



Western Society of Weed Science Newsletter

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SPRING 2023

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President's Report - Curtis Rainbolt

I hope that everyone enjoyed the 76th meeting of the Western Society of Weed Science in Boise, Idaho. The success of the meeting was due to the people who volunteered their time and knowledge. A special thanks to Joel Felix, Sandra McDonald, and the entire Board of Directors. George Newberry served as our Local Arrangements Chair and did a fantastic job of keeping things running smoothly.

The Section Chairs and Chair-elects did a wonderful job of keeping the meeting on track and led great discussions. A big thanks to those who shared their work and expertise by presenting a paper or poster at the meeting. The student presentations and posters were remarkably good as always. Congratulations to those that won awards and thank you to Clint Beiermann, Student Paper Judging Chair, and the society members who helped judge the contest.

I also want to recognize Jane Mangold, Mirella Ortiz, Sandra McDonald, Clarke Alder, and Doug Kleweno who worked to develop the "Water in the West: Implications for Weed Management" symposium. It gave us a great start to the meeting and was a nice tie-in with our colleagues from the Western Aquatic Plant Management Society.

Lastly, I want to give a big thank you to our business manager Eric Gustafson. He does a tremendous amount of work to make sure the meeting goes smoothly and was very patient and helpful to me during the meeting facility and program planning.

Please consider volunteering to serve on a committee. It is a wonderful opportunity to get more involved and further build relationships in WWS. If you are interested in serving please let me know at curtis.rainbolt@basf.com. Thanks to all WWS Board of Directors, committee members, and section chairs who have completed their terms and welcome to those starting to serve in 2023.

I appreciate the opportunity to serve as 2023-2024 WWS President. Please do not hesitate to reach out if you want to be more involved or have ideas for improving our society. All the best and I look forward to seeing everyone in Denver!

Curtis Rainbolt, President

WWS Annual Meeting March 4 – 7, 2024, Denver, Colorado

Student Liaison Report – Aaron Becerra-Alvarez

I'd like to start out by acknowledging all students who attended and participated at this year's WSWs/WAPMS annual meeting in Boise, Idaho. I interacted with a lot of great students and saw great support for the students from the societies. The annual meeting is a great opportunity for students to present our research, grow professionally and meet our future colleagues. For those who were unable to attend, we hope to see you next year in Denver, Colorado!

At our WSWs Student Business Luncheon, we elected our new student-liaison chair elect, Kenzie Barth from the University of Wyoming. Help me congratulate her in assuming this role in our society! Kenzie will work alongside me this year learning the role of the student-liaison and take over next year at the conclusion of our annual meeting.

Our student events at the annual meeting were a success! Thank you to our sponsors, mentors and board of directors who participated and made the events possible. The events included the Student Luncheon, Student Afternoon Reception, and the Student Night Out. We got positive feedback from all the events. Thank you all who donated and participated in the silent auction! This year we obtained \$1,675 from the auction. All money raised from the silent auction go to fund the Elena Sanchez Memorial WSWs Outstanding Student Scholarship. We are looking to have some WSWs attire (shirts/polos) available through our website soon and sales will also go to support the student scholarship. We will keep you all updated on the progress of this project.

There are opportunities available for students coming up. The WSSA Travel Enrichment Experience Award deadline is May 9, 2023. This award allows students to participate in a five-day, four-night educational experience with professionals in a different WSSA region. Please see the **WSSA website** for more information and application procedure. The National Weed Science Contest will be going on July 25-27, 2023 in Union City, Tennessee. Registration for this event has passed, but to my knowledge there will be representation from the WSWs this year, so we wish those students luck!

Lastly, I would like to thank Grace Flusche Ogden, our previous student-liaison, who taught me all I need to know to succeed in this role. It was great working with you, and good luck with your future endeavors! We hope to see you stay active in our society.

Please don't hesitate to reach out if you think of any ideas to improve the student experience in our society.

Thanks,

Aaron Becerra-Alvarez, Student Chair
abecerraalvarez@ucdavis.edu

McKenzie Barth, Student Chair (elect)
mbarth3@uwyo.edu



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Fellow & Honorary Awards – Rich Zollinger

The WSWS Fellows and Honorary Member Committee is pleased to announce the Fellow Awards for 2023 were presented to Dr. Corey Ransom, Utah State University and Dr. Brad Hanson, University of California-Davis. The Honorary Member Award was presented to Dr. Dan Kunkel, presently Northeast Product Development Director for AMVAC Chemical Corporation but prior was 30 years at Rutgers University within the IR-4 Project as Associate Director, Food and International Programs, Senior Associate Director, and Acting National Director. The 2023 committee members were Ed Peachey (Chair), Drew Lyon, and Rich Zollinger. Rich will assume the role of committee chair for 2023.



Brad Hanson



Corey Ransom



Dan Kunkel

WSWS 2023 Professional Awards

The **Outstanding Professional Staff** award was granted to Dr. Beth Fowers, Assistant Research Scientist at the University of Wyoming Sheridan Research and Extension Center, Sheridan, Wyoming.

The **Outstanding Weed Scientist – Early Career** award was granted to Dr. Breanne Tidemann, Research Scientist with Agriculture and Agri-Food Canada, Lacombe Research and Development Center, Lacombe, Alberta.

The **Outstanding Weed Scientist** award was granted to Byron Sleugh, Lead Scientist with Corteva’s Weed Management Biology and Field Sciences team, Indianapolis, Indiana.



Joel Felix & Beth Fowers



Breanne Tidemann



Byron Sleugh

2023-2024 WSWS Officers and Executive Committee



The 2023-2024 WSWS Board of Directors are: (back row, left to right) **Alan Helm**-WSSA Liaison, **Sandra McDonald**-Constitution and Operating Procedures, **Nevin Lawrence**-Education and Regulatory Section Chair, **Gregory Dahl**-CAST Representative, **Ryan Rapp**-Treasurer, **Dirk Baker**-Research Section Chair Elect; (front row, left to right) **Marcelo Moretti**-Research Section Chair, **Aaron Becerra-Alvarez**-Student Liaison Chair, **Joel Felix**-Past President, **Curtis Rainbolt**-President, **McKenzie Barth**-Student Liaison Chair -Elect, **Timothy Prater**-President-Elect. Not Pictured: **Lee Van Wychen**-Executive Director of Science Policy, **Joe Vassios**-Secretary, **Eric Gustafson**-Business Manager, **Clarke Alder** Member-At-Large (Private), and **Albert Adjesiwor**-Education and Regulatory Section Chair-Elect. Their contact information can be found in the sidebar sections of the newsletter.

Presidential Award of Merit

Charlie Hicks, with Bayer CropScience in Fort Collins, Colorado received the 2022/2023 WSWS **Presidential Award of Merit** from Joel Felix for outstanding contribution to the society through organizing and executing the 'What's New in Industry' session at the WSWS annual meetings for many years.



Charlie Hicks (right) accepts the Presidential Award of Merit from the WSWS President Joel Felix (left).

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Publications

WSWS ONLINE

EDUCATION

WSSA Journals Website Online

CALENDAR OF EVENTS

Aquatic Plant Management Society Annual Meeting
Jul. 24 - 27, 2023
Indianapolis, Indiana
www.apms.org

Canadian Weed Science Society Annual Meeting
Nov. 19 - 23, 2023
Winnipeg, Manitoba
www.weedscience.ca

North Central Weed Science Society Annual Meeting
Dec. 11 - 14, 2023
Minneapolis, Minnesota
www.ncwss.org

Northeastern Weed Science Society Annual Meeting
Jan. 8 - 11, 2024
Gettysburg, Pennsylvania
www.newss.org

Weed Science Society of America and Southern Weed Science Society Joint Annual Meeting
Jan. 22 - 25, 2024
San Antonio, Texas
www.wssa.net
www.swss.ws

Western Society of Weed Science Annual Meeting
Mar. 4 - 7, 2024
Denver, Colorado
www.wsweedscience.org

Elena Sanchez Memorial Scholarship

Timothy Prater, Awards Committee Chair announced the recipients of the “WSWS Elena Sanchez Outstanding Student Scholarship Program” were:

- Carlos Alberto Gonsiorkiewicz Rigon, 3rd year Ph.D. candidate, Colorado State University, Todd Gaines advisor
- Georgia Harrison, 3rd year Ph.D. candidate, University of Idaho, Tim Prather and Eva Strand advisors
- Zachariah Fighter, 2nd year M.S. candidate, Montana State University, Jane Mangold and Scott Powell advisors

A big thanks to their advisors for bringing along such great promising talent for the future of weed science.



The WSWS Rita Beard Endowment Foundation Announces Scholarship Recipients

The Rita Beard Endowment Foundation Board of Trustees has selected three recipients of travel scholarships for 2023. They are Melissa Meyers, a M.S. student at New Mexico State University; Lilly Sencenbaugh, a Ph.D. student from Montana State University; and Valerie Repp, Coordinating Invasive Species Biology for Pheasants and Quail Forever. The Rita Beard Endowment Foundation is a 501 (c) (3) non-profit that was created from a generous donation by Rita Beard’s family and friends. Funds are awarded to support educational opportunities of students and early career invasive species managers by providing registration and travel to professional meetings including Society for Range Management, Western Society of Weed Science, Western Aquatic Plant Management Society, and the North American Invasive Species Management Association. Melissa Meyers will be attending the Society for Range Management annual meeting in February, Lilly Sencenbaugh will be attending the Western Society of Weed Science/Western Aquatic Plant Management Society joint annual meeting in February-March, and Valerie Repp will be attending the North American Invasive Species Management Association annual conference in October. To read more about the Foundation, learn how to apply for the 2024 scholarships, or make a donation go to: [Rita Beard Endowment Travel Scholarship](#).



Lilly Sencenbaugh

2023 Student Paper and Post Contest

2023 Paper judging committee: Josh Adkins, Clint Beiermann, Alix Whitener, and Georgia Harrison

There was a total of 34 oral and poster entries made in the student contest. As always, WSWs students brought outstanding presentations and posters to this year's meeting. Oral presentation sections for weeds of horticultural crops and basic biology & ecology were combined due to a low number of entries.

A big thank you to all 36 members who volunteered to judge the student contest:

Mirella Ortiz	Tina Bond	Caleb Dalley
Dan Tekiela	Dennis Scott	Elizabeth Oys
Jodie Crose	Harlene Hatterman-Valenti	Alix Whitener
Lisa Rew	Rui Liu	Joe Yenish
Marty Schraer	Jake Courkamp	Garrison Gundy
Chloe Mattilio	Ben Westrich	Vicki Maloney
Gregory Endres	Clint Beiermann	Sonia Rios
Chris Mayo	Tyler Hicks	Eric Westra
Cody Creech	Pete Berry	Vicki Maloney
Josh Adkins	Ben Fischer	Quincy Law
David Belles	Rachel Seedorf	Breanne Tidemann
Jaycie Arndt	Clarke Alder	Sandra McDonald

Sections with 9+ entries were awarded first, second, and third place. Sections with 5-8 entries were awarded first and second. Sections with 1-4 entries were awarded first only. The winners of each section were announced at the business breakfast and presented with a check. Customized plaques will be mailed to the award winners at a later date. Contest winners are listed below for each section.

Posters:

Weeds of Range, Forestry, & Natural Areas

1st place: Weston Maughan, Utah State University

Testing barrier-created safe sites for revegetation purposes in indaziflam-treated areas

Weeds of Agronomic Crops

1st place: McKenzie Barth, University of Wyoming

Late-Season Weed Control in Dry Bean With Split Application of Residual Herbicides

2nd place: Chandra Montgomery, University of Idaho

Weed Seedbank Control in Rotational Crops for Proactive Herbicide Resistance Management

Weeds of Horticultural Crops

1st place: Joshua Miranda, Oregon State University

*Indaziflam Resistance in Annual Bluegrass (*Poa annua* L.) from Hazelnut Orchards*

Basic Biology & Ecology

1st place: Andre Lucas Simoes Araujo, Colorado State University

Weed survey in Colorado sugar beet farms reveals resistance to Dicamba and Glyphosate

Oral presentations:

Weeds of Range, Forestry, & Natural Areas

1st place: Erin Hettinger, Utah State University
Community Response to Dyer's Woad Control Efforts

2nd place: Erin Teichroew, Montana State University
Impact of native vegetation on cheatgrass fitness: A neighborhood study

3rd place: Walker Billings, University of Wyoming
Effects of Grazing Deferment Following Invasive Annual Grass Control with Indaziflam in Northeast Wyoming

Weeds of Agronomic Crops

1st place: Marija Savic, Washington State University
Smooth Scouringrush Control with Glyphosate is Affected by Surfactant Choice and Application Time

2nd place: Victor Ribeiro, Oregon State University
Herbicide Resistance in Downy Brome from Winter Wheat Fields in Eastern Oregon

Weeds of Horticultural Crops + Basic Biology & Ecology

1st place: Joshua Miranda, Oregon State University
*European Hazelnut (*Corylus avellana* L.) and Canada thistle (*Cirsium arvense* L.) Response to *Florpyrauxifen-benzyl**

Graduate Research Assistantship (PhD)

with the University of Illinois at Urbana-Champaign, College of ACES, Department of Crop Sciences (<https://cropsciences.illinois.edu>), 1102 S. Goodwin Avenue, Urbana, IL 61801.

Submitted March 28, 2023.

A Graduate Research Assistant position (PhD) is available at the University of Illinois-Urbana in the weed physiology program of Dr. Dean Riechers, with the possibility to also serve as a Teaching Assistant. The overall research topic is to investigate and comprehensively understand the genetic basis for metabolic herbicide resistance in dioecious *Amaranthus*. Students will perform cutting-edge, multidisciplinary research aimed at unraveling genetic and biochemical mechanisms of weed resistance related to rapid herbicide detoxification. Research experimentation will generate and integrate data from genomic, metabolomic (HPLC and LC-MS/MS), quantitative gene expression, greenhouse dose-response analysis (PRE and POST herbicides) and cell biology studies utilizing advanced microscopy techniques.

Qualifications include a BS or MS in weed science, plant biology, physiology, biochemistry, genetics or molecular biology discipline. Experience with gene expression, QTL analysis and/or metabolite profiling is desirable but is not required.

Interested applicants should send an email stating their academic and research interests, professional background, and current resume (PDF) to Dr. Dean E. Riechers, Professor of Weed Physiology (riechers@illinois.edu). A formal Graduate School application can be submitted anytime, but ideally the successful applicant can start their PhD program in fall semester 2023. Further application details will be provided upon request.

The University of Illinois is an Equal Opportunity, Affirmative Action employer. Minorities, women, veterans, and individuals with disabilities are encouraged to apply. For more information, visit <http://go.illinois.edu/EEO>. To learn more about the University's commitment to diversity, please visit <http://www.inclusiveillinois.illinois.edu>.

Contribute to CABI's new Plant Health Cases

Real-life examples of plant health in practice.

About Plant Health Cases

CABI, together with Editors in Chief Lone Buchwaldt, David B. Collinge, and Boyd A. Mori is embarking on a new type of online publication called Plant Health Cases.

Plant Health Cases is a curated, peer-reviewed collection of real-life examples of plant health in practice. It is an invaluable resource for students, lecturers, researchers, and research-led practitioners. We are interested in submissions of case studies in all areas relevant to plant health, including:

- plant diseases
- plant pests
- weeds
- environmental factors
- agronomic practices
- diagnosis, prevention, monitoring and control
- international trade and travel

What is a Case Study?

A Plant Health Case is a relatively short publication with a well-defined example of research in plant health, e.g. a study which results in reduced impact from a disease or pest problem. Cases should be between 3000 and 5000 words long, and can include photos, figures and tables. They should be written in an engaging style that is both science-based and accessible using a limited number of references. Importantly, each case should suggest points for discussion to broaden the reader's horizon, inspire critical thinking and lead to interactions in the classroom or field.

Interested in Contributing to Plant Health Cases?

We are currently looking for contributions of case studies, and we welcome your ideas! You may have existing case study material ready prepared for use in teaching, or a good example of research in plant health which could be easily adapted to our template. **Further information and guidance on submitting your idea for a case study**

Your submission will be peer-reviewed, and a DOI assigned at the time of publication similar to your other scientific publications. The corresponding author will receive £100 upon acceptance of the final case study.

Further Information please get in touch with Rebecca Stubbs, Commissioning Editor, CABI
r.stubbs@cabi.org

About CABI

CABI is a not-for-profit, scientific research, international development and publishing organisation. Unlike other publishers, we use our surpluses to support scientific and rural development projects that help improve the lives of the world's poorest people, which means that by publishing with us, you are helping to improve the lives of some of the world's poorest people. Please visit our website at www.cabi.org

WASHINGTON REPORT

April 4, 2023

Lee Van Wychen

WSSA Science Policy Committee: Past and Present

Two Directors of Science Policy and two of the three chairs of the Science Policy Committee (formerly known as the Washington Liaison Committee) pose for a picture after the general session at the WSSA/NEWSS 2023 annual meeting in Arlington, VA. Their leadership of the Science Policy Committee extends from 1990 to present. The only Science Policy Committee chair missing is Donn Shilling, Georgia, who chaired the committee from 2010 to 2018.



*Pictured (L to R): **Lee Van Wychen**, WSSA Executive Director of Science Policy: 2005 - present; **Rich Bonanno**, Associate Dean, College of Agriculture and Life Sciences and Director, North Carolina State Extension, and Chair, WSSA Washington Liaison/Science Policy Committee: 1990 - 2010; **Janis McFarland**, retired Syngenta; Chair, WSSA Science Policy Committee: 2018 - present; and **Rob Hedberg**, retired USDA-NIFA, WSSA Congressional Fellow 1995-1996 and Director of Science Policy, Washington Liaison/Science Policy Committee 1999 - 2005.*

Xochitl Torres Small Nominated for #2 Post at USDA



On February 16, Xochitl Torres Small was nominated to be Deputy Secretary for USDA under Secretary Tom Vilsack. The former New Mexico congresswoman (2019 - 2021) is currently serving as the USDA Under Secretary for Rural Development since 2021.

Torres graduated from Mayfield High School in Las Cruces, NM in absentia while she earned her International Baccalaureate (IB) Diploma from Waterford Kamhlaba United World College in Mbabane, Swaziland. She earned a Bachelor of Science in Foreign Service degree from Georgetown University in 2008 and her Juris Doctor degree from the University of New Mexico School of Law. Torres Small worked as a field representative for U.S. Senator Tom Udall (D-NM) from 2009 to 2012. She served as a federal law clerk in the New Mexico District from 2015 to 2016. She also worked as a water attorney with the Kemp Smith law firm.

Kevin Shea, APHIS Administrator, has been serving as Acting Deputy Secretary since March 3 when former Deputy Secretary Jewel Bronaugh retired.

WSSA Research Priorities Symposium Hosts 13 Federal Agency Reps

Thirteen federal agencies participated in a symposium held during the WSSA/NEWSS 2023 annual meeting that focused on identifying research gaps and weed management needs in both managed and natural ecosystems. The symposium was co-organized by Steve Young, USDA-ARS National Program Leader for Weeds and Invasive Pests and Jim Kells, WSSA NIFA Fellow. Dan Brainerd, Michigan State University and Chair of the Research Priorities Committee, shared insights from the 2022 research priorities survey to facilitate a discussion on the future of weed science in terms of research needs, program support, and national initiatives.



Federal agency reps participating in the WSSA research priorities symposium.

*(Pictured first row: L to R) Paul Heimowitz, Department of the Interior (DOI) - US Geological Survey (USGS); Scott Pfister, USDA Animal and Plant Health Inspection Service (APHIS); Steve Young, USDA Agricultural Research Service (ARS), Jessica L. Burnett, National Aeronautics and Space Administration (NASA); **Seth Flanagan**, DOI - Bureau of Land Management (BLM) and **FICMNEW Co-chair**; Doug Burkett, Department of Defense (DOD) Armed Forces Pest Management Board (AFPMB);*

*(Second Row): Jim Kells, WSSA-NIFA Fellow; Mike Ielmini, USDA Forest Service (USFS); Jeremy Crossland, DOD - Army Corps of Engineers (ACOE); Vijay Nandula, USDA National Institute of Food and Agriculture (NIFA); Cameron Douglass, USDA Office of Pest Management Policy (OPMP); Eric Bradley, Department of Energy, Office of Sustainable Environmental Stewardship (DOE – EHSS-21); **Chris Taliga**, USDA Natural Resources Conservation Service (NRCS) and **FICMNEW Co-chair**; Terri Hogan, DOI - National Park Service (NPS); Lee Van Wychen, WSSA Executive Director of Science Policy.*

What is FICMNEW?

Since 12 of the current 20 FICMNEW agency members were present at the symposium, let's talk about my most favorite acronym in all of Washington DC (Note: NASA was represented at symposium, but is not a FICMNEW member agency at present). FICMNEW is the **Federal Interagency Committee for the Management of Noxious and Exotic Weeds (FICMNEW)**. It meets regularly (quarterly or monthly) and represents a formal partnership between federal agencies with direct invasive plant management and regulatory responsibilities spanning across the United States and territories. These agencies support weed science research or invasive plant management, or both, through grant funding, technical assistance, and scientific studies. The remaining eight federal agency members and their principals not in the photo above are:

- USDA Agricultural Marketing Service (USDA - AMS) Ernest Allen
- DOI Bureau of Indian Affairs (DOI – BIA) Thomas Mendez
- DOI Bureau of Reclamation (DOI – BOR) Jolene Trujillo
- Department of Transportation (DOT) Rhonda Solomon
- Environmental Protection Agency (EPA) Gisele Nighswander
- Farm Service Agency (USDA – FSA) open
- Federal Highway Administration (DOT – FHWA) Richard Darden
- US Fish & Wildlife Service (DOI – FWS) Xiomara Labiosa

While the FICMNEW federal agency meetings among the principals are closed, there is an open-to-the-public meeting typically following their closed meeting. The next open meeting is:

- *FICMNEW Open Meeting: April 26, 2023, 1:00 pm EST/11:00 am MDT*
- *Presentation:* Efforts to Control European Frogbit
- *Presenters:* Thomas Alwin and Sarah Lesage from the Michigan Department of Environment, Great Lakes, and Energy (EGLE)
- *FICMNEW Call-in information:* The public meeting will be held virtually. Call in instructions will be sent via email. Please email Seth Flanigan, sflanigan@blm.gov, if you are not on the FICMNEW electronic list and would like to receive a meeting invitation.

China Battles Smooth Cordgrass (*Spartina alterniflora*) at Unprecedented Scale

Science. 8 MAR 2023. By Erik Stokstad.

Along its 18,000 kilometers of coastline, China has been taken over by a green invader. Smooth cordgrass (*Spartina alterniflora*) grows tall and thick across tidal mudflats, depriving endangered migratory birds of habitat, clogging shipping channels, and ruining clam farms. Now, China aims to beat back 90% of the weed by 2025. “This is a mammoth undertaking,” says Steven Pennings, a coastal ecologist at the University of Houston. “It’s audacious.”

Spartina, native to eastern North America, was brought to China starting in 1979 to stabilize tidal mudflats and turn them into land for agriculture or development. The plan worked, but the *Spartina* kept spreading and now covers about 68,000 hectares, about the area of New York City. The government has realized, says Yihui Zhang, a wetland ecologist at Xiamen University, that “the harm of *Spartina alterniflora* outweighs its benefits.” It dominates native salt marshes, outcompeting native plants that provide food for indigenous species such as the reed parrotbill, which has declined as a result. **Continue reading in *Science*.**

The IR-4 Project Commemorates 60 Years of Impact

This year, the IR-4 Project commemorates 60 years of operation. Since its establishment by land grant universities and the USDA in 1963, IR-4 has championed specialty crop growers by facilitating the registration of safe, effective pest management solutions to meet their unique needs.

Specialty crops, which include fruits, vegetables, nuts, herbs, and horticulture crops, are not typically served by agrochemical companies’ registration efforts. Larger acreage, “major crops” (like corn and soybeans) typically yield higher returns on investment. This “minor use problem” spurred the founding of IR-4.

IR-4 upholds specialty crops as essential components of a healthy diet, a thriving landscape, and a robust U.S. economy. Since its founding, IR-4 has secured over 23,000 pest management product registrations through the Environmental Protection Agency (EPA) for food crops (and countless others for ornamental crops). IR-4 evaluates a range of tools — including reduced-risk chemical and bio-based pesticides, as well as emerging technologies and integrated solutions. According to an economic impact study by Michigan State University in 2022, IR-4 contributes \$8.97 billion annually to the gross domestic product. **More info about the IR-Project.**



Weed Scientists attending the 60 year Celebration of the IR-4 Project on March 7 in Washington DC.

*Pictured (L to R): **Rob Hedberg**, retired USDA-NIFA, former WSSA Director of Science Policy; **Lee Van Wychen**, WSSA Executive Director of Science Policy; **Ray McAllister**, Senior Director, Regulatory Policy at CropLife America; **Dirk Drost**, retired Syngenta, Minor Use Foundation chairman, **Doug Buhler**, Assistant Vice President of Research and Innovation at Michigan State University; **Dan Kunkel**, former IR-4 Project manager, Northeast Field Product Development Director at AMVAC Chemical Corporation; **Jerry Baron**, Executive Director of the IR-4 Project; **Janis McFarland**, retired Syngenta, WSSA Science Policy Committee chair.*

Weed Science Societies Comment on EPA’s Endangered Species Act Workplan

On February 14, the WSSA, along with APMS, NCWSS, NEWSS, SWSS and WSWs **submitted comments** in response to EPA’s request for information on the Endangered Species Act (ESA) Workplan Update. This is a major step for EPA to harmonize its obligations under the ESA and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

The draft ESA Workplan Update provides more details about how EPA plans to impose various mitigation measures that will be required on pesticide labels to meet its ESA obligations when registering a pesticide. There are concerns about some of the mitigation options such as “buffers to reduce pesticide drift and water runoff” or “do not use when rain is expected in the next 48 hours” — which raises other issues such as what or how compliance might be proven or enforced.

The ESA Workplan Update also describes initiatives that, according to EPA, will help it and other federal agencies improve approaches to mitigation under the ESA and improve the interagency consultation process outlined in the ESA Workplan. These initiatives include EPA’s work to identify ESA mitigation measures for pilot species, incorporate early ESA mitigation measures

for groups of pesticides (e.g., broadleaf herbicides), and develop region-specific ESA mitigations.

Press Release

The WSSA has also issued a press release on April 4 “**WSSA Encourages Growers to Act Now to Understand the Impact of EPA’s Endangered Species Act Compliance Initiatives**” trying to raise awareness of the coming changes. **The bottom line - farmers and land owners need to become familiar with the EPA’s updated workplan and how to access site specific application instructions online through EPA’s Bulletins Live! Two.** As we found out in January 2022 on the revised ESA-compliant Enlist One and Enlist Duo labels, applications might be prohibited in entire counties.

EPA Issues Endangered Species Protections for Three Herbicides and a Soil Fumigant

On February 1, the EPA implemented measures to protect 28 federally endangered and threatened Pacific salmon and steelhead species and their designated critical habitat from the effects of **bromoxynil, prometryn, metolachlor, and 1,3-D** (also known as telone).

Biological Opinions

In June 2021, after receiving public comments, the National Marine Fisheries Service (NMFS) issued final biological opinions for bromoxynil, prometryn, metolachlor, and 1,3-D. NMFS’s biological opinions found that registered uses of these pesticides do not jeopardize listed salmon and steelhead species or adversely modify their critical habitats. **Because use of these pesticides may result in “take”** of individuals of listed salmon and steelhead species, the biological opinions also describe **measures to minimize the potential for take and any impacts of take.** “Take” includes (among other things) unintentionally harming or killing an individual of a listed species.

Implementation

EPA has implemented these biological opinions by issuing **Endangered Species Protection Bulletins**, available on the **Bulletins Live! Two** website, and approving label amendments to protect listed species, thereby fulfilling its obligations under the Endangered Species Act (ESA) for these pesticides for the listed salmon and steelhead species and their critical habitat.

The **Endangered Species Protection Bulletins** for the four pesticides **describe geographically specific use limitations** to protect listed salmon and steelhead species and critical habitat. The Bulletins include mitigation measures such as no-spray buffers, retention ponds, and vegetated ditches to minimize potential take.

The amended labeling for bromoxynil, prometryn, metolachlor, and 1,3-D products includes instructions for pesticide users to obtain Bulletins and follow their required mitigation measures. The labeling also includes guidance on how to report ecological incidents associated with pesticide applications, should users observe any. This work aligns with the goals outlined in EPA’s April 2022 ESA Workplan and its November 2022 ESA Workplan Update to provide practical, timely protections for listed species from pesticides.

EPA Aims to Reinstate 2015 Worker Protections From Pesticides

The EPA is requesting public comment on a proposed rule that would retain various pesticide Application Exclusion Zone (AEZ) requirements under the 2015 Agricultural Worker Protection Standard (WPS) that were not implemented as part of a previous agency final rule currently under a court-ordered stay.

Unveiled February 16, the pre-proposal seeks to “improve and modernize” protections under the agency’s 2015 standard on agricultural worker protection. EPA classifies the application exclusion zone as “the area surrounding the application that must be free of all persons, other than appropriately trained and equipped handlers, during pesticide applications.”

Under the proposal, EPA would reinstate provisions including:

- Applying the AEZ beyond an establishment’s boundaries and when workers are within easements, such as for utility workers to access telephone lines.
- Establishing AEZ distances for ground-based spray applications of 25 feet for medium or larger sprays when sprayed from a height greater than 12 inches from the soil surface or planting medium, and 100 feet for fine sprays.

EPA issued a final rule in October 2020 revising the AEZ requirement. However, the U.S. District Court for the Southern District of New York last year extended its stay of the rule, which initially was granted on Dec. 28, 2020 – the day before the final rule was to have taken effect.

The prepublication version of the proposal states that “since the 2020 AEZ rule has not been implemented due to the court-ordered stay,” the 2015 WPS “continues to provide the operative regulatory language for the AEZ requirements during the current stay and any future extensions of the stay.”

Still, the agency proposes to keep elements of the 2020 rule, including:

- Exempting farm owners’ immediate family members from the requirement.
- Establishing clarifying language stating that pesticide applications suspended as a result of individuals entering an exclusion zone may be resumed after the individuals have left the area.

EPA officially issued the proposed rule titled “Pesticides: Agricultural Worker Protection Standard; Reconsideration of the Application Exclusion Zone Amendments” on March 13, 2023.

The proposed rule is available at [EPA-HQ-OPP-2022-0133-0002](#). **Comments are due on or before May 12, 2023.**

2023 National Invasive Species Awareness Week (NISAW) Recap

NISAW was held virtually from February 20-26 and organized by the North American Invasive Species Management Association (NAISMA). Sponsors included the WSSA, Wyoming Weed and Pest Council, Washington Invasive Species Council, SePRO, UPL, Pacific States Marine Fisheries Commission, and Bayer. **NISAW** included:

- 5 Webinars
- 36 webinar presenters
- 65 events on the NISAW calendar
- 759 attendees
- 1,045 advocacy letters sent to members of Congress
- 11,000+ people reached via email marketing

NISAW 2024 is scheduled for **February 26 – March 3, 2024** in Washington DC. This will be the 25th anniversary and planning is already under way. My hope is that all the invasive species stakeholder groups traveling to Washington DC will make **establishing an invasive species management fund** their #1 priority.

Dr. Chris Boomsma Selected as New CAST EVP/CEO



The Council for Agricultural Science and Technology (CAST) announced on March 8 that Dr. Chris Boomsma will be their next Executive Vice President and Chief Executive Officer (EVP/CEO). Kent Schescke, the current EVP/CEO, will retire at the end of August after eight successful years with CAST.

Dr. Boomsma is currently serving as the Director of Education for the American Society of Agronomy, the Crop Science Society of America, and the Soil Science Society of America (ACSESS). In addition, he is the Director of Science and Strategy for Decode 6 educational platform. Prior to joining ACSESS, he worked as a research director for Purdue University and a strategist and scientist at Dow AgroSciences (now Corteva). More details at <https://www.cast-science.org/cast-announces-dr-chris-boomsma-as-next-evp-ceo/>

Establishing an Invasive Species Management Fund

A common theme during the Invasive Species Advisory Committee (ISAC) meeting held virtually on March 6 – 8, and the first ISAC meeting since 2019, is that we need a consolidated all-purpose **source of funding for invasive species prevention, research, and management.**

Global trade provides many benefits to us as consumers, but there is no question that one of the indirect costs is the importation of invasive species. I have begun work on Capitol Hill discussing legislation similar to what Hawaii passed into law in 2008 (**HB2843**) where an inspection, quarantine, and eradication service fee was assessed on the net weight of freight, computed on the basis of **50 cents for every 1,000 pounds of freight** brought into the state.

As an example, there would be a \$3 fee assessed for a 6,000 pound SUV imported into the U.S. A rough estimate of U.S. import data suggests that this inspection, quarantine, and eradication service fee would generate about \$1 billion per year for a federal invasive species management fund. Please email me with any thought, concerns or suggestions.

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National and Regional Weed Science Societies
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Russian Knapweed Biological Control Success with Host Specific Wasps and Midges

Dan Bean and Sonya Daly, Colorado Department of Agriculture Palisade Insectary

Russian knapweed (*Rhaponticum repens*) remains the target of a classical weed biological control program in the western United States. Russian knapweed is a non-native plant invading and degrading cropland, rangeland, riparian areas, and roadsides. USDA APHIS permitted a rosette gall midge (*Jaapiella ivannikovi*) and a stem gall wasp (*Aulacidea acroptilonica*) that decrease flowering and stunt plant growth by causing abnormal plant growth (galls).



Figure 1: Photos taken at the Dolores River site showing Russian knapweed plants stunted by stem galls (left) and a combination of stem and rosette galls (right) on the same plant.

In 2012 Colorado Department of Agriculture Palisade Insectary (Palisade) first released rosette gall midges (*J. ivannikovi*) at a disturbed site near the Dolores River where a major Russian knapweed infestation covered more than 24 hectares in a high-value riparian corridor (Figure 3). Palisade set up monitoring transects and a 16 m² grid, centered at the release point, to measure the impact of the biocontrol agents on the target weed and desired native plants. Over the next eight years, Palisade detected low but consistent presence of midge rosette galls at the site with no signs of overall plant suppression (Figure 2 Left).

After releasing stem gall wasps (*Aulacidea acroptilonica*) in 2019 Palisade detected a steady

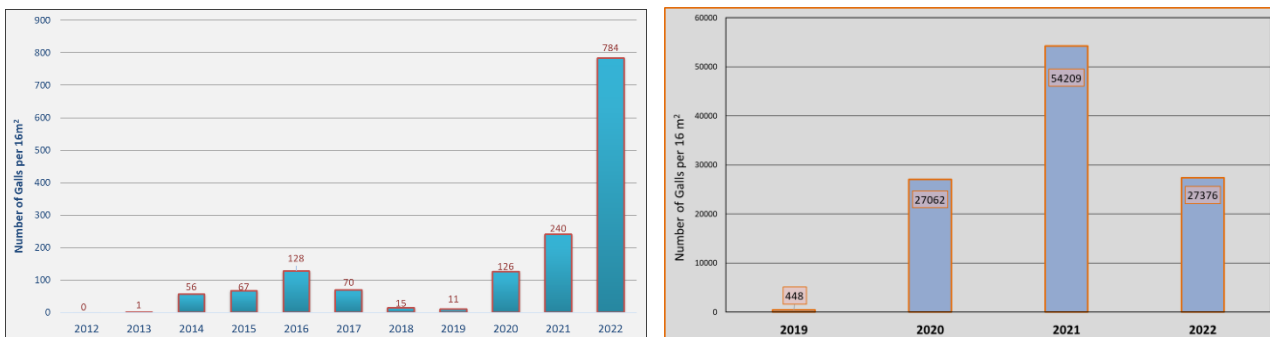


Figure 2: Left total number of rosette galls caused by the gall midge (*Jaapiella ivannikovi*) counted in the census area across years at the Dolores River site; Right Total number of stem galls caused by the gall wasp (*Aulacidea acroptilonica*) counted in the 16 m² census area across years, recorded at the Dolores River site.

increase of stem galls within the 16 m² squares centered on the release site (Figure 2 Right) and a stunting of plant growth as the galls substantially impacted plant structure (Figure 1). The density of stem galls peaked in 2021, with over 3,300 galls per m², followed by a decline in density in 2022, most likely due to stunted plants presenting fewer potential oviposition sites for the wasps to use to generate galls.

An intriguing pattern was also noted in which the midge gall density increased substantially after the introduction of the wasps (Figure 2). Plants heavily infested with stem galls generate short and tender regrowth that proved attractive to oviposition by the rosette gall midges. Not only were there increased numbers of galls but the size was notable, with some plants having galls resembling fingerling potatoes (Figure 1).

In 2022 the 16 m² census area around the point of release had 72% of Russian knapweed stems galled by the wasps and 2% of stems were galled by the midge. Both biocontrol agents were observed together on 13% of the plants within the census area. CDA Palisade noted decreased flower production and plant height, which may be enhanced by an interaction of both galling agents. CDA Palisade will continue to monitor the Dolores River site as well as others across Colorado as it appears the Russian knapweed galling agents may play a key role in suppression of the weed in the western US. CDA Palisade is very grateful for the foundational work and dedication by the scientists at CABI, Delémont, Switzerland, without which we would have no safe effective biocontrol agents to use against this highly damaging weed.

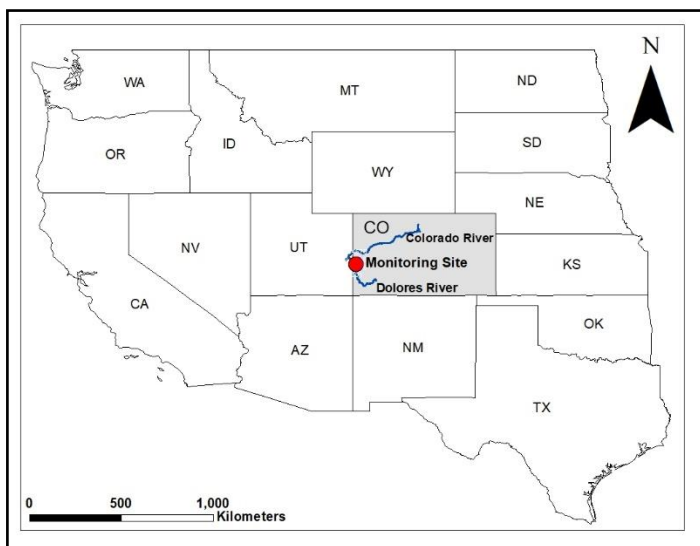


Figure 3. A map displaying a monitoring site along the Dolores River in Colorado.

Note from the Business Office – Eric Gustafson

The 2023 WSWS Annual Meeting was held in Boise Idaho, February 27 to March 2, 2023, at The Boise Center. This meeting was a joint annual meeting with the Western Aquatic Plant Management Association (WAPMS).

The meeting was a great success thanks to the numerous volunteers that graciously give their time and energy to the Society and all its endeavors. President Felix and Program Chair Rainbolt did a fantastic job of navigating all the hurdles of hosting the event and the inclusion of the WAPMS brought new eyes and ideas to the event.

Attendance was very strong with over 275 attendees registered for the event from both societies. It was great to see all the members from both groups networking together at the Monday social and throughout the week. It is always energizing and refreshing to see our members network and interact during the breaks and poster sessions. The energy of face-to-face meetings is far better, in my opinion, and I hope we never have to go back to virtual only.

The planning has started for the 2024 meeting in Denver, CO and we are anticipating a very successful

return there as well. Please add March 4 - 7, 2024, to your calendar for the WSWS Annual Meeting at the Grand Hyatt Denver. There are some of us that will recall this location from the 2018 meeting, and

the “Snowpocalypse” from that year; I am looking forward to having all the WSWS back in our HQ of Colorado. I also look forward to perfect weather so all attendees can enjoy the beauty of Colorado.

We are working on preliminary planning for the 2025 meeting, to be held in Seattle with more information to be presented later.

The new website is up and running. Please log in and make sure your contact information is up to date.

If you were not able to attend the Annual Meeting or need to update your membership, please log in to your account and pay your dues for 2023. We are available in the office to assist as well – (303) 327-8016. To send a check, simply fill out the Membership Form at the end of the newsletter and send that in with the check for \$30.00.

2023 Membership Renewal Form

To pay by credit card, please login to your account at www.wsweedscience.org

IF YOU DID NOT ATTEND THE ANNUAL MEETING BUT WANT TO REMAIN A MEMBER, FILL IN THE INFORMATION BELOW AND SEND \$30.00 FOR DUES TO THE ADDRESS PROVIDED.

Last name	First name	Affiliation	
Mailing address	City	State	Zip code
Phone # w/area code		e-mail address	

Classification: Student ___ University ___ Federal Agency ___ State Agency ___
Private Industry (manufacturing and sales) ___ Private Industry (consulting) ___
Unemployed ___ Retired ___ other (specify) _____

**Send to: WSWS/IMI,
12110 Pecos St., Ste 220,
Westminster, CO 80234**

Questions? info@wsweedscience.org or (303) 327-8016

Publications Available from the WSWs

The following books or DVDs can be purchased from the WSWs:

Aquatic and Riparian Weeds of the West
Weeds of California and Other Western States
Interactive Encyclopedia of North American Weeds DVD
Weed Bingo

All publications can be ordered online at

<https://wsweedscience.org/store/#!form/Store>. Contact the Business Manager (Eric Gustafson) at (303) 327-8016 for bulk order prices.

WSWS Objectives

- ❖ To foster and encourage education and research in weed science.
- ❖ To foster cooperation among state, federal and private agencies in matters of weed science.
- ❖ To aid and support commercial, private and public agencies in the solution of weed problems.
- ❖ To support legislation governing weed control programs and weed research and education programs.
- ❖ To support the Weed Science Society of America and foster state and regional organizations and agencies interested in weed control.

Western Society of Weed Science
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