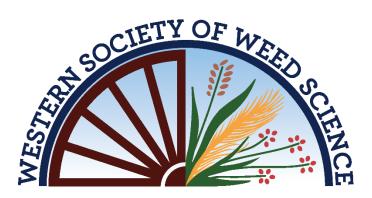
2025 Meeting

WESTERN SOCIETY OF WEED SCIENCE

March 10 - 13, 2025

The Westin Seattle Seattle, Washington



WESTERN SOCIETY OF WEED SCIENCE OFFICERS AND BOARD OF DIRECTORS 2024-2025 **PRESIDENT:** Tim Prather University of Idaho tprather@uidaho.edu PRESIDENT-ELECT: Carl Coburn Bayer Crop Science carl.coburn@bayer.com SECRETARY: Brad Hanson University of California Davis bhanson@ucdavis.edu CHAIR, RESEARCH SECTION: Dirk Baker Campbell Scientific dbaker@campbellsci.com CHAIR, EDUCATION AND REGULATORY: Albert Adjesiwor University of Idaho aadjesiwor@uidaho.edu WSSA REPRESENTATIVE: Alan Helm Gowan Inc. AHelm@gowanco.com IMMEDIATE PAST PRESIDENT: Curtis Rainbolt BASF Corporation Curtis.rainbolt@basf.com MEMBER-AT-LARGE PUBLIC SECTOR: Erik Lehnhoff New Mexico State University lehnhoff@nmsu.edu MEMBER-AT-LARGE PRIVATE SECTOR: Derek Sebastian Envu Derek.sebastian@envu.com TREASURER: Ryan Rapp Bayer Crop Science. Ryan.rapp@bayer.com BUSINESS MANAGER: Eric Gustafson WSWS info@wsweedscience.org CHAIR-ELECT RESEARCH SECTION: Beth Fowers University of Wyoming bfowers@uwyo.edu CHAIR-ELECT EDUCATION & REGULATORY: Lovreet Shergill Colorado State University colorado blate on versity lovreet.shergill@colostate.edu CAST REPRESENTATIVE: Gregory Dahl Ret. Gkdahl19@gmail.com **REPRESENTATIVE FOR CONSTITUTION AND OPERATING PROCEDURES:** Sandra McDonald Mountain West Pesticide Education & Safety Training sandra@mountainwestpest.com STUDENT LIASONS: McKenzie Barth (Chair) Wes Maughan Washington State University University of Wyoming mbarth3@uwyo.edu peter.maughan@wsu.edu



Welcome to the 2025 annual WSWS meeting. The Program Committee and Local Arrangements Committee have worked to arrange what should be a great meeting. We hope you enjoy the meeting, and encourage you to catch up with old friends, make new friends, and come away with renewed energy and new ideas.

LOCAL ARRANGEMENTS COMMITTEE MEMBERS

Rui Liu, Chair

PROGRAM COMMITTEE MEMBERS

Carl Coburn, Chair Dirk Baker Albert Adjesiwor





Meal





Student Contest

Break

Reception

WSWS 2025 PROGRAM AT A GLANCE

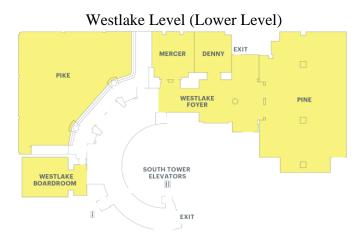
Poster Session 7:45 – 9:15 am Authors of Odd Numbered Posters Present Elliott Bay General Session 9:30 – 11:00 am Cascade Ballroom Diversity and Inclusion Committee Social Hour 11:15am-noon Pine Student Luncheon 12:00 – 1:15 pm Puget Sound Elliott Bay Pine Pike Mercer Poster Room Weeds of Agronomic Crops Weeds of Range, Forestry, and 1:30 pm to Basic Biology, Ecology Technology Open Crops Natural Areas Technology 1:30 pm to 1:30 pm to 5:00 pm 1:30 pm to 5:00 pm Denny Mercer 3:30 pm to 3:30 pm to 5:00 pm 3:30 pm to 5:00 pm 5:00 pm BREAK – 3:00 pm to 3:30 pm Westlake Foyer Matter Reception 5:00 – 6:30 pm Puget Sound			
Student Luncheon 12:00 – 1:15 pm Puget Sound Elliott Bay Pine Pike Mercer Poster Room Weeds of Agronomic Crops Weeds of Range, Forestry, and Natural Areas Basic Biology, Ecology Technology 0pen 1:30 pm to 1:30 pm to 1:30 pm to 7:30 am to 5:00 pm 1:30 pm to 3:00 pm Denny Mercer 0pen Teaching and Outreach Weeds of Horticultural O 3:30 pm to 4:30 pm 3:30 pm to 5:00 pm 3:30 pm to 5:00 pm 5:00 pm Student Reception 5:00 - 6:30 pm Puget Sound	Authors of Odd Numbered Posters Present Elliott Bay General Session 9:30 – 11:00 am Cascade Ballroom		
Elliott BayPinePikeMercerPoster Room OpenWeeds of Agronomic Crops 1:30 pm to 5:00 pmWeeds of Range, Forestry, and Natural Areas 1:30 pm to 5:00 pmBasic Biology, Ecology Technology 1:30 pm to 3:00 pm7:30 am to 5:00 pm5:00 pm1:30 pm to 5:00 pmBasic Biology, Ecology Technology 1:30 pm to 3:00 pm7:30 am to 5:00 pm5:00 pm1:30 pm to 5:00 pm1:30 pm to 3:00 pmDennyMercerMercerTeaching and Outreach 3:30 pm to 4:30 pmWeeds of Horticultural O 3:30 pm to 5:00 pmBREAK - 3:00 pm to 3:30 pm Westlake FoyerStudent Reception 5:00 - 6:30 pmPuget Sound			
Poster Room Open Weeds of Agronomic Crops 1:30 pm to 5:00 pm Weeds of Range, Forestry, and Natural Areas Basic Biology, Ecology Technology 7:30 am to 5:00 pm 1:30 pm to 5:00 pm 1:30 pm to 5:00 pm 1:30 pm to 3:00 pm Denny Mercer Teaching and Outreach 3:30 pm to 4:30 pm Weeds of Horticultural C 3:30 pm to 5:00 pm BREAK – 3:00 pm to 3:30 pm Westlake Foyer Student Reception 5:00 – 6:30 pm Puget Sound			
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3:30 pm to 4:30 pm 3:30 pm to 5:00 pm BREAK - 3:00 pm to 3:30 pm Westlake Foyer Student Reception 5:00 - 6:30 pm Puget Sound			
Student Reception 5:00 – 6:30 pm Puget Sound	Crops 1		
Wednesday, March 12			
Wednesday, March 12			
Poster Session 7:45 - 9:15 am Authors of Even Numbered Posters Present Elliott Bay			
Elliott Bay Pine Pike Mercer Den	•		
Poster Room Open 7:30 am to 5:00 pmWeeds of Agronomic CropsWeeds of Range, Forestry and Natural AreasBasic Biology, Ecology, and TechnologyWeed Horticultu7:30 am to 5:00 pm9:30 am to 11:30 am9:30 am to 11:00 am9:30 am to 10:45 am9:30 am to	ural Crops		
WSWS Awards Luncheon 11:45 am - 1:30 pm			
Cascade Ballroom			
Pine Pike Denny Mercer Pik	-		
Weeds of Agronomic CropsWeeds of Range, Forestry, and Natral Areas Discussion SessionBasic Biology, Ecology, and Technology Discussion SessionWeeds of Horticultural Crops Discussion SessionSymposium: Approaches Science Educ Communi1:30 pm to 3:00 pm1:35 pm to 2:20 pm1:45 pm to 2:30 pmWeeds of Horticultural Crops Discussion Session 1:45 pm to 2:30 pmSymposium: Crops Discussion Session 1:45 pm to 2:30 pmSymposium: Crops Discussion Session 	for Weed cation and ication		
What's New in Industry? 5:00 pm - 6:00 pm Cascade Ballroom			
Student Night Out 6:15 pm			
Thursday, March 13			
WSWS Business Meeting Breakfast and Student Awards 6:30 - 9:00 am Cascade Ballroom			
Pine Pine Pike			
Weeds of Agronomic Crops Weeds of Agronomic Crops Discussion Teaching and Outreach Discussion 9:15 am to Session Session 10:45 am 10:45 am to 11:30 am 9:15 am to 10:00 am			

The Westin Seattle 1900 5th Avenue Seattle, Washington, USA, 98101 206-728-1000

Floor Plan







WSWS SPECIAL EVENTS – MONDAY MARCH 10

10:00 am to 2:00 pm	Board of Directors Meeting
	Puget Sound
3:00 pm to 5:00 pm	WERA-77 Meeting
	Mercer
4:00 pm to 6:00 pm	Registration
	Cascade Foyer South
5:00 pm to 11:00 pm	Poster Display Set-Up
	Elliott Bay
5:00 pm to 11:00 pm	Sustaining Members Displays
	Cascade Foyer South
5:00 pm to 11:00 pm	Presentation Practice Room
	St Helens
6:00 pm to 8:00 pm	WSWS Members Welcome
	Reception
	Cascade Ballroom
	T Sponsored by NuFarm

WSWS SPECIAL EVENTS – TUESDAY MARCH 11

7.00 4. 4.00	
7:00 am to 4:00 pm	Registration
7 , 20, 4. 5 , 00,	Cascade Foyer South
7:30 am to 5:00 pm	Poster Displays
	Elliott Bay
7:30 am to 5:00 pm	Sustaining Members Displays
	Cascade Foyer South
7:45 am to 9:15 am	Poster Session – Authors of Odd
	Numbered Posters Present
	Elliott Bay
	Sponsored by Washington State
	University Weed Science
9:30 am to 11:00 pm	Presentation Practice Room
· · · · · · · · · · · · · · · · · · ·	St Helens
9:30 am to 11:00 am	General Session
	Cascade Ballroom
11:15 am to Noon	Diversity and Inclusion
	Committee Social Hour
	Pine
	Sponsored by Sandra
	– Sponsored by Sunara McDonald
Noon to 1:15 pm	Student Luncheon
1000 to 1.15 pm	Puget Sound
	Sponsored by Bayer Crop Science
3:00 pm to 3:30 pm	 Break - Sponsored by
5.00 pm to 5.50 pm	Miller Research, Rohlfs
	and Adkins Research,
	Pratum Research, GDM
	Solutions, VARCO, Azlin
	Seed Service
5:00 nm to 6:30 nm	Student Reception
5:00 pm to 6:30 pm	Student Reception

Puget Sound Sponsored by Syngenta

WSWS SPECIAL EVENTS – WEDNESDAY MARCH 12

7:00 am to 4:00 pm	Registration
-	Cascade Foyer South
7:00am to 11:00 pm	Presentation Practice Room
_	St Helens
7:00 am to 8:00 am	WSWS New Officer Orientation
	– Eric Gustafson, WSWS-
	Business Manager
	Westlake Boardroom
7:30 am to 5:00 pm	Sustaining Members Displays
	Remove Between 5 and 7 pm
	Cascade Foyer South
7:45 am to 9:15 am	Poster Session – Authors of Even
	Numbered Posters Present
	Elliott Bay
	Sponsored by Gowan Company
9:30 am to 5:00 pm	Poster Displays Remove Posters
•	by 5:00 pm
	Elliott Bay
11:45 am to 1:30 pm	Awards Luncheon
	Cascade Ballroom
	♥ Sponsored By Jemmett, UPL,
	Corteva Agriscience, R&D
	Sprayers, The Amalgamated Sugar
	Company
2:30 pm to 5:00 pm	Symposium – Innovative
-100 piii 10 0100 piii	Approaches for Weed Science
	Education and Communication
	Pike
	Sponsored by Hubbard Ag
	Sciences
5:00 pm to 6:00 pm	What's New in Industry?
cros più to oros più	Cascade Ballroom
6:15 pm	Student Night Out
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WSWS SPECIAL EVENTS – THURSDAY MARCH 13

6:30 am to 9:00 am	WSWS Business Breakfast Cascade Ballroom
	Sponsored by BASF, Corteva Agriscience
8:00 am to 10:00 am	Registration Cascade Foyer South
12:00 pm to 2:00 pm	Board of Directors Meeting

Puget Sound **PROGRAM**

MONDAY AFTERNOON MARCH 10

WSWS Board of Directors Meeting

LOCATION:
TIME:
CHAIR:

Puget Sound 10:00 AM - 2:00 PM PT Tim Prather University of Idaho Moscow, ID

MONDAY AFTERNOON MARCH 10

WERA-77 Meeting

LOCATION:	Mercer
TIME:	3:00 PM - 5:00 PM PT

MONDAY AFTERNOON MARCH 10

Registration

LOCATION:	Cascade Foyer South
TIME:	4:00 PM - 6:00 PM P

MONDAY AFTERNOON MARCH 10

Poster Display Set Up

LOCATION: TIME:

Elliott Bay 5:00 PM - 11:00 PM PT

PT

MONDAY AFTERNOON MARCH 10

WSWS Members Welcome Reception

LOCATION: TIME: CHAIR: Cascade Ballroom 6:00 PM - 8:00 PM PT Tim Prather University of Idaho Moscow, ID

TUESDAY MORNING MARCH 11

Registration

LOCATION:	Cascade Foyer South
TIME:	7:00 AM - 4:00 PM PT

POSTER SESSION: March 11, Odd Numbers March 12, Even Numbers

LOCATION:	Elliott Bay
TIME:	7:45 AM - 9:15 AM

Sponsored by Washington State University Weed Science (March 11) and Gowan Company (March 12)

POSTER – Weeds of Agronomic Crops

*PRESENTER † STUDENT CONTEST

Weed Seedbank Management in Cereal Crop Rotations. Chandra Montgomery, Albert Adjesiwor*; University of Idaho, Kimberly, ID (1)

†Herbicide Mixtures for Horsetail Control: Evaluating Tolpyralate, Tiafenacil, Flazasulfuron, and Florpyrauxifen-benzyl. Davi de Carvalho Fiedler*, Marcelo Moretti; Oregon State University, Corvallis, OR (2)

Herbicide Resistant Wild Oat (Avena fatua) Survey in Northern Idaho and Eastern Washington. Traci Rauch*, Joan Campbell, Albert Adjesiwor; University of Idaho, Moscow, ID (3)

A New Method for Analyzing Replacement Series Competition Studies.

Erik Lehnhoff*, Ciro Velasco-Cruz; New Mexico State University, Las Cruces, NM (4)

†Volunteer Winter Wheat as a Cover Crop for Weed Suppression in Sugar Beet.

Adam Kennedy*, Albert Adjesiwor; University of Idaho, Kimberly, ID (**5**)

†Herbicide Strategies to Control Waterhemp (Amaranthus tuberculatus) in Wheat.

Ethan Mewes*, Kirk Howatt; North Dakota State University, Fargo, ND (6)

Palmer Amaranth in the Pacific Northwest: Glyphosate Resistance Confirmation and Response to Selected Herbicides.

Laura Rodriguez^{*1}, Joel Felix², Clarke Alder³, Pamela Hutchinson⁴, Rui Liu⁵, Olivia Landau⁶, Albert Adjesiwor⁷; ¹University of Idaho, Moscow, ID. ²Oregon State University, Ontario, OR. ³Amalgamated Sugar, Boise, ID. ⁴University of Idaho, Aberdeen, ID. ⁵Washington State University, Prosser, WA. ⁶USDA Wheat Health, Genetics, and Quality Research Unit, Pullman, WA. ⁷University of Idaho, Kimberly, ID (**7**)

†Effect of Soil Active Herbicides on the Critical Time of Weed Removal in Establishment Alfalfa.

Kaitlyn Hoberg*, Clint Beiermann. University of Wyoming, Laramie, WY (8)

Adjuvant Effects on Canola Desiccation with Diquat.

Jim Daniel^{*1}, Kirk Howatt², Joseph Mettler². ¹Daniel Ag Consulting, Keenesburg, CO. ²North Dakota State University, Fargo, ND (9)

Chemical Control of Panicle Willowweed (Epilobium brachycarpum) in Wheat Cropping Systems of the Pacific Northwest.

Jennifer Gourlie*, Judit Barroso. Oregon State University, Adams, OR (10)

Comparing Paraquat and Alternative Herbicides for Spring Weed Control in Established Alfalfa.

Sushmita Sharma^{*1}, Chandra Montgomery¹, McKenna Carnahan², Earl Creech¹, James Gomm¹, Albert Adjesiwor³; ¹University of Idaho, Moscow, ID. ²Utah State University, Logan, UT. ³University of Idaho, Kimberly, ID (**11**)

[†]Pre-Emergence Herbicide Activity on Volunteer Barley in Spring Wheat.

Jace Heiman*, Kirk Howatt, Joseph Mettler; North Dakota State University, Fargo, ND (12)

[†]Assessing Kochia (Bassia scoparia) Populations for Resistance to PPO-Inhibitors and Auxin-Mimic Herbicides in Northeast Montana.

Devanshi Het Desai^{*1}, Het Samir Desai¹, Lovreet Shergill², Tim Seipel¹; ¹Montana State University, Bozeman, MT. ²Colorado State University, Fort Collins, CO (**13**)

Lewis Flax (Linum lewisii) Injury Response from Grass and Broadleaf Herbicides.

Greta Gramig^{*1}, Brent Hulke², Waqas Ahmad¹; North Dakota State University, Fargo, ND. ²USDA-ARS, Fargo, ND (**14**)

Weed Management Options in Lupin in the Canadian Prairies.

Breanne Tidemann*¹, Robyne Davidson², Shaun Sharpe³; ¹Agriculture and Agri-Food Canada, Lacombe, AB. ²Lakeland College, Lacombe AB. Agriculture and Agri-Food Canada. Saskatoon, SK (**15**)

Identification of Orobanche Minor Parasitism Using Hyperspectral Remote Sensing in Red Clover Seed Production in the Willamette Valley, OR. Iram Mujahid Iqbal*, Jing Zhou, Carol Mallory-Smith, Pete

Berry; Oregon State University, Corvallis, OR (16)

†Inter-Row Electrocution Improves Glyphosate-Resistant Kochia (Bassia scoparia) Control.

Waqas Ahmad*, Greta Gramig; North Dakota State University, Fargo, ND (17)

Timing of application and rate influence response of Rydrich MZ winter wheat to metribuzin.

Jessica Kalin*, Ian Burke; Washington State University, Pullman, WA (**18**)

†Spot Spraying Between Crop Rows to Minimize Application Volume and Maximize Herbicide Efficacy. Prayusha Bhattarai*, Andy Branka, Pete Berry; Oregon State University, Corvallis, OR (19)

†Evaluating the Prevalence of Herbicide Resistance of Most Troublesome Grass Weeds in Oklahoma Wheat Fields.

Amna Dar*, Liberty Galvin, Swati Shrestha; Oklahoma State University, Stillwater OK (20)

†Effect of Deficit Irrigation on Herbicide Activity in Cotton Production System.

Jasleen Makkar*, Rupinder Saini, Sukhbir Singh, Lindsey Slaughter, Glen Ritchie; Texas Tech University, Lubbock, TX (21)

†Establishing the Maximum Control Height of Common Lambsquarters (Chenopodium album) in Glufosinate, Glyphosate, and Dicamba-Resistant Sugarbeet in the Western United States.

Abraham Akuoko^{*1}, Albert Adjesiwor², Joel Felix³, Andrew Kniss⁴, Nevin Lawrence¹; ¹University of Nebraska Lincoln, Lincoln, NE. ²University of Idaho, Kimberly, ID. ³Oregon State University, Ontario, OR. ⁴University of Wyoming, Laramie, WY (**22**)

First Report of Quizalofop-P Resistance in Cheatgrass (Bromus tectorum) in Washington.

Marija Savic^{*1}, Samuel Revolinski¹, Ian Burke²; ¹University of Kentucky, Lexington, KY. ²Washington State University, Pullman, WA (**23**)

Interseeding Annual and Perennial Forage Species with Corn.

Michael Atiemo*, Jenna Meeks, Andrew Kniss; University of Wyoming, Laramie, WY (24)

Dry Edible Bean Response to Metamitron Soil Residue. Jenna Meeks*, Andrew Kniss; University of Wyoming, Laramie, WY (**25**)

Kochia (Bassia scoparia) Management with Dichlorpropp Based Herbicide Mixtures in Fallow and Small Grains. Daniel Beran*, Joe Vassios; Nufarm Americas, Inc. Eldora, IA (26)

†Status of Kochia (Bassia scoparia) Herbicide Resistance in Utah.

Olanrewaju Adeyemi*, Eric Westra, Corey Ransom, Earl Creech, Mirella Ortiz; Utah State University, Logan, UT (**27**)

†Stale Seedbed for Weed Management in Sugar Beet.

Newman Teye-Doku^{*1}, Nevin Lawrence², Jenna Meeks¹, Ramawatar Yadav³, Andrew Kniss¹; ¹University of Wyoming, Laramie, WY. ²University of Nebraska, Lincoln, NE. ³Ohio State University, Columbus, OH (**28**)

Alberta Survey of Herbicide-Resistant Weeds in 2023. Charles Geddes^{*1}, Mattea Pittman¹, Breanne Tidemann², Julia Leeson³; ¹Agriculture and Agri-Food Canada, Lethbridge, AB. ²Agriculture and Agri-Food Canada, Lacombe, AB. Agriculture and Agri-Food Canada, Saskatoon, SK (29)

Extent of Residual Activity of the HPPD Inhibiting Herbicides Bicyclopyrone, Pyrasulfotole, and Tolpyralate. Jessica Kalin*, P Weston Maughan, Marija Savic, Ian Burke; Washington State University, Pullman, WA (**30**)

[†]Palmer amaranth Survey Reveals Widespread of Glyphosate Resistance in Colorado.

Lucas Soares Rosa*, Andre Araujo, Amber Pelon, Todd Gaines; Colorado State University, Fort Collins, CO (**31**)

[†]Potential of a Soil and Some Plant Adjuvants on the Efficacy of Pre- and Post-emergence Herbicides.

Bianey Medina*, Anil Shrestha; California State University, Fresno, CA (**32**)

Evaluation of Fall- and Spring-Applied Herbicides for Weed Control in Field Pea.

Caleb Dalley*, Daniel Guimaraes Abe; North Dakota State University, Hettinger, ND (**33**)

Agronomic and Economic Impacts of Integrating Fallplanted Cereal Cover Crops and Herbicides for Weed Control in Dry Beans.

Prayusha Bhattarai^{*1}, Albert Adjesiwor²; ¹Oregon State University, Corvallis, OR. ²University of Idaho, Kimberly, ID (**34**)

Evaluating the Impact of Seeding Rate, Nitrogen, and Disease Pressure on Bromus tectorum (cheatgrass; downy brome) and Winter Wheat Competition.

Laura Berrios^{*1}, Lovreet Shergill², Alan Dyer¹, Fabian Menalled¹; ¹Montana State University, Bozeman, MT. ²Colorado State University, Fort Collins, CO. (**35**)

Balancing Spray Deposition and Weed control Among Glufosinate Formulations.

Jeff Golus*, Adam Balic, Laura de Souza Viera, Vuk Stamenovic, Kasey Schroeder, Milos Zaric; University of Nebraska- Lincoln, North Platte, NE (**36**)

Regrowth Potential of Palmer Amaranth, Kochia, and Common Lambsquarters in Response to Glufosinate and Acifluorfen Applications.

Kasey Schroeder*, Jeffrey Golus, Milos Zaric; University of Nebraska-Lincoln, North Platte, NE (**37**)

<u>POSTER - Basic Biology, Ecology, and</u> <u>Technology</u>

†Germination Moisture and Temperature Requirements of Italian Ryegrass.

Chandra Montgomery*, Albert Adjesiwor, Traci Rauch, Joan Campbell; University of Idaho, Moscow, ID (**38**)

Survey of Poa annua herbicide resistance in the Willamette Valley of Oregon.

Joshua Miranda*, Marcelo Moretti; Oregon State University, Corvallis, OR (39)

†Development of A Rapid Throughput Screen Bioassay for Quizalofop Tolerance to Experimental CoAxium Wheat Seed Lines.

Amber Pelon*, Franck Dayan, Todd Gaines; Colorado State University, Fort Collins, CO (40)

†Evaluating Glufosinate for Hop Spring Pruning. Greeshmanth Alluri*, Marcelo Moretti. Oregon State University, Corvallis, OR (41)

Effect of Germination Time and Crop Competition on Biomass, Fecundity, and Seed Viability of Downy Brome (Bromus tectorum L.) in Spring Wheat. Fernando Oreja*¹, Vhuthu Ndou², Jennifer Gourlie², Judit Barroso²; ¹Clemson University, Clemson, SC. ²Oregon State University, Adams, OR (**42**)

†Inheritance of Paraquat Resistance in Sumatran fleabane (Conyza sumatrensis): Genetic Analysis and Identification of a Major Quantitative Trait Locus. Andre Araujo^{*1}, Ana Beatriz Amaral², Jessica Leal³, Camila Ferreira de Pinho³, Todd Gaines¹; ¹Colorado State University, Fort Collins, CO. ²Universidade Federal Rural do Rio de Janeiro. Seropedica, BR (43)

†Effect of Cover Crop Presence on Herbicide Efficacy. Madison Wright*, Ramawatar Yadav, Andrew Kniss;

University of Wyoming, Laramie, WY (44)

†Polyploidization Effects on Seed Dormancy and Herbicide Resistance in Common Lambsquarters (Chenopodium album).

Jonah Ziyaaba^{*1}, Ramawatar Yadav², Donna Harris¹, Andrew Kniss¹; ¹University of Wyoming, Laramie, WY. ²Ohio State University, Columbus, OH (**45**)

Soil Multivariate Analyses Reveal Signals of Rotational Crop Life History and Fertilizer Source in the Weed Seedbank.

Brendan Alexander^{*1}, Benjamin Ellert¹, Paul DeMaere, Charles Geddes; Agriculture and Agri-Food Canada, Lethbridge, AB. (**46**)

Optimized Robotic Workflow for DNA and RNA Extraction in Downy Brome (Bromus tectorum) Using the KingFisher System: From Germination to Quality Control.

Shahbaz Ahmed*, Marija Savic, Ian Burke; Washington State University, Pullman, WA (47)

POSTER – Teaching and Outreach

Strategic Messaging for Herbicide Resistance Management: Focusing on the Value of Product Stewardship. Liberty Galvin*, Swati Shrestha; Oklahoma State University, Stillwater, OK (48)

Identifying Historical Knowledge Gaps in Wheat-Herbicide Resistance Reporting Across The US. Connor Cox*, Swati Shrestha, Liberty Galvin; Oklahoma State University, Stillwater, OK (**49**)

Engaging the Public: King County's Dynamic Approach to Noxious Weed Education.

Rahel Stampfer*, Skye Pelliccia; King County Noxious Weed Control Program, Seattle, WA (**50**)

White Plum Farm Ag Learning Center Year 1 - Field of Weeds, Undergrad Interns, and Lessons Unlearned: An Extension Story.

Kat Caswell^{*1}, Erica Bassett²; 1Colorado State University Extension, Greeley, CO. ²Colorado State University, Fort Collins, CO (**51**)

Priorities for Plant Protection Undergraduate Education. Randa Jabbour*, Clint Beiermann; University of Wyoming,

Laramie, WY (52)

Integrated Weed Control for Cereal Grain Cropping Systems.

Aaron Esser*; Washington State University, Ritzville, WA (53)

POSTER – Weeds of Horticultural Crops

†Exploring Pulse Electric Field for Weed Control in Nursery.

Pamela Medeiros dos Santos*, Tatiana Benedetti, Marcelo Moretti; Oregon State University, Corvallis, OR (**54**)

Evaluating Crop Safety and Weed Control Using Ethalfluralin in Highland Blueberries.

Marcelo Moretti*, David King; Oregon State University, Corvallis, OR (55)

Promising herbicides for use in perennial peanut, and emerging crop in the United States.

Chanz Robbins*. New Mexico State University, Las Cruces, NM (56)

†Electric Weed Management in Organic Blueberry Fields: Efficacy, Species Shifts, and Soil Health. Luisa Baccin*, Marcelo Moretti; Oregon State University,

Corvallis, OR (57)

Fewer Suckers, More Nuts: The Effect of Sucker Pruning Regime on Hazelnut (Corylus avellana) Growth and Yield.

Austin Frewert*, Marcelo Moretti; Oregon State University, Corvallis, OR (58)

Cost-Benefit Comparisons Between Cover Crop and Herbicide Methods for Controlling Early-Season Weeds in Chile Pepper.

Brian Schutte*, Ram Acharya; New Mexico State University, Las Cruces, NM (**59**)

Developing a Practical Guide to Grower Decision-Making in Herbicide Drift and Carryover Situations in Sugarbeet. Clarke Alder^{*1}, Albert Adjesiwor²; ¹Amalgamated Sugar Company, Boise, ID. ²University of Idaho, Kimberly, ID (**60**)

Control of Silverleaf Nightshade (Solanum elaeagnifolium) in Olives (Olea europaea). Jorge Angeles*, Elizabeth Fichtner; University of California Cooperative Extension Tulare, CA **(61)**

Herbicide Programs for Weed Control in Washington State Onion Production.

Rui Liu^{*1}, Timothy Waters²; 1Washington State University, Prosser, WA. ²Washington State University, Pasco, WA (**62**)

<u>POSTER – Weeds of Range, Forestry, and</u> <u>Natural Areas</u>

Agroecological Importance of Smooth Brome (Bromus inermis) in Hosting Braconid Parasitoids Associated with the Insect Pest Wheat Stem Sawfly.

Jackson R. Strand*, Robert K.D. Peterson, Tracy M. Sterling, David K. Weaver; Montana State University, Bozeman, MT (63)

2024 Weed Survey: Common and Troublesome Weeds in Aquatic and Non-Crop Areas.

Joshua Miranda^{*1}, Sarah Chu², Lee Van Wychen³; ¹Oregon State University, Corvallis, OR. ²Texas A&M, College Station TX (**64**)

Kochia Control on Roadsides in Northern California, with Possible Herbicide Resistant Populations.

Thomas Getts^{*1}, Deniz Inci², Simarjeet Singh³, Kassim Al-Khatib²; ¹Unviersity of California Cooperative Extension, Susanville, CA. ²University of California Davis, Davis, CA. ³University of California Extension, Alturas, CA. (**65**)

†Understanding Challenges to Eurasian Watermilfoil (Myriophyllum Spicatum) Control in Bear Lake.

Tia Lawrence*, Olanrewaju Adeyemi, Francielli Santos de Oliveira, Eric Westra, Mirella Ortiz. Utah State University, Logan, UT (**66**)

Fire Modeling of Techniques to Manage Linear Fuel Breaks Suggest Moderation of Fire Behavior. Madeleine Touchette*, Timothy Prather, Eva Strand, Lisa

Jones; University of Idaho, Moscow, ID (67)

TUESDAY MORNING MARCH 11

General Session

LOCATION:	Cascade Ballroom
TIME:	9:30 AM - 11:00 AM PT
CHAIR:	Tim Prather
	University of Idaho
	Moscow, ID

MODERATOR:	Carl Coburn
	Bayer Crop Science
	St. Louis, MO

*SPEAKER

- 09:30 AM Presidential Address. Tim Prather*; University of Idaho, Moscow, ID
- 09:50 AM From Nuisance to Nourishing: A Sea(weed) to Soil Climate Solution for the Pacific Northwest. Sarah M. Collier; University of Washington, Seattle, WA
- **10:35 AM Washington D.C. Policy Update.** Lee Van Wychen*; Weed Science Society of America, Alexandria, VA

TUESDAY MORNING MARCH 11

Diversity and Inclusion Committee Social Hour

Pine

LOCATION:	
TIME:	
CHAIR:	

11:15 AM - 12:00 PM PT Elizabeth Mosqueda Madera Community College Madera, CA

Sponsored by Sandra McDonald

TUESDAY AFTERNOON MARCH 11

Student Luncheon

LOCATION:	Puget Sound
TIME:	12:00 PM - 1:15 PM PT
CHAIR:	Tim Prather
	University of Idaho, Moscow,
	ID
MODERATOR:	McKenzie J. Barth
	University of Wyoming
	Laramie, WY
CO-MODERATOR:	Wes Maughan
	Washington State University
	Pullman, WA
	Sponsored by Bayer Crop
	Science

TUESDAY AFTERNOON MARCH 11

LOCATION: Pine TIME: 1:30 PM - 3:00 PM PT CHAIR: Joseph Mettler North Dakota State University Fargo, ND CO-MODERATOR: Kyle Roerig Pratum Co-Op Salem, OR

ORAL - Weeds of Agronomic Crops

***SPEAKER † STUDENT CONTEST**

01:30 PM Effect of First Cutting Timing on Weed Competition in Establishment Alfalfa. Clint Beierman*; University of Wyoming, Laramie, WY (68)

01:45 PM †Evaluating Corn Herbicide Programs That Allow for Rotation to Dry Edible Bean and Sugarbeet. Abraham Akuoko*, Nevin Lawrence; University of Nebraska Lincoln, Lincoln, NE. (69)

- 02:00 PM Optimizing Glufosinate Efficacy: The Role of Humectant-Based Adjuvants and Time-of-Day Applications. Het Samir Desai*¹, Franck Dayan², Fabian Menalled¹, Lovreet Shergill²; ¹Montana State University, Bozeman, MT. ²Colorado State University, Fort Collins, CO (70)
- 02:15 PM †Enhancing Weed Control Using Light-Activated Sensors and Mapping in Chemfallow. Devanshi Het Desai*¹, Paul Nugent¹, Tim Seipel¹, Lovreet Shergill²; ¹Montana State University, Bozeman, MT. ²Colorado State University, Fort Collins, CO (71)
- 02:30 PM Rapidicil(R), a Novel Non-Selective Herbicide for Burndown Weed Control - Summary of Tank-Mixture Efficacy when Applied with Burndown and Residual Herbicides. Pat Clay*; Valent U.S.A. LLC, Fresno, CA (72)

02:45 PM Evaluation of Adjuvants for use with Tolpyralate + Bromoxynil Premix Herbicide in Cereal Crops. Joe Yenish*¹, Ryan Humann², Kevin Falk³, Rory Degenhardt⁴; ¹Corteva Agriscience, Billings, MT. ²Corteva Agriscience, Fargo, ND. ³Corteva Agriscience, Oak Bluff, MB. ⁴Corteva Agriscience, Edmonton, AB (73)

TUESDAY AFTERNOON MARCH 11

ORAL - Weeds of Range, Forestry, and Natural Areas

LOCATION: TIME: CHAIR:	Pike 1:30 PM - 3:00 PM PT Jaycie Ardnt
	University of Wyoming Extension Sheridan, WY
MODERATOR:	Jake Courkamp Colorado State University Fort Collins, CO

*SPEAKER † STUDENT CONTEST

01:30 PM Evaluating Herbicides for Managing Invasive Annual Grass Infestation in Nevada's Mojave Desert. Cody Beckley*, Mirella Ortiz, Eric Westra, Corey Ransom; Utah State University, Logan, UT (74)

01:45 PM **†From Grass to Grouse: Indaziflam** Application Increases Greater Sage-Grouse (Centrocercus urophasianus) Habitat Use in Idaho Rangelands. Kirby Lau*¹, Timothy Prather¹, Yvette Ortega², Tracey Johnson³; ¹University of Idaho, Moscow, ID. ²U.S. Forest Service Rocky Mountain Research Station, Missoula, MT. ³University of Idaho, Boise, ID (75)

02:00 PM Aerial Applications of Indaziflam Control Annual Grasses in Pasture and Rangeland. Lisa Jones^{*1}, Christie Guetling², Kirk Davies², Timothy Prather¹; ¹University of Idaho, Moscow, ID. ²USDA ARS, Burns, OR (**76**)

02:15 PM †Balancing the Scales: Efficacy of Cheatgrass (Bromus tectorum) Management Versus Response of Native Plants. Erin Teichroew*, Jane Mangold, Lilly Sencenbaugh, Lisa Rew; Montana State University, Bozeman, MT (77)

- 02:30 PM A Look at One Year After: Forb Response to Florpyrauxifen-benzyl, Aminopyralid, and Clopyralid in Natural Areas. Jodie Crose*; Corteva Agriscience, Indianapolis, IN (78)
- 02:45 PM Microtopography and Climate Interact Across Spatial Scales to Influence Invasive Annual Grass Control in Wyoming. Morgan Frost*¹, Jaycie Arndt², Brian Mealor², Kelsey Brock¹, Paige Copenhaver-Parry¹; ¹University of Wyoming, Laramie WY. ²Unviersity of Wyoming, Sheridan, WY (79)

TUESDAY AFTERNOON MARCH 11

ORAL - Basic Biology, Ecology, and Technology

LOCATION:	Mercer
TIME:	1:30 PM - 3:00 PM PT
CHAIR:	Breanne D. Tidemann
	Agriculture and Agri-Food
	Canada
	Lacombe, AB, Canada
CO-MODERATOR:	Albert Adjesiwor
	University of Idaho
	Kimberly, ID

- 01:30 PM Utilizing the Phenospex TraitFinder to Phenotype Pre-emergence Herbicide Injury. Luigi Peracchi¹, Raissa Na-ah¹, Olivia Landau^{*2}; ¹Washington State University, Pullman, WA. ²USDA-ARS, Pullman, WA (80)
- 01:45 PM **†Kernza Intermediate Wheatgrass Tolerance** to PRE and POST Herbicides. McKenzie Barth*, Jenna Meeks, Andrew Kniss; University of Wyoming, Laramie, WY (81)
- 02:00 PM Harnessing Stress Memory: Transcriptomic Insights into Multigenerational Crop-Weed Interactions in Spring Wheat. Albert Kwarteng*, Albert Adjesiwor; University of Idaho, Kimberly, ID (82)
- 02:15 PM Understanding Indaziflam Resistance in Poa annua: Recent Findings and Future Directions. Joshua Miranda*, Marcelo Moretti; Oregon State University, Corvallis, OR (83)

- 02:30 PM †Does Climate Change Alter Weed Management Recommendations? Evaluating the Impact of Elevated CO2 on Plant Growth and the Critical Period of Weed Control. Emma Kubinski*, Kevin Sheridan, Fabian Menalled; Montana State University, Bozeman, MT (84)
- 02:45 PM Getting a Grip on False Cleavers (Galium spurium).

Breanne Tidemann^{*1}, Charles Geddes², Sara Martin³, Shaun Sharpe⁴; ¹Agriculture and Agri-Food Canada, Lacombe, AB. ²Agriculture and Agri-Food Canada, Lethbridge, AB. ³Agriculture and Agri-Food Canada, Ottawa, ON. ⁴Agriculture and Agri-Food Canada, Saskatoon, SK. (**85**)

TUESDAY AFTERNOON MARCH 11

Coffee Break

LOCATION: TIME: Westlake Foyer 3:00 PM - 3:30 PM PT

Sponsored by Miller Research, Rohlfs and Adkins Research, Pratum Research, GDM Solutions, VARCO, Azlin Seed Service

TUESDAY AFTERNOON MARCH 11

ORAL - Weeds of Agronomic Crops

LOCATION:	Pine
TIME:	3:30 PM - 5:00 PM PT
CHAIR:	Joseph Mettler
	North Dakota State University
	Fargo, ND
CO-MODERATOR:	Kyle Roerig
	Pratum Co-Op
	Salem, OR

*SPEAKER † STUDENT CONTEST

03:30 PM †Fluroxypyr Control of Kochia (Bassia scoparia) With and Without MCPA. Newman Teye-Doku*, Andrew Kniss; University of Wyoming, Laramie, WY (86)

- 03:45 PM Season-Wide Weed Management with Florpyrauxifen-benzyl in Water-Seeded Rice. Deniz Inci*, Kassim Al-Khatib; University of California Davis, Davis, CA (87)
- 04:00 PM †Exploring the Effects of Tillage and Environmental Conditions on Weed Emergence in the Inland Pacific Northwest. P Weston Maughan*, Jessica Kalin, Marija Savic, Ian Burke; Washington State University, Pullman, WA (88)

 04:15 PM Introducing INTERLINE® MEGA Powered by L-tek[™] for Optimized L-glufosinate Applications to Glufosinate-tolerant Row and Specialty Crops. Ryan Bryant-Schlobohm*¹, Ryan Henry², Cody Gray³, Carlos Antonio Koury d'Arce Junior⁴; ¹UPL NA, Inc. Amaraillo, TX. ²UPL NA, Inc. Fort Wayne, IN. ³UPL NA, Inc. Peyton, CO. ⁴UPL NA, Inc. Raleigh, NC (89)

04:30 PM Tradeoffs in the Use of Glyphosate-resistant Canola for Italian Ryegrass Management. Mark Thorne*, Drew Lyon; Washington State University, Pullman, WA (90)

04:45 PM Control of Multiple Herbicide-Resistant Amaranthus Populations in Corn. Jose Nunes¹, Jesse Haarmann², Mark Kitt³, David Belles³, Tom Beckett³, Ben Westrich*⁴; ¹Syngenta Crop Protection, Madison, WI. ²Syngenta Crop Protection, Rochester, MN. ³Syngenta Crop Protection, Greensboro, NC. ⁴Syngenta Crop Protection, Loveland, CO (91)

TUESDAY AFTERNOON MARCH 11

ORAL - Weeds of Range, Forestry, and Natural Areas

LOCATION:	Pike
TIME:	3:30 PM - 5:00 PM PT
CHAIR:	Jaycie Ardnt
MODERATOR:	University of Wyoming Extension Sheridan, WY Jake Courkamp Colorado State University Fort Collins, CO

- 03:30 PM Evaluating Pyraflufen-ethyl on Leafy Spurge Management at Two Rangeland Sites. Evaluating Pyraflufen-ethyl on Leafy Spurge Management at Two Rangeland Sites. Beth Fowers^{*1}, Jaycie Arndt, Brian Mealor, Jane Mangold²; ¹University of Wyoming, Sheridan, WY. ²Montana State University, Bozeman, MT (92)
- 03:45 PM Updated Colorado Front Range Research on Long-term Invasive Annual Grass Control with Rejuvra.

Jim Sebastian*, Joe Swanson; Boulder County Parks and Open Space, Longmont, CO (93)

- 04:00 PM Indaziflam Treatment Effects on Live Fuel Moisture Content (LFMC) in Colorado Front Range Grasslands Invaded by Annual Grasses. Jacob Courkamp*, John Watson; Colorado State University, Fort Collins, CO (94)
- 04:15 PM Current Status of Noxious Weed Management in South Dakota. Eric Jones^{*1}, Krista Ehlert², Philip Rozeboom¹, Jill Alms¹, Dave Vos¹; ¹South Dakota State University, Brookings, SD. ²South Dakota State University, Rapid City, SD (95)
- 04:30 PM Leafy Spurge Management (Euphorbia esula) with Broadcast Applications of 2,4-D Followed by Wiper Applications of Glyphosate. Eric Jones*, Jill Alms, Dave Vos; South Dakota State University, Brookings, SD (96)
- 04:45 PM The Mullet Strategy: Using Short and Long Residual Herbicides to Improve Native Perennial Establishment. Jaycie Arndt*, Brian Mealor; University of Wyoming, Sheridan, WY (97)

TUESDAY AFTERNOON MARCH 11

ORAL - Weeds of Horticultural Crops

Mercer
3:30 PM - 5:00 PM PT
Craig Alford
Corteva Agriscience
Indianapolis, IN

- 03:30 PM Electric Weed Control What Works, What Doesn't, and What We've Learned. Luisa Baccin*, Marcelo Moretti; Oregon State University, Corvallis, OR (98)
- 03:45 PM †A Multi-Year Study on the Effects of Electric Weed Control on Hazelnut (Corylus avellana) Growth and Yield. Juliano Ricardo Marchi Sulzback*, Marcelo Moretti; Oregon State University, Corvallis, OR (99)
- 04:00 PM Management of Yellow Nutsedge in Pacific Northwest Potato Production. Rui Liu*¹, Joel Felix², Timothy Waters³; ¹Washington State University, Prosser, WA. ²Oregon State University, Ontario, OR. ³Washington State University, Pasco, WA (100)
- 04:15 PM †Evaluation of Electrical Weed Control in California Orchards. Tong Zhen*, Bradley Hanson; University of California Davis, Davis CA (101)
- 04:30 PM Weed Control in Potatoes with the Anthem Flex PreMix - Do I Still Need to Tank Mix? Pamela Hutchinson*, Brent Beutler; University of Idaho, Aberdeen, ID (102)
- 04:45 PM †Two Applications of Post-Emergence Herbicides in Sorghum Maximize Reductions of Broadleaf Weeds in Chile Pepper Grown the Following Year. Ram Singh Insa*, Brian Schutte, Erik Lehnhoff; New Mexico State University, Las Cruces, NM (103)

TUESDAY AFTERNOON MARCH 11

ORAL - Teaching and Outreach

LOCATION:	Denny
TIME:	3:30 PM - 4:30 PM PT
CHAIR:	Harlene M. Hatterman-
	Valenti
	North Dakota State University
	Fargo, ND
CO-MODERATOR:	Sandra K. McDonald
	Mount West PEST
	Fort Collins, CO

03:30 PM †MulcH2O: A Sprayable Biodegradable, Mulch Technology for Certified Organic Growers.

Ben Weiss^{*1}, Lisa DeVetter¹, Greta Gramig², Sharon Weyers³, Dilpreet Bajwa⁴, Alice Formiga⁵, Suzette Gallinato⁶, Waqas Ahmad²; ¹Washington State University: Northwestern Research and Extension Center, Mount Vernon, WA. ²North Dakota State University, Fargo, ND. ³USDA-ARS, Morris, MN. ⁴Montana State University, Bozeman, MT. ⁵Oregon State University, Corvallis, OR. ⁶Washington State University, Pullman, WA (**104**)

03:45 PM Ask Artificial Intelligence (AI): How Good are AI Chatbots in Answering Pest Management Questions? Albert Adjesiwor*¹, Randa Jabbour²; ¹University of Idaho, Kimberly, ID. ²University of Wyoming, Laramie, WY (105)

04:00 PM Does Dual-Boom Application Alleviate 2,4-D Antagonism of Quizalofop-P? Kirk Howatt^{*1}, Joseph Mettler¹, Rich Zollinger²; ¹North Dakota State University, Fargo, ND. ²AMVAC Chemical Company, Spokane, WA (106)

04:15 PM Be Out Standing in the Field!! The Critical Role of Field Research Scientists in Developing, Launching, and Supporting Crop Protection Products. Byron Sleugh*, Rory Degenhardt, David Simpson, Craig Alford, Norbert Satchivi, Kelly Backscheider, John Wiles, Andrew Leader; Corteva Agriscience, Indianapolis, IN. (107)

TUESDAY AFTERNOON MARCH 11

Student Reception

LOCATION: TIME: Puget Sound 5:00 PM - 6:30 PM PT

Sponsored by Syngenta

TUESDAY AFTERNOON MARCH 11

<u>Rita Beard Endowment</u> Foundation Board of Trustees Meeting LOCATION:OlympicTIME:5:00 PM - 6:00 PM PT

WEDNESDAY MORNING MARCH 12

Registration

LOCATION: Casca TIME: 7:00 Å

Cascade Foyer South 7:00 AM - 4:00 PM PT

WEDNESDAY MORNING MARCH 12

Finance Committee Meeting

LOCATION:	Puget Sound
TIME:	7:00 AM - 8:00 AM PT

WEDNESDAY MORNING MARCH 12

New Officer Orientation

LOCATION:	Westlake Boardroom
TIME:	7:00 AM - 8:00 AM PT

WEDNESDAY MORNING MARCH 12

ORAL – Weeds of Agronomic Crops

LOCATION:	Pine
TIME:	9:30 AM - 11:30 AM PT

CHAIR: Joseph Mettler North Dakota State University Fargo, ND CO-MODERATOR: Kyle Roerig Pratum Co-Op Salem, OR

09:30 AM Do AMS Replacement Adjuvants Replace AMS?

Rich Zollinger^{*1}, Kirk Howatt², Albert Adjesiwor³; ¹AMVAC Chemical Company, Spokane, WA. ²North Dakota State University, Fargo, ND. Idaho State University, Kimberly, ID (**108**)

09:45 AM Intercropping of Dryland Wheat Cropping Systems Affects Crop Establishment and Weed Suppression.

Vhuthu Ndou*¹, Hero Gollany², Wayne Polumsky², Fernando Oreja³, Jennifer Gourlie⁴, Judit Barroso¹; ¹Oregon State University, Adams, OR. ²USDA-ARS, Adams, OR. ³Clemson University, Clemson, SC. (**109**)

10:00 AM Statewide Survey of Herbicide Resistance in Kochia (Bassia scoparia) and Pigweed (Amaranthus spp.) Populations Using Molecular Diagnostics and Volunteer-Based Collections.

Zack Bateson*¹, Lindsey Fransen¹, Brian Jenks², Michael Christoffers³, Megan O'Neil¹, Joseph Ikley³; ¹National Agriculture Genotyping Center, Fargo, ND. ²North Dakota State University North Central Research Extension Center, Minot, ND. ³North Dakota State University, Fargo, ND. (**110**)

10:15 AM Influence of Rainfall Timing on the Efficacy of PRE-Herbicides. Karina Beneton^{*1}, Liberty Galvin¹, Todd

Baughman²; ¹Oklahoma State University, Stillwater, OK. ²Texas A&M University, Lubbock, TX (**112**)

10:30 AM Spectral Discrimination of Weed Species in Grass Seed Production in the Willamette Valley, OR. Iram Mujahid Iqbal*, Jing Zhou, Carol Mallory-Smith, Pete Berry; Oregon State University, Corvallis, OR. (113)

10:45 AM Identifying Weed Species in Mint Using Aerial Imagery and Artificial Intelligence. Pete Berry, Andy Branka*, Jing Zhou; Oregon State University, Corvallis, OR (114)

11:00 AM Community-Based Herbicide Resistance Management: A Participatory Action Research Approach to Improving Weed Management in North Central Washington. Nick Bergmann*¹, Ian Burke¹, Garett Heineck², Chloe Wardropper³; ¹Washington State University, Pullman, WA. ²USDA-ARS, Prosser, WA. ³University of Illinois, Champaign, IL (115)

WEDNESDAY MORNING MARCH 12

ORAL - Weeds of Range, Forestry, and Natural Areas

LOCATION:	Pike
TIME:	9:30 AM - 11:00 AM PT
CHAIR:	Jaycie Ardnt
MODERATOR:	University of Wyoming Extension Sheridan, WY Jake Courkamp Colorado State University Fort Collins, CO

*SPEAKER † STUDENT CONTEST

09:30 AM Longer-term responses of cheatgrass and desired species to integrated weed management in southwest Montana. Lisa Rew*, Christian Larson; Montana State University, Bozeman, MT (116)

09:45 AM Remote Sensing for Mapping Invasive Annual Grasses and Sagebrush in Carbon County, Wyoming. Chloe Mattilio*, Brian Mealor, Jaycie Arndt; University of Wyoming, Sheridan, WY (117)

10:00 AM Working Toward Thresholds: Rush Skeletonweed (Chondrilla juncea) Control After Aerial Herbicide Treatment Improves as Perennial Herbaceous Foliar Cover Increases. Timothy Prather*, Lisa Jones; University of Idaho, Moscow, ID (118)

- 10:15 AM Evaluating Herbicide Impacts In A Greenhouse Setting: Native Seedling Emergence, Biomass, And Injury Responses. Ian McRyhew*¹, Virgil Dupuis, Jane Mangold², Tim Seipel²; ¹Salish Kootenai College, Pablo, MT. ²Montana State University, Bozeman, MT (119)
- 10:30 AM Maintaining Effective Weed Management, in the Wildland Urban Interface. Joe Swanson*, James Sebastian; Boulder County Parks and Open Space, Longmont, CO (120)

 10:45 AM † Where Does the Woad End?: Population Dynamics During Dyer's Woad (Isatis tinctoria) Management.
 Maloree McDonald*¹, Erin Hettinger², Mirella Ortiz¹, Eric Westra¹, Tom Monaco¹, Corey Ransom¹; ¹Utah State University, Logan, UT.
 ²U.S. Fish and Wildlife Services, Ibapah, UT (121)

WEDNESDAY MORNING MARCH 12

ORAL - Basic Biology, Ecology, and Technology

LOCATION:	Mercer
TIME:	9:30 AM - 11:00 AM PT
CHAIR:	Breanne D. Tidemann
	Agriculture and Agri-Food
	Canada
	Lacombe, AB, Canada
CO-MODERATOR:	Albert Adjesiwor
	University of Idaho
	Kimberly, ID
* SPEAKER † STUD	ENT CONTEST

09:30 AM Friend or Foe: Exploring Competition Between Cheatgrass (Bromus tectorum) and Ventenata (Ventenata dubia) in an Addition Series Study. Lilly Sencenbaugh*, Lisa Rew; Montana State University, Bozeman, MT (122)

09:45 AM †Parrotfeather (Myriophyllum aquaticum) Biology and Management Options in Utah. Francielli Santos de Oliveira*, Tia Lawrence, Eric Westra, Mirella Ortiz; Utah State University, Logan, UT (123)

10:00 AM Germinability of Annual Bluegrass (Poa annua) in Western Oregon. Clint Mattox*; USDA-ARS FSCRU, Corvallis, OR (124)

 10:15 AM †Impact of Different Herbicides on Microbial Activities in Cotton Production Systems. Jasleen Makkar*, Rupinder Saini, Lindsey Slaughter, Sukhbir Singh, Glen Ritchie; Texas Tech University, Lubbock, TX (125)

- 10:30 AM Palmer Amaranth (Amaranthus palmeri), Kochia (Bassia scoparia), and Russian Thistle (Salsola tragus) Applied and Basic Research Updates from Colorado. Philip Westra*; Colorado State University, Fort Collins, CO (126)
- 10:45 AM †Dose Response of Tolpyralate & Bromoxynil on Weedy Grasses and Green Foxtail (Setaria viridis) Resistance Management. Hayden Lee*, Kirk Howatt; North Dakota State University, Fargo, ND (127)

WEDNESDAY MORNING MARCH 12

ORAL - Weeds of Horticultural Crops

1:00 AM PT
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***SPEAKER †** STUDENT CONTEST

09:30 AM	Evaluating Herbicide Combinations and
	Sequences for Season-long Weed Control in
	Onion.
	Harlene Hatterman-Valenti*, Collin Auwarter;
	North Dakota State University, Fargo, ND (128)

09:45 AM †Hydromulches Reduce Weed Pressure in Organic Broccoli Production.

Waqas Ahmad^{*1}, Greta Gramig¹, Ben Weiss², Sharon Weyers³, Lisa DeVetter², Alice Formiga⁴, Suzette Galinato⁵, Dilpreet Bajwa⁶; ¹North Dakota State University, Fargo, ND. ²Washington State University Northwestern Washington Research and Extension Center, Mount Vernon, WA. ³USDA-ARS North Central Soil Conservation Research Laboratory, Morris, MN. ⁴Oregon State University, Corvallis, OR. ⁵Washington State University, Pullman, WA. ⁶Montana State University, Bozeman, MT (**129**)

10:00 AM Weed Control and Response of Onion Cultivar 'Vaquero' to Post-emergence Applied Pyraflufen-Ethyl Herbicide. Joel Felix^{*1}, Rui Liu²; ¹Oregon State University, Ontario, OR. ²Washington State University, Prosser, WA (130)

- 10:15 AM †Differential Circulifer tenellus Acceptance of Allelopathic Barley and Brown Mustard Cover Crops. Caroline Toth*, Brian Schutte; New Mexico State University, Las Cruces, NM (131)
- 10:30 AM Refining Use of Chemigated Rimsulfuron for Branched Broomrape (Phelipanche ramosa) Management in California Processing Tomato. Matthew Fatino*, Bradley Hanson; University of California, Davis, Davis, CA (132)
- 10:45 AM †Interseeding Cover Crops to Manage Weeds in Organic Vegetables. Sophia Lattes*, Reilly Stack, Fabian Menalled, Mac Burgess; Montana State University, Bozeman, MT (133)

WEDNESDAY MORNING MARCH 12

WSWS Awards Luncheon

LOCATION:	Cascade Ballroom
TIME:	11:45 AM - 1:30 PM PT
CHAIR:	Timothy S. Prather
	University of Idaho
	Moscow, ID
MODERATOR:	Carl Coburn
	Bayer Crop Science
	St. Louis, MO

Sponsored by Jemmett, UPL, Corteva, R&D Sprayers, The Amalgamated Sugar Company

WEDNESDAY AFTERNOON MARCH 12

ORAL – Weeds of Agronomic Crops

LOCATION:	Pine
TIME:	1:30 PM - 3:00 PM PT

CHAIR: Joseph Mettler North Dakota State University Fargo, ND CO-MODERATOR: Kyle Roerig Pratum Co-Op Salem, OR

- 01:30 PM Evaluation of Acifluorfen and Lactofen for Management of Herbicide-Resistant Palmer Amaranth (Amaranthus palmeri) in Dry Edible Bean: Weed Control Efficacy and Crop Safety. Nevin Lawrence*; University of Nebraska Lincoln, Lincoln, NE (134)
- 01:45 PM Diflufenican: A New Preemergent Broadleaf Herbicide in Pacific Northwest Winter Wheat. Monte Anderson*; Bayer Crop Science, Spangle, WA (135)

02:00 PM Mapping Resistant Weed Populations Across the Pacific Northwest; A Collaborative Approach. Pete Berry*¹, Albert Adjesiwor², Judit Barroso¹, Joan Campbell³, Doug Finkelnburg³, Olivia Landau⁴, Drew Lyon⁵, Victor Ribeiro¹, Ian Burke⁵; ¹Oregon State University, Corvallis, OR. ²University of Idaho, Kimberly, ID. ³University of Idaho, Moscow, ID. ⁴USDA-ARS, Pullman, WA. ⁵Washington State University, Pullman, WA. (136)

02:15 PM Herbicide-Resistant Common Chickweed [Stellaria media (L.) Vill.] Populations and Vield Losses in San Joaquin Valley Small Grain Dairy Crops. Jennifer Valdez-Herrera*, Anil Shrestha, Katherine Waselkov, Nicholas Clark; California State University, Fresno, CA (137)

02:30 PM Development of ConvintroTM Brand Herbicides for Managing Amaranthus Species in Corn and Soybean: Field Performance Update. Charles Hicks*, Jody Gander, Katilyn Price, Carl

Coburn, Richard Leitz, Zewei Miao, Emily Scholting; Bayer Crop Science, St. Louis, MO (138)

02:45 PM Does Tank Mixing Palisade with Axial Bold Reduce Wild Oat and Control Lodging in Wheat?

Hafiz Haider Ali^{*1}, Jared Spackman¹, Tom Jacobsen², Macy Rankin², Pamela Hutchinson¹; ¹University of Idaho, Aberdeen Research and Extension Center, Aberdeen, ID. ²Unviersity of Idaho, St. Anthony, ID (**139**)

WENDESDAY AFTERNOON MARCH 12

<u>DISCUSSION – Basic Biology, Ecology,</u> <u>Technology</u>

LOCATION:	Denny
TIME:	1:45 PM - 2:30 PM PT

One of These Things is Not Like the Other... or is it? Crop Mimicry, Hybridization, and Taxonomic Challenges

WENDESDAY AFTERNOON MARCH 12

<u>DISCUSSION – Weeds of Range, Forestry, and</u> <u>Natural Areas</u>

LOCATION:	Pike
TIME:	1:35 PM - 2:20 PM PT

Recent Changes in Weed Science and How to Adapt Management

WENDESDAY AFTERNOON MARCH 12

DISCUSSION – Weeds Horticultural Crops

LOCATION:	Mercer
TIME:	1:45 PM - 2:30 PM PT

Building Synergy Through Weed Science Collaborations in the West

WEDNESDAY AFTERNOON MARCH 12

<u>SYMPOSIUM - Innovative Approaches for</u> Weed Science Education and Communication

LOCATION:	Pike
TIME:	2:30 PM - 5:00 PM PT

CHAIR:

Emma Kubinski Montana State University Bozeman, MT Sponsored by Hubbard Ag Sciences

- 02:30 PM Innovative Approaches for Weed Science Education and Communication Introduction. Fabian Menalled* Montana State University, Bozeman, MT (140)
- 02:45 PM Rethinking the Extension Weed Science Paradigm. Jane Mangold* Montana State University, Bozeman, MT (141)

03:00 PM Breaking the Cycle: Educating for Effective Herbicide Resistance Management. Pete Berry*¹, Albert Adjesiwor², Judit Barroso¹, Joan Campbell³, Doug Finkelnburg³, Olivia Landau⁴, Drew Lyon⁵, Victor Ribeiro¹, Ian Burke⁵; ¹Oregon State University, Corvallis, OR. ²University of Idaho, Kimberly, ID. ³University of Idaho, Moscow, ID. ⁴USDA-ARS, Pullman, WA. ⁵Washington State University, Pullman, WA.(142)

- 03:15 PM Putting Weed Research to Work: Farmers Leading the Way. Sophia Lattes* Montana State University, Bozeman, MT (143)
- 03:30 PM Weed Science is Boring: Innovative Ways to Engage Undergraduates. Fabian Menalled* Montana State University, Bozeman, MT (144)
- 03:45 PM Teaching Ecological Weed Management: A Laboratory Exercise on Weed Community Assembly. Emma Kubinski* Montana State University, Bozeman, MT. (145)
- 04:00 PM Lessons Learned from Teaching Herbicide Physiology Collaboratively and Online. Tracy M. Sterling* Montana State University, Bozeman, MT (146)
- 04:15 PM Frequent Low-Stakes Assignments to Teach Quantitative Skills in an Undergraduate Weed Science Course. Brian Schutte* New Mexico State University, Las Cruces, NM (147)
- 04:30 PM Edible Weeds Experiential Learning in Sustainable Food Systems and Weed Science. Roland Ebel* Montana State University, Bozeman, MT (148)

WEDNESDAY EVENING MARCH 12

What's New in Industry?

LOCATION: TIME: CHAIR:

Cascade Ballroom 5:00 PM - 6:00 PM PT Charlie Hicks Bayer Crop Science Fort Collins, CO

WEDNESDAY EVENING MARCH 12

Student Night Out

TIME: 6:15 PM - 8:15 PM PT

THURSDAY MORNING MARCH 13

WSWS Business Meeting and Student Awards

LOCATION:	Cascade Ballroom
TIME:	6:30 AM - 9:00 AM PT
CHAIR:	Tim Prather
	University of Idaho
	Moscow, ID
MODERATOR:	Tim Prather
	University of Idaho
	Moscow, ID
CO-MODERATOR	: Carl Coburn
	Bayer Crop Science
	St. Louis, MO

Sponsored by BASF, Corteva

THURSDAY MORNING MARCH 13

ORAL - Weeds of Agronomic Crops

LOCATION:	Pine
TIME:	9:15 AM - 10:45 AM PT

CHAIR:

Joseph Mettler

North Dakota State University Fargo, ND CO-MODERATOR: Kyle Roerig Pratum Co-Op Salem, OR

*SPEAKER † STUDENT CONTEST

09:15 AM Dry Bean Development as Influenced by Soil Nitrogen and Neighboring Plants. Andrew Kniss*¹, Ram Yadav²; ¹University of Wyoming, Laramie, WY. ²Ohio State University, Columbus, OH (**149**)

09:30 AM Increasing Droplet Size Reduces Spray Droplet Adsorption. Cody Creech^{*1}, Amanda Easterly²; ¹University of Nebraska Lincoln, Scottsbluff, NE. ²University of Nebraska Lincoln, Sidney, NE (150)

09:45 AM Confirmation and Current Understanding of New Herbicide-Resistant Weeds in Western Canada. Charles Geddes*, Gaganpreet Dhariwal, Austin

Charles Geddes*, Gaganpreet Dhariwal, Austin Jaster, Laura Kennedy, Mattea Pittman; Agriculture and Agri-Food Canada, Lethbridge Research and Development Centre, Lethbridge, AB (**151**)

10:00 AM Impact of Desiccants on Crop Dry Down and Weed Management in Garbanzo and Lentils. Fabian Menalled*¹, Laura Berrios¹, Het Samir Desai¹, Lovreet Shergill²; ¹Montana State University, Bozeman, MT. ²Colorado State University, Fort Collins, CO (152)

 10:15 AM Potential of Cover Crop Use, Termination with a Roller-crimper, and Weed Suppression in a Strip-Till Silage Corn Production System in the Central Valley of California. Robert Willmott¹, Jennifer Valdez-Herrera¹, Jeffrey Mitchell², Anil Shrestha*¹; ¹California State University, Fresno, CA. ²University of California Davis, Davis, California (153)

10:30 AM Lentil Tolerance and Weed Control with POST-Applied Pyridate and Metribuzin. Brian Jenks^{*1}, Ed Davis²; ¹North Dakota State University, Fargo, ND. ²DDS Research, Bozeman, MT (154)

THURSDAY MORNING MARCH 13

DISCUSSION- Teaching and Outreach

LOCATION:	Pike
TIME:	9:15 AM - 10:00 AM PT

Read and Follow the Label – Sounds Easy, but is it?

THURSDAY MORNING MARCH 13

DISCUSSION- Weeds of Agronomic Crops

LOCATION:	Pine
TIME:	10:45 AM - 11:30 AM PT

Greenhouse Research Standards and Methods

THURSDAY AFTERNOON MARCH 13

WSWS Board of Directors Meeting

LOCATION:	Puget Sound
TIME:	12:00 PM - 2:00 PM PT
CHAIR:	Carl Coburn
	Bayer Crop Science
	St. Louis, MO

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1952	W. W. Robbins	1996	Gus Foster
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1960	Richard A. Fosse	2000	Jeffrey M.Tichota
962	William R. Furtick	2001	Don Morishita
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965	Jesse M. Hodgson	2003	Jill Schroeder
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1969	K. C. Hamilton	2006	Phil Banks
970	Harold P. Alley	2007	Kassim Al-Khatib
971	Kenneth W. Dunster	2008	Ron Crockett
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1973	David E. Bayer	2010	Jesse Richardson
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1981	L.E. "Jack" Warren	2018	Monte Anderson
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1984	Gary Massey	2021	Corey Ransom
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2023 Joel Felix2024 Curtis Rainbolt

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19821	R. Phillip Upchurch
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1984	Warren C. Shaw
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1988	Logan A. Norris
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1995	K. James Fornstrom
1997	F. Dan Hess
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2014	David Armstrong
2020	William Price
2021	Michael Walsh
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968	Robert B. Balcom	1996	Don Colbert
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	Alden S. Crafts	1997	Steven A. Dewey
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	D.C. Tingey	1998	Doug K. Ryerson
969	Lambert C. Erickson		Tom D. Whitson
	Jesse M. Hodgson	1999	Charlotte V. Eberlein
1970	Lee M. Burge		John E. Orr
	Bruce Thornton	2000	Rodney G. Lym
1971	Virgil H. Freed		Frank L. Young
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1074	K.C. Hamilton	2003	Vanelle Peterson
1974	William R. Furtick	2004	Carol Mallory-Smith
1075	Oliver A. Leonard	2004	Don Morishita
1975	Richard A. Fosse	2005	Phil Banks
1076	Clarence I. Seely	2005	Nelroy Jackson Roland Shirman
1976 1977	Arnold P. Appleby J. LaMar Anderson	2006	Celestine Duncan
1977		2000	
1978	Arthur H. Lange David E. Bayer	2007	Joan Campbell Bill Cobb
19/0	Kenneth W. Dunster	2007	Phil Stahlman
1979	Louis A. Jensen	2008	K. George Beck
1919	Gary A. Lee	2008	Rick Boydston
1980	W.L. Anliker	2009	Kassim Al-Khatib
1981	P. Eugene Heikes	2007	Scott Nissen
1701	J. Wayne Whitworth	2010	Tracy Sterling
1982	Bert L. Bohmont	2010	Rick Arnold
	Lowell S. Jordan	2011	Daniel A. Ball
1983	Richard D. Comes	-011	Roger Gast
	Clyde L. Elmore	2012	Jodie Holt
1984	Larry C. Burrill		Lars Anderson
1985	L.E. "Jack" Warren	2013	Tim Miller
1986	Dwight V. Peabody		Tom Lanini
	Robert L. Zimdahl	2014	Robert Stougaard
1987	Alex G. Ogg, Jr.		Robert Norris
	Jean H. Dawson	2015	Pete Forster
1988	Harvey D. Tripple		Gilbert Cook
	E. Stan Heathman	2016	Jesse Richardson
1989	John O. Evans		Joseph DiTomaso
	W.B. "Jim" McHenry	2017	Ralph Whitesides
1990	Harry S. Agamalian		Ed Peachey
	Bart A. Brinkman	2018	Phillip Munger
1991	Larry W. Mitich		Kai Umeda
	Edward E. Schweizer	2019	Joe Yenish
1992	Donald C. Thill		Drew Lyon
	Harold M. Kempen	2020	Traci Rauch
1993	Paul J. Ogg		Monte Anderson
	Peter K. Fay	2021	Carl Libbey
1994	Sheldon E. Blank		Charlie Hicks
	Gus J. Foster	2022	Andrew Kniss
1995	Stephen D. Miller		Richard Zollinger

John T. Schlesselman	
----------------------	--

2023	Bradley D. Hanson
	Corey V. Ransom
2024	Sandra McDonald
	Stott Howard

	OUTSTANDIN	G WEE	D SCIENTISTS
1989	Jean H. Dawson	2008	Robert G. Wilson
1990	Arnold P. Appleby		Leo Charvat
1991	Stephen D. Miller		Pat Clay [‡]
	Harvey D. Tripple	2009	Carol Mallory-Smith
1992	Alex G. Ogg, Jr.		Pete Forster
	Kenneth W. Dunster		Alan Helm [‡]
1993	Edward E. Schweizer	2010	Drew Lyon
	Sheldon E. Blank		Ian Burke [‡]
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2000	Philip Westra	2018	Rick Boydston
2000	Bart Brinkman	2010	Brian Schutte [‡]
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2007	John Fenderson		Derek Sebastian [‡]
	Rod Lym		Andrew Kniss
	-		Greg Dahl
			0

COLDIFICTO

[‡]Early Career

	OUTSTANDING ACHI	
2003	Bill Brewster	Professional Staff
2005	Guy Kyser	Professional Staff
	Eric Lane	Weed Manager
2006	Ed Peachy	Professional Staff
2007	Jim Freeman	Weed Manager
	Carl Libbey	Professional Staff
2008	Lars Baker	Weed Manager
	Lori Howlett	Professional Staff
2009	April Fletcher	Weed Manager
	Gary Willoughby	Professional Staff
2010	Cheryl Fiore	Professional Staff
2011	Robert Higgins	Professional Staff
2012	James Sebastian	Professional Staff
	Jerry Asher	Weed Manager
2013	Joan Campbell	Professional Staff
	Tim D'Amato	Weed Manager
2014	Ed Davis	Professional Staff
	Rita Beard	Weed Manager
2015	Brent Beutler	Professional Staff
2020	Steve Sauer	Weed Manager
2022	Julie Kraft	Weed Manager
2023	Beth Fowers	Weed Manager
2024	Cody Beckley	Professional Staff
2024	Joe Swanson	Weed Manager

	PRESIDENTIAL AWARD OF MERIT		
1994	Rodney G. Lym		
1995	John E. Orr		
1996	Steven A. Dewey		
1997	Jill Schroeder		
1999	Celestine Duncan		
2000	Gus Foster		
2001	Jack Schlesselman		
2002	Tom Whitson		
2003	Nelroy Jackson		
2004	Joan Campbell		
2005	Tony White		
2006	Janet Clark		
2007	Tim Miller		
2009	Mike Edwards		
2010	Phil Motooka		
2011	Kai Umeda		
2012	Tim Miller		
2013	Phil Banks		
2014	Carl Libbey		
2015	Carol Mallory-Smith		
2016	Roland Schirman		
2017	Phil Stahlman		
2018	Roger Gast		
2019	Sandra K. McDonald		
2020	Marty Schraer		
2021	Elizabeth Mosqueda		
2022	Vanelle Peterson		
	Mithila Jugulam		
	Todd Neel		
	Dennis Scott		
	Mirella Ortiz		
2023	Charlie Hicks		
2024	Tracy Rauch		

PROCEEDINGS EDITORS 1990-2021		
1990 - 1997	Rodney Lym	
1998 - 2000	Kathy Christianson	
2001	Joan Campbell & Donn Thill	
2002 - 2003	Joan Campbell	
2004 - 2010	Joan Campbell & Traci Rauch	
2011 - 2017	Bill McCloskey	
2018 - current	Carl Libby	

NEWSLETTER EDITORS 2002-2021		
2002 - 2003	Don Morishita	
2004 - 2006	Pat Clay	
2007 - 2011	Cheryl Fiore	
2011 - 2013	Cheryl Fiore and Carl Libby	
2013 to present	Carl Libby	

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1964-1966	Edward Boles	Business Manager
1967-1989	LaMar Anderson	Treasurer/ Business Manager
1990-2006	Wanda Graves	Treasurer / Business Manager
2007-2017	Phil Banks	Treasurer / Business Manager
2017-2018	Tara Steinke	Treasurer / Business Manager
2018-2019	Kala Travis	Treasurer / Business Manager
2019-current	Eric Gustafson	Business Manager*
2020-2022	Phil Banks	Treasurer
2023-current	Ryan Rapp	Treasurer

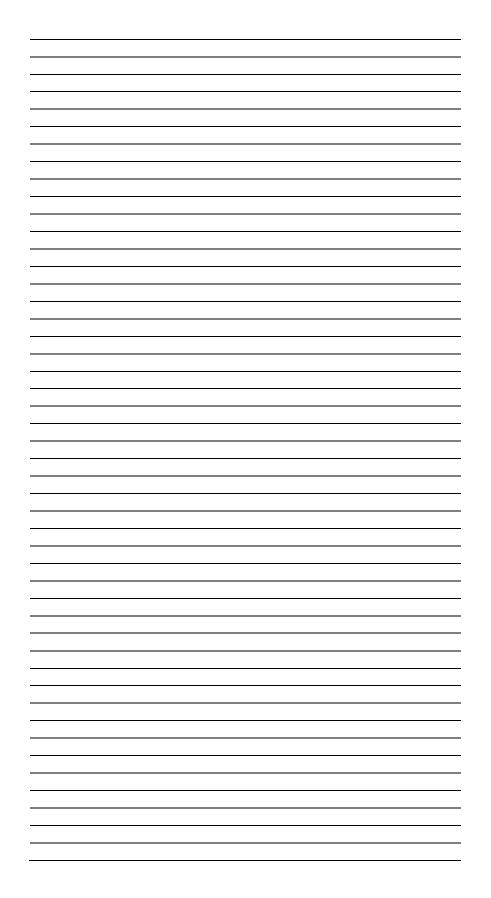
 \ast A separate position for Treasurer on the Board of Directors was created in 2020

WSWS Committees 2024-25

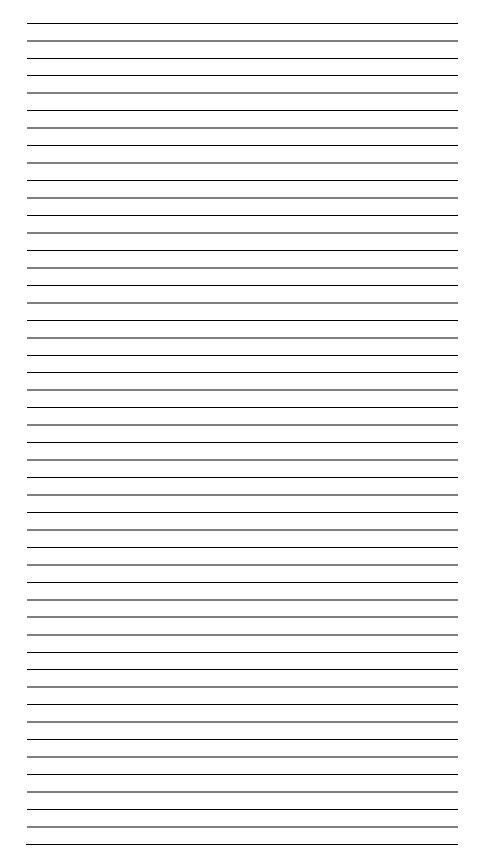
Board contact *italicized*. (Year to rotate off committee in parenthesis)

Awards President Harry Quicke (2025) Drew Lyon Chair (2026) Nevin Lawrence (2027) Adeyemi Olanrewaju, Student Rep (2025)	Legislative <i>WSSA Representative</i> Ryan Edwards (2025) Lisa Rew (2026) Lee Van Wychen, Ex-officio
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Program President-Elect Carl Coburn, Chair (2025) Dirk Baker (2025) Albert Adjesiwor (2025)	Poster <i>President-Elect</i> Lovreet Shergill (2025) Shannon Clark (2026) Marcelo Moretti (2027)
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Student Paper Judging President-Elect Alix Whitener (2025) Jake Courcamp (2026) Judit Barroso (2027) Tong Zhen, Student	Site Selection Past President Kyle Roerig (2025) Craig Alford (2026) Jesse Richardson (2027)
Sustaining Membership Past President Carl Coburn (2025) Ben Westrich (2026)	Ad-Hoc Committees President Diversity and Inclusion; Elizabeth Mosqueda, Invasive Species; Mirella Ortiz, Lisa Jones, Jane Mangold, Chloe Mattilio, Will Hatler, Tanner Hart

NOTES







THANK YOU!

The WSWS members thank the Sustaining Members of the WSWS for their support. We would also like to thank the industry sponsors listed below for providing refreshments for the retiree reception and meeting breaks and for hosting the graduate student, and business breakfasts. Please thank the sustaining members and sponsors for their generosity and support of the society. The Program and Local Arrangements Committees would like to **thank Marty Schraer** for making the arrangements for the sponsored activities.

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FUTURE MEETING DATES AND SITES

2026 Tucson Arizona