respondents improved their knowledge of herbicide-resistant weeds and weed management strategies through his programs.

Kurt has authored 18 peer-reviewed Extension publications and more than 50 newsletter articles. He is a co-author of the Mid-Atlantic Field Crop Weed Management Guide, the Mid-Atlantic Vegetable Production Guide, and the Integrated Weed Management Guide for Mid-Atlantic Grain Crops. His educational efforts also include workshops, webinars, pesticide applicator training, guest lectures, and mentoring undergraduate interns.

Kurt has been an active contributor to the Northeastern Weed Science Society (NEWSS), particularly through his support of student education. In 2026, he hosted the NEWSS Collegiate Weed Science Contest at the Wye Research and Education Center, providing students with valuable hands-on learning opportunities.

In recognition of his accomplishments, Kurt received the University of Maryland's 2025 Off-Campus Junior Faculty Award and was promoted to Senior Agent with tenure that same year.



Outstanding Researcher Award

Dr. Caio Brunharo

Pennsylvania State University

Associate Professor of Weed Science

Originally from Brazil, Caio Brunharo earned his B.S. in Agricultural Engineering and M.S. in Crop Science from the University of São Paulo in 2013 and 2014, respectively. He

moved to the United States to pursue his Ph.D. in Horticulture and Agronomy at the University of California, Davis, graduating in 2018 under Dr. Brad Hanson. After completing postdoctoral training at UC Davis and holding a faculty position at Oregon State University, he joined Penn State in 2022, where he is currently an Associate Professor of Weed Science.

Caio's research focuses on understanding how weeds evolve resistance to herbicides and developing strategies to address this growing challenge. His work combines molecular biology, genomics, and population genetics to investigate resistance mechanisms, track the spread of resistant populations, and develop diagnostic tools. He established a regional herbicide resistance screening program serving the Northeast and has contributed to research on resistance in horseweed, Palmer amaranth, common lambsquarters, and Italian ryegrass.

Caio has published more than 40 peer-reviewed articles, including 21 as corresponding author, and five book chapters. His work received the 2024 Outstanding Paper Award from the Weed Science Society of America (WSSA). He maintains active collaborations with researchers across the United States and internationally, bringing together expertise in evolutionary biology and applied weed management.

Caio serves as Associate Editor for *Weed Science* and *Advances in Weed Science*, Chair of the WSSA Herbicide-Resistant Plants Committee, and Chair of the NEWSS Sustaining Membership Committee. He is also involved in scientific activities of the International Weed Science Society.

Caio is equally committed to mentoring graduate students and supporting their professional development. Several of his former students have pursued academic careers, and he continues to encourage young researchers to explore new approaches to understanding and managing herbicide resistance.



Robert D. Sweet Outstanding Graduate Student Award – M.S.

Rebecca Stup

Cornell University

Rebecca (Becky) Stup earned her B.S. in Plant Sciences from Cornell University in 2023, graduating magna cum laude, and completed her M.S. in Soil and Crop Sciences under Dr. Antonio DiTommaso in May 2026. She first joined his laboratory as an undergraduate research assistant in 2022 and subsequently worked as a research technician before pursuing her graduate degree. In Fall 2026, she began a Ph.D. program in Weed Science at the University of Wisconsin–Madison under Dr. Sarah Kezar.

Becky's M.S. research examined how field margin management influences weed and arthropod communities, particularly whether establishing wildflower strips increases weed pressure in adjacent crops. Her work reflects her interest in finding ways to support pollinators, beneficial insects, and biodiversity without compromising agricultural productivity. She also conducted independent research on common milkweed reproduction, supported by a Weed Science Society of America (WSSA) John Jachetta Undergraduate Research Award.

Becky has already established an impressive publication record, with four first-author peer-reviewed articles and five additional co-authored publications. Both chapters of her M.S. thesis were published in 2026, including one in *Weed Science*. Beyond research, she has demonstrated strong teaching and leadership skills, serving as a teaching assistant for Cornell's Weed Biology and Management course, mentoring undergraduate researchers, and participating in outreach activities for younger students.

Becky has been actively involved in the Northeastern Weed Science Society (NEWSS), presenting her research at annual meetings and participating in several collegiate weed science contests. She was part of Cornell's first-place undergraduate

team in 2022 and placed second in the 2026 NEWSS M.S. Graduate Student Writing Contest. Her scientific curiosity, enthusiasm for teaching, and dedication to weed science have established a strong foundation for her future career.



Robert D. Sweet Outstanding Graduate Student Award – Ph.D.

Laurel Wellman

Pennsylvania State University

Laurel Wellman grew up in upstate New York, where gardening with her family sparked an early interest in plants and ecology. She pursued undergraduate studies at the University of Michigan before studying classical music at Yale School of Music as an oboist. Her growing interest in agriculture eventually led her to Pennsylvania State University, where she began graduate studies in Agricultural and Environmental Plant Science in 2021 under Dr. John Wallace. She transitioned into the Ph.D. program in 2023, with graduation anticipated in Fall 2026.

Laurel's research focuses on integrating cover crops and ecological principles into sustainable weed management. Her early studies examined cereal rye management for weed suppression in organic no-till cropping systems. She also coordinated a regional study involving six northeastern universities to improve cover crop management recommendations. Her doctoral research investigates how cover crop mulches influence herbicide-resistant waterhemp populations and their response to glufosinate.

Laurel has published three peer-reviewed articles in *Weed Science*, *Weed Research*, and *Agronomy Journal*, along with a book chapter on cover crops and weed management. She has presented her research at scientific meetings, grower field days, and Extension workshops, earning several awards for her presentations.

An active member of the Northeastern Weed Science Society (NEWSS), Laurel has achieved outstanding results in collegiate weed science contests, including first place overall individually in 2025 and contributing to Penn State's first-

place graduate team. She currently serves as the graduate student representative on the NEWSS Board and the Northeast Cover Crop Council Board.

Beyond her research, Laurel enjoys teaching, mentoring fellow students, and sharing practical weed management recommendations with growers. Her interests in ecology, agriculture, and environmental stewardship continue to shape her research and professional goals.

Future NCWSS Annual Meeting Sites

2027 - December 6 - 9	Des Moines, IA
2028 – December 4-7	Madison, WI

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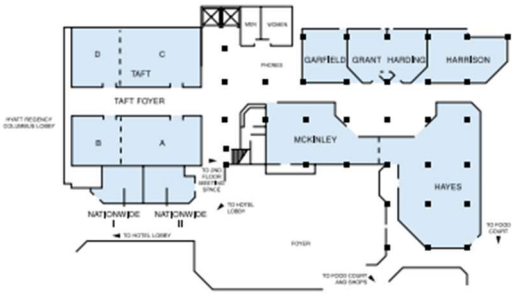
Time Schedule

Use this page to plan your meeting. Write in the talks you want to hear, the committee meetings you serve on, and when you are presenting. Several sessions run at the same time in different rooms, so note the room as well.

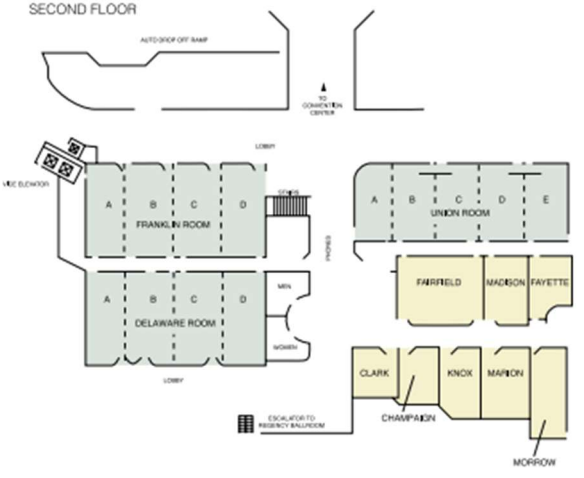
Time	Tuesday	Wednesday	Thursday
7:00		Poster Session 2	Industry Breakfast & Speaker
7:15			
7:30			
7:45			
8:00	Poster Session 1		
8:15			
8:30			What's New in the Industry?
8:45			
9:00			
9:15			
9:30			
9:45			
10:00	General Session		
10:15			
10:30			
10:45			
11:00			
11:15			
11:30			
11:45			
12:00	Student Luncheon	NCWSS/NEWSS Awards Luncheon	
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12:30			
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4:30			
4:45			
5:00			
5:15			
5:30		Society Social & Contest Awards	
5:45			
6:00			
6:30			

NCWSS/NEWSS Notes

MEETING ROOMS
FIRST FLOOR



MEETING ROOMS
SECOND FLOOR



REGENCY BALLROOM
AND EXHIBIT ROOM
THIRD FLOOR

