

Western Society of Weed Science Newsletter

205 W. Boutz, Bldg. 4, Ste. 5, Las Cruces, NM 88005 (575) 649-7157 wsws@marathonag.com

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Report from the President by Joe Yenish

As many of you know, we are currently searching for a Business Manager to replace Phil Banks. Phil indicated he will be stepping down from that position following our 2017 Annual Meeting in Coeur d'Alene, Idaho in March of that year. Essentially, this leave us two schedule board meetings (March and July/August of 2016) to make any changes in the duties required by the current position,

release a Request for Proposals (RFP), and hire a suitable replacement for Phil and the staff of Marathon-Agricultural & Environmental Consulting.

In addition to the position Phil held with the WSWS, he has had similar duties with the North Central Weed Science Society (NCWSS), the Southern Society of Weed Science (SSWS), and the North American Invasive Species Management Association (NAISMA). Myself and others on the board have recognized the benefits to having one individual serving in that capacity with each of the societies. Thus, we have contacted the other societies to coordinate recruitment of the executive position for each of our societies. While our search will be jointly coordinated, we intend on having a contract for our Business Manager separate from that of the other societies.

Similar to the regional societies, the Weed Science Society of America (WSSA) is searching for an Executive Secretary given the pending retirement of Joyce Lancaster. Drew Lyon, Kirk Howatt, and I have been involved with officers of the NCWSS, the SSWS, the NAISMA, and the WSSA to develop an RFP for the WSSA and affiliated regional society membership and business services. A notice of that RFP has been sent out to WSSA membership and the actual RFP has been posted to the WSSA website. The RFP itself can be found here; http://wssa.net/wp-content/uploads/RFP-for-Executive-Secretary-Services.pdf. If you know of individuals or organizations that would provide excellent service to the WSWS or other societies, please make them aware of the RFP or forward their names to WSWS or WSSA leadership.

Other items of note, the WSWS Nominations Committee is finalizing the officer ballot and we hope to have elections and candidates notified of the outcome by the upcoming year-end holidays. Also, the website is open for title submission until December 1st. Thank you in advance for your submissions.

Here's wishing you and your families a great holiday season and a prosperous New Year. See you in Albuquerque in March.

Anticipation is Soaring like Balloons over Albuquerque - Kirk Howatt, Program Chair

I'm not saying we will get to see hot air balloons rise during the WSWS Annual Meeting, but you won't know if you're not there. The 2016 WSWS Annual Meeting is set and we would enjoy your company. The meetings will be held March 7-10 in Albuquerque, NM, at the Hyatt Regency. The hotel has a convenient layout for our meetings, comfortable accommodations, and excellent food. There are a few dates to remember as you prepare your travels.

First, submit a title by **December 1**. The title registration is run through the WSSA Abstracts site (http://wssaabstracts.com/). A few have already submitted titles. Beat the rush and submit a title today. We are planning to accommodate five project choices for your papers and posters: Agronomic Crops, Horticultural Crops, Weeds of Range and Natural Areas, Basic Biology and Ecology, and Teaching and Technology Transfer.

Second, register for the meeting with the society by **February 13**. That is, if you want the reduced pre-registration rate of \$250 with the student registration set at \$100. Meeting registration information can be found on the society web page (http://www.wsweedscience.org/) or a copy of the mail-in form is included in this newsletter.

Third, **February 13**th (don't worry, it's not a Friday) also is the deadline for room reservations at the meeting block rate. A link to hotel reservations can be accessed through the annual meeting page on the WSWS website. If you call in your reservation, please be sure to mention the WSWS Annual Meeting event to receive the block rate.

Fourth, complete entry of abstract and indexing information by **February 29**. This also may be done at your earliest convenience as the site will accept it today.

Fifth, submit slide presentations on the WSSA Abstracts site by **March 2**, the Wednesday before the meetings. A few days for review by the project chairs is important to catch incompatibilities and allow for corrections.

Finally, make your way to the meetings and have a great time. Local Arrangements Chair Brian Schutte has included some information to aid your travel in this newsletter. Festivities begin Monday night, March 7, with the Welcome and Retirees Reception. The General Session will include addresses from President Joe Yenish and Science Policy Director Lee Van Wychen. In addition, we will hear about some local flora with historic importance from Dr. Mary O'Connell of New Mexico State University.

Education Section Chair Sandra McDonald is bringing back Kaci Buhl, Science Communicator and Coordinator of the National Pesticide Information Center (NPIC), for an encore performance. We all communicate about risk, but most of us were never trained about good practices in risk communication. In the Education Session, Kaci will share some key training elements, including 1) how to re-frame safety questions, 2) using the risk framework, and 3) recognizing psychological drivers of risk perception.

Research Section Chair Jane Mangold is busy coordinating efforts of the project chairs and encouraging formulation of exceptional discussion topics. Look for more information about these discussion topics and project meetings in the program information to be assembled in December. One important item of the project meetings is election of a chair-elect. This person aids the chair in moderating the session for the next Annual Meeting and then coordinates session moderation the following year. Please consider this and other ways you can serve your society.

The meeting will be filled with interesting presentations, collaboration, and camaraderie. If you have time to stay in the area, Brian Schutte prepared a list of several local and area activities. These include recreational as well as educational destinations. His list can be found in the Summer 2015 Newsletter available at the society web page under publications.

We look forward to seeing you soon.

Contact Us Newsletter Editor

Carl Libbey
Washington State University
Mt. Vernon, WA 98273
(360) 848-6139
libbey@wsu.edu

WSWS Officers and Executive Committees

President

Joe Yenish
Dow AgroSciences
101 Calendula Circle
Billings, MT 59105
jpyenish@dow.com
Awards, Site Selection

President-Elect

Kirk Howatt
North Dakota State University
NSDU Dept 7670
PO BOX 6050

Fargo, ND 58108-6050 Kirk.howatt@ndsu.edu

Program, Poster,
Publications, Student Paper
Judging, Local Arrangements

Immediate Past President

Drew Lyon
Washington State University
PO BOX 646420
Pullman, WA 99164-6420

Drew.lyon@wsu.edu Fellows & Honorary Members, Sustaining Members, Nominations

Secretary

Curtis Rainbolt

BASF Corporation

4763 N Pacific Ave
Fresno, CA 93705

curtis.rainbolt@basf.com

Necrology

WSSA Representative Marty Schraer

Syngenta Crop Protection 152 E Cassidy Drive Meridian, ID 83646

marty.schraer@syngenta.com Legislative

CAST Representative

Phil Westra
Colorado State University
112 Weed Lab
Fort Collins, CO 80523
cows19@comcast.net

Member-At-Large Public Sector

Scott Nissen

Colorado State University 115 Weed Research Lab Fort Collins, CO 80523-1179 scott.nissen@colostate.edu Finance

Member-At-Large Private Sector

Michael Hubbard Kootenai Valley Research 4181 District Five Rd Bonners Ferry, ID 83805 hubbard.kvfr@gmail.com

Research Section Chair

Herbicide Resistant Plants

Jane Mangold
Montana State University
PO Box 173120
Bozeman, MT 59717
Jane.mangold@montana.edu

Research Section Chair-Elect Prashant Jha

Montana State University Southern Agricultural Research Center Huntley, MT 59037 pjha@montana.edu

Education Section Chair

Sandra McDonald
Mountain West Pest
2960 Southmoor Drive
Fort Collins, CO 80525
Sandra@MountainWestPest.com
Education
Public Relations

Education Section Chair-Elect Brian Jenks

North Dakota State University 5400 Hwy 83 S. Minot, ND 58701 brian.jenks@ndsu.edu

Albuquerque Notes — by Brian Schutte, Local Arrangements Chair

The 2016 WSWS meeting in Albuquerque, NM will be a meeting not to be missed! Preregistration is now offered, and it will remain available until February 13. This date is also the deadline for reserving hotel rooms at the meeting block rate. Please see http://www.wsweedscience.org/annual-meeting/ for important registration links. Here is information to assist you with travel planning.

Options for travel between the Hyatt Regency and the Albuquerque International Airport

Bus: ABQ RIDE has two bus routes that run from the airport to the Alvarado Transportation Center, which is approximately 4 blocks from the Hyatt Regency. Bus routes include: #250 (weekdays) and #50 (weekdays & Saturday). At the airport, bus stops are located on the lower level, west end of the shuttle island. For updated information on fares and schedules, please see: https://www.cabq.gov/transit/bus-routes-and-schedules

Shuttle: Reservations are required with Sunport Shuttle. Reservations can be made by calling 1-866-505-4966, or emailing **reservations@sunportshuttle.com** for individual reservations, **sales@sunportshuttle.com** for group reservations. For individuals, the oneway fare is \$11.00, round-trip is \$20.00. Fares are discounted for groups. For more information, please see: http://www.sunportshuttle.com/contact.htm

Taxi: Average taxi fare from the airport to the Hyatt Regency is \$18.00 before gratuity. ABQ Cab Company (http://www.albuquerquecab.com/index.php) offers vans that can accommodate six people.

Parking at the Hyatt Regency

The Hyatt Regency Albuquerque offers valet parking for vehicles with 6' 8" clearance at \$20.00 per night. Self-parking is available at \$16.00 per day. Self-parking is located on Copper Avenue between 3^{rd} and 4^{th} Streets.

For information on some of the wonderful attractions in the Albuquerque area, please see the Local Arrangements Report in the Summer 2015 newsletter: http://www.wsweedscience.org/wp-content/uploads/2013/09/WSWS-2015-Summer-Newsletter.pdf.



Student Liaison Report - by Carl Coburn

Greetings! I hope the field season and semester are wrapping up nicely for you! I wanted to update you on a few items as we look forward to the upcoming meeting in Albuquerque, NM. Nine applications were received for the Elena Sanchez Memorial WSWS Outstanding Student Scholarship this year, which is a notable increase compared to previous years. Thank you to all of the student society members who applied for this scholarship, and we are looking forward to recognizing the winners at the upcoming annual meeting. I encourage students to apply for this scholarship in the future as it is a way to recognize your hard work and commitment to the field (and who couldn't use an extra \$1,000 right?).

As you may be aware, the Outstanding Student Scholarship program is partially funded by the proceeds from the student silent auction, and we hope to raise enough money this year to fully fund all three scholarships for the 2017 award winners. This goal can only be achieved with the generous support of the society members. It is your continuing commitment that has contributed to the success of the various programs and scholarships that are valued greatly by the students. Outreach for silent auction items has begun, and if you are unable to provide monetary support, please consider donating an item related to the field, such as photos, books, wine, golf gear, etc. Or, if you have a contact at a company whose equipment you frequently use, please pass the information on. Also, society members have expressed interest in University and departmental items (hats, shirts), so students, please consider bringing such items for inclusion in the silent auction. Anything you can provide is very much appreciated. If you have questions, feel free to contact me (ccoburn2@uwyo.edu) or Breanne Tidemann (blaturnu@ualberta.ca).

As for the approaching meeting in March, keep an eye on the WSWS student page (http://www.wsweedscience.org/student-site/) for information on deadlines, activities, and the meeting schedule. In addition to the website, follow us on Facebook (https://www.facebook.com/WSWSStudentSection/) and Twitter (@WSWSstudents) for meeting information, as I hope to use social media to pass on meeting information so you don't have to go to the website and sort through lots of information. In the past, students have expressed concerns about locating guidelines for papers and posters, so in addition to being posted on the student page you can find them on Facebook and Twitter. Or if you don't want to search for the guidelines, they are here: http://www.wsweedscience.org/wp-

content/uploads/2013/09/Student-contest-criteria-2016.pdf. Again, please contact Breanne or myself with any questions or concerns, and I look forward to seeing you in Albuquerque!

Carl Coburn (ccoburn2@uwyo.edu) and Breanne Tidemann (blaturnu@ualberta.ca).

A Note from the Business Office by Phil Banks

Registration for the 2016 annual meeting in Albuquerque is now open and you can go to our website (http://www.wsweedscience.org/annual-meeting/) to conveniently register online or you can use the registration form found in this newsletter. The Annual Meeting page on the website also has information for making a room reservation at the Hyatt Regency Albuquerque Hotel and for title and abstract submissions. Titles must be submitted before December 1, 2015. The meeting preregistration deadline is February 13, 2016.

I look forward to seeing you all at the meeting. As always, if you need to contact the office, please give us a call at (575) 649-7157 or e-mail at wsws@marathonag.com.

Phil Banks, WSWS Business Manager/Treasurer

Treasurer / Business Manager

Phil Banks
Marathon Ag Company
205 W. Boutz Road
Bldg 4, Ste 5
Las Cruces, NM 88005
wsws@marathonag.com

Constitution & Operating Procedures Representative

Corey Ransom
Utah State University
4820 Old Main Hill
Logan, UT 84322-4820
corey.ransom@usu.edu

Webmaster & Web Editor

David Krueger
Apex WebStudio LLC
PO Box 91235
Raleigh, NC 27675
david@apexwebstudio.com

Student Liaison Carl Coburn

University of Wyoming Dept. 3354 1000 University Laramie, WY 82071 ccoburn2@uwyo.edu

Student Liaison Chair-elect

Breanne Tidemann
University of Alberta
6000 C and E Trail
Lacombe, AB T4L 1W1
Canada

blaturnu@ualberta.ca

Science Policy Director Lee Van Wychen

The National and Regional Weed Science Societies 5720 Glenmullen Place Alexandria, VA 22303 (202) 746-4686

Lee.VanWychen@WSSA.net

Publications

WSWS ONLINE EDUCATION http://passel.unl.edu/pages/in dex2col.php?category=weedsci ence#

WSSA Journals Website Online www.WSSAJournals.org

CALENDAR OF EVENTS

Canadian Weed Science Society Annual Meeting November 22-26, 2015 Edmonton, Alberta http://weedscience.ca

Weed Science Society of America Annual Meeting Joint Meeting with the Southern Weed Science Society

February 8-11, 2016 San Juan, Puerto Rico www.wssa.net

Canadian Herbicide Resistance Summit

March 2, 2016 Saskatoon, Saskatchewan www.weedsummit.ca

Western Society of Weed Science Annual Meeting March 7-10, 2016 Albuquerque, New Mexico

Western Invasive Weed Short Course

www.wsweedscience.org

April 18-21, 2016 Loveland, Colorado www.mountainwestpest.com /ShortCourse.html

11th International Symposium on Adjuvants for Agrochemicals June 13-17, 2016

June 13-17, 2016 Monterey, California www.isaa-online.org

7th International Weed Congress

June 19-25, 2016
Prague, Czech Republic
http://www.iwsc2016.org/

20th Australasian Weeds Conference

September 11-15, 2016 Perth, Australia www.20awc.org.au

Call for Symposia for the 70th Annual Meeting

That's right, the 70th annual meeting to be held in Coeur d'Alene, ID in 2017. It's not too early to start planning and get your proposal in early. The meeting in Albuquerque would be a great forum to discuss symposia ideas and establish collaboration plans. Submitted symposia will be discussed at the summer board meeting.

Please use the **WSWS SYMPOSIUM PROPOSAL FORM**, which can be found on the WSWS homepage (**www.wsweedscience.org**) under the "Annual Meeting" tab. Previous symposia topics are listed there as well.

Research Progress Reports - by Traci Rauch

Please consider submitting preliminary results from ongoing laboratory, physiological, and other research in the WSWS Research Progress Report. It is a good opportunity for staff and graduate students to initiate the process for journal submission and improve their technical writing skills. Also, consider publishing results that will not be submitted for journal publication.

For instructions, see the Call for Research Progress Reports located on the website http://www.wsweedscience.org. Reports must be postmarked by January 5, 2016.



2016 Canadian Herbicide Resistance Summit

The Herbicide Resistance Summit (March 2, 2016 in Saskatoon, Saskatchewan) was organized to facilitate a more unified understanding of herbicide resistance issues across Canada and around the world. and to

increase awareness that everyone engaged with agriculture has a role in managing herbicide resistance.

Presenters will address many of the key issues faced by farmers and crop protection researchers in meeting the challenge of the growing threat of herbicide resistance. Our goal is to ensure participants walk away with a clear understanding of specific actions they can take to help minimize the devastating impact of herbicide resistance on agricultural productivity in Canada.

For more information visit: www.weedsummit.ca

REQUEST FOR WSWS FELLOW AND HONORARY MEMBER NOMINATIONS

 \mathbf{BY}

Dr. Jill Schroeder, Committee Chair

Now is your chance to nominate deserving colleagues as a WSWS Fellow or Honorary Member!

WSWS FELLOW

WSWS Guidelines for Nominating Fellows

Fellows of the society are members who have given meritorious service to the Western Society of Weed Science.

The nominator must contact the member to be nominated and request them to prepare a concise [2-3 page] resume.

- a. The nominee must be involved in the process. The most pertinent information about the nominee can only be obtained from the nominee.
- b. The nominee's resume should be based on the WSWS guidelines approved by the Board of Directors (see below).
- c. Information from the resume will be used by the nominator in writing the letter of nomination.
- d. The nominator also is responsible for soliciting two letters of support for the nominee. The letters should be sent to the nominator and included in the nomination package sent to the committee.
- e. The nomination package should include the nominee's vita, the nominator's letter of nomination, and two support letters.

SERVICE TO WSWS – Please address the following points in the resume:

- 1. **Officer:** President; Vice-President; Secretary, Research Section Chair; Education & Regulatory Section Chair; Editor; Other.
- 2. Committees: Standing; Special; Ad Hoc.
- 3. **Presentations and Publications:** WSWS Papers, Proceedings, Research Progress
- 4. Service to other Weed Science Societies: Weed Science Society of America; State Organizations.
- 5. **Academic Weed Science Endeavors**: Teacher; Graduate Students; Refereed Publications; Extension Publications, Books; Popular Publications; Academic Weed Science Pursuits; Other.
- 6. **Industry Weed Science Endeavors**: Sales and Marketing; Research and Development; Regional Manager; Product Manager.
- 7. Other Meritorious Weed Science Service

WSWS HONORARY MEMBER

WSWS Guidelines for Nominating Honorary Members

Honorary members are selected from individuals whose activities have been largely from outside the Western Society of Weed Science, but who have significantly contributed to the field of weed science.

- The nominator must contact the person to be nominated and request them to prepare a vita.
- The nominator will then prepare a letter summarizing the nominee's contribution to the area of weed science with emphasis on how the interests of the WSWS have been served by this non-member.
- Include the vita with the letter of nomination to provide all pertinent information to the Committee.

NOMINATIONS FOR FELLOW AND HONORARY MEMBER PACKAGES ARE DUE BY **DECEMBER 1, 2015** TO:

Electronic submission preferred.

Dr. Jill Schroeder (202)720-0066

Jill.schroeder@ars.usda.gov



The 2016 Western Invasive Weed Short Course will be held April 18 - 21, 2016, at the Sylvan Dale Guest Ranch in Loveland, Colorado.

The continued partnership with Sylvan Dale Guest Ranch allows us to provide some unique training opportunities. One of the truly unique features of the Short Course is the ability to have a long-term restoration plot. Sylvan Dale has worked with us to establish a fenced site where we have been able to demonstrate weed management combined with native grass establishment. The plots were designed in a way that allows the course participants to see the progression of control and restoration over a three-year period. An opening night twilight weed walk is great way to see the ranch and start learning some weeds.

The WIWSC is an intensive study of current technologies and best management practices associated with noxious and invasive weeds in the western United States. Participants gain up-to-date knowledge specific to invasive weed management with interactive sessions that include:

- Classroom lecture
- Hands-on demonstration
- Field plots
- Facilitated discussion
- Live weed and herbicide symptomology specimens
- Small group projects
- Educational games
- Time for individual interaction with instructors

The 2016 WIWSC will be similar to the previous Courses, to see agendas please visit http://www.mountainwestpest.com/Current_Course.html. The Organizing Committee builds the final agenda based on a pre-course survey of the registered participants to assess specific areas of participant interest. The pre-course survey will not be sent to participants until they have completed the registration process.

Our target participants are local, state, federal government, and other land managers throughout the western region desiring a better understanding of weed management. WIWSC is designed to benefit both those new to invasive plant management and experienced professionals seeking a comprehensive update in western invasive weeds and their management. The WIWSC instructors are from the Western Society of Weed Science.

Registration will open in the fall of 2015. Enrollment is limited and is accepted on a first-come, first-serve basis. Please contact Sandra McDonald, Course Coordinator, for additional information at 970-266-9573 or Sandra@MountainWestPEST.com.

Sandra McDonald Pesticide Safety Educator (970) 266-9573





Save new date and location June 13-17, 2016

Hyatt Regency Monterey Hotel and Spa on Del Monte Golf Course

To protect ISAA 2016 participants from the renovations in the original venues: the storied Monterey Conference Center, the Portola Hotel and Spa, and the Monterey Marriott, ISAA is taking advantage of an opportunity to stay in Monterey, California in the better-suited Hyatt Regency Monterey Hotel and Spa on Del Monte Golf Course. In doing so, the ISAA 2016 Symposium will be brought forward one week and held from 13 to 17 June 2016.

Join us and our great sponsors and speakers in Monterey in 2016

Our ISAA 2016 Partner



...and other ISAA 2016 sponsors as of 16 October 2015:

























Tiered sponsorships, as well as these opportunities (and more) for sponsorship are still available: Coffee breaks, breakfasts, lunches, welcome reception, poster session, the proceedings publication, symposium app, and an interesting array of ag field trips.

For further information on ISAA 2016, contact

Solito Sumulong, ISAA 2016 Organizing Chair, Loveland Products, Crop Production Services, Loveland, CO, USA, +1 970-685-3579, solito.sumulong@cpsagu.com





Denver, Colorado, USA May 14-18, 2017

HERBICIDE RESISTANCE CHALLENGE

Save the Date! Plan to Join Us in Denver!

The 2nd Global Herbicide Resistance Challenge "Challenge Accepted" will be held May 14-18, 2017 in Denver, Colorado, USA. The Challenge will kick off on Sunday, May 14, 2017, with exhibit set up, opening reception, and more!





The 2nd Global Challenge expects to attract weed scientists and professionals in research, education, government, and industry for four days of presentations and networking on key weed resistance management issues worldwide.

The 1st Global Herbicide Resistance Challenge was held February 18-22, 2013 in Perth, Australia. More than 300 scientists from 38 countries industry, representing government, universities, non-governmental organizations attended the very successful 1st Global Challenge.



For more info visit: www.ghrc2017.org

WASHINGTON REPORT

October 30, 2015 Lee Van Wychen

Court Stops Nationwide Implementation of WOTUS Expansion Rule

An Ohio federal appeals court ordered a nationwide hold on the Waters of the United States (WOTUS) rule on October 9, amid disparate rulings by courts around the country on the EPA's ability to define which waters fall under the Clean Water Act.

The stay was granted so the court may determine jurisdiction on the several pending WOTUS lawsuits challenging the rule, and sort out confusion about its requirements. A North Dakota federal district court had blocked enforcement of the rule in 13 states in August. The EPA said after the August ruling that it would still enforce the rule in the rest of the nation even though numerous lawsuits to overturn it were still pending in other federal courts.

The EPA and Army Corps of Engineers first proposed the WOTUS rule in April 2014 and finalized it in May 2015. The rule has been controversial from the start because it greatly expands the jurisdiction of the Clean Water Act by adding some two million acres of streams and 20 million acres of wetlands.

The Ohio federal appeals court decision, available here, was agreed upon 2 – 1 by the three-judge panel. "A stay allows for a more deliberate determination whether this exercise of executive power, enabled by Congress and explicated by the Supreme Court, is proper under the dictates of federal law. A stay temporarily silences the whirlwind of confusion that springs from uncertainty about the requirements of the new rule and whether they will survive legal testing," the opinion states. "A stay honors the policy of cooperative federalism that informs the Clean Water Act and must attend the shared responsibility for safeguarding the nation's waters."

The stay in implementation will only last until the judges determine whether the law gives them authority over the measure or the case must be remanded to a district court. Whatever the court decides will have to be in line with a ruling from the 11th U.S. Circuit Court of Appeals, which is considering the same issue. If the circuit courts don't agree, the jurisdictional issue will have to be decided by the Supreme Court, which could take several years.

A better fix to all of this would be for Congress to pass the bipartisan Federal Water Quality Protection Act (H.R. 1732, S. 1140). This legislation would repeal the WOTUS rule and require the administration to develop an alternative rule in consultation with state and local governments. In May, the House voted 261-155 to pass H.R. 1732. In the Senate, S. 1140 was passed by the Environment and Public Works Committee in June, but is awaiting a vote from the full Senate. The Administration said it would likely veto the House and Senate bills, so a two-thirds majority would be needed in both chambers.

Weed Science Societies Comment on EPA Milkweed and Monarch Plan

Earlier this year, the White House's Office of Science and Technology Policy issued the **Pollinator Research Action Plan**. The plan focuses on increasing honeybee and monarch butterfly numbers through the creation and maintenance of pollinator habitat.

Following that, EPA published a white paper for comment titled "Risk Management Approach to Identifying Options for Protecting the Monarch Butterfly". The National and Regional Weed Science Societies (WSSA, APMS, NCWSS, NEWSS, SWSS, and WSWS) submitted the following comments:

Our scientific societies are nonprofit professional associations of academic research, extension, government, and industry scientists committed to improving the knowledge and management of weeds in managed and natural ecosystems. We appreciate the opportunity to comment on EPA's white paper titled "Risk Management Approach to Identifying Options for Protecting the Monarch Butterfly."

As stated in the white paper, this is the start of a process of stakeholder input and collaboration that will balance weed management needs with the conservation of milkweed for protecting the monarch butterfly. We are happy to be part of that process and would like to emphasize the following points:

- 1. More research is needed on milkweed species (Asclepias spp.).
- 2. Consideration for the management of herbicide resistant weeds.
- 3. Utilizing noncropped areas for milkweed habitat.
- 4. A complex issue without a "one size fits all" answer.

More research is needed on milkweed species (Asclepias spp.)

There are 100 plus species of Asclepias across the United States. While some research has been done on common milkweed (Asclepias syriaca), there is a paucity of scientific information on the Asclepiadaceae family, whose members are the main food source for monarch butterfly larvae. Because common milkweed typically does not drive weed management decisions, there has been little public or private investment on researching this perennial weed's long term growth and reproduction, population dynamics, response to herbicides, impact on crop yield, and distribution. We agree with the white paper that this type of scientific information will be crucial in developing options to conserve monarch butterfly habitat.

Consideration for the management of herbicide resistant weeds

We believe it is critical for the Agency to balance weed management needs, especially the management of herbicide resistant weeds, with efforts to assist the monarch butterfly. **Programs for herbicide-resistance management should employ the following best management practices**:

- 1. Understand the biology of the weeds present.
- 2. Use a diversified approach toward weed management focused on preventing weed seed production and reducing the number of weed seed in the soil seedbank.
- 3. Plant into weed-free fields and then keep fields as weed free as possible.
- 4. Plant weed-free crop seed.
- 5. Scout fields routinely.
- 6. Use multiple herbicide mechanisms of action (MOAs) that are effective against the most troublesome weeds or those most prone to herbicide resistance.
- 7. Apply the labeled herbicide rate at recommended weed sizes.
- 8. Emphasize cultural practices that suppress weeds by using crop competitiveness.
- 9. Use mechanical and biological management practices where appropriate.
- 10. Prevent field-to-field and within-field movement of weed seed or vegetative propagules.
- 11. Manage weed seed at harvest and after harvest to prevent a buildup of the weed seedbank.
- 12. Prevent an influx of weeds into the field by managing field borders.

Some of the above best management practices counter what is outlined in the white paper's "Analysis and Actions" section that discusses the possibility of lowering herbicide rates, modifying application timing, or establishing field buffers. These are all critical areas of concern to agricultural producers and should not be considered without a thorough discussion with producers and registrants to gauge their impact.

Utilizing noncropped areas for milkweed habitat

The utilization of noncropped lands to develop perennial milkweed habitat makes good biological sense. In general, higher infestations of perennial plants are expected in undisturbed areas. In addition, transportation rights-of-ways and utility corridors are uniformly distributed across the landscape which may aid monarch butterfly migration.

Weed scientists can advocate steps to promote habitats where pollinators and other iconic insects such as the monarch butterfly can flourish, beginning with the adoption of a prudent approach to weed management. While it is crucial that we control invasive, noxious, and herbicide-resistant weeds that can overtake crops and native plants, other weeds such as common milkweed might be left to grow in areas where it is likely to do no harm. The key is to exercise good judgment about which weeds to control, when and where.

A complex issue without a "one size fits all" answer

Initiatives like the Monarch Butterfly Conservation Fund, the Iowa Monarch Conservation Consortium, and other science-based conservation initiatives will allow private and public landowners to develop local knowledge of milkweed species for their area. Milkweed conservation efforts will vary according to the management of other weed species present in their area and there will not be a "one size fits all" solution. For example, recommending reduced mowing or herbicide use on weeds in ditches where kochia (i.e. tumbleweed) is prevalent could create a public safety hazard due to the buildup of kochia carcasses.

We hope that EPA's actions are consistent with the Interagency Pollinator Health Task Force Report that recognized the importance of evidence-based decision making, collaborative public private partnerships, and expanded research that will balance local weed management needs with the conservation of the monarch butterfly.

We appreciate this opportunity to make initial comments on the white paper "Risk Management Approach to Identifying Options for Protecting the Monarch Butterfly" and look forward to working with the Agency on this important topic.

Congress Passes a Continuing Resolution Funding Government Through Dec. 11

On Sept. 30, both the House and Senate passed a continuing resolution (CR) funding the federal government at FY 2015 levels through Dec. 11. It was a "clean" CR in that it contained no policy riders, but it did include \$700 million in emergency funding to fight wildfires in the West. Since 1977, there have been only four Congresses that have not needed a CR – the most recent was almost two decades ago, in 1997 – and lawmakers have sent the president an average of six CRs per year to avoid shutdowns.

Congress avoided a lot of budget heartaches this fall when they passed a 2 year budget-debt ceiling pact on October 29. The budget deal would raise the discretionary spending caps for defense and nondefense accounts by \$80 billion above the sequester level for FY 2016 and FY 2017. The increased discretionary spending is offset with cuts to various entitlement programs and revenue raisers.

The agreement also suspended the debt limit until March 15, 2017 so the U.S. doesn't default on its \$18.1 trillion debt in early November. Congress also passed a 3 week extension on federal highway funding that would have expired on Oct. 29. This is the 35th short-term extensions over the past six years. We'll see if the new Speaker of the House, Paul Ryan from Wisconsin, can capitalize on all the camaraderie on Capitol Hill following his election on Oct. 29 and negotiate a long term highway funding bill.

<u>Weed Risk Assessment Models Prove Unreliable at Predicting Which Biofuel Crops Are Likely to Become</u> Invasive Weeds

The following WSSA press release highlighted a paper published in the latest issue of *Invasive Plant Science* and *Management* by L. Smith, D. Tekiela, and J. Barney titled: "Predicting Biofuel Invasiveness: A Relative Comparison to Crops and Weeds". I am redistributing this release because this paper represents a shift in policy on how we might "weed out" biofuel candidate species. Past biofuel policy recommendations have relied heavily on the outcomes of weed risk assessments conducted by APHIS.

<u>WSSA Press Release</u>: Several of the plants grown as biofuel crops have proved to be invaders in some environments – spreading rapidly and overwhelming surrounding natural ecosystems. Concerns about these weedy tendencies have led many to contend that risk assessments should be conducted before any bioenergy crop becomes widely cultivated. A new study featured in the journal Invasive Plant Science and Management, though, shows that current "gold-standard" weed risk assessment techniques simply aren't up to the task.

Scientists at Virginia Tech used two of the best-respected and most widely used weed risk assessment models to develop invasive species risk scores for three categories of plants. They assessed 16 bioenergy crops, 14 agronomic crops and 10 known invasive weeds introduced for agronomic purposes.

Both models failed to reliably distinguish weeds from crops. For example, cereal rye received a higher risk score than kudzu, which is a widespread and damaging invader across the Southeast.

"We found the majority of all the species we evaluated had high weed risk assessment scores, including crops that we predicted would score low," said Jacob Barney Ph.D., assistant professor of Invasive Plant Ecology at

Virginia Tech. "It is clear we should be cautious about using current risk assessment models in setting biofuels policy."

In the absence of effective risk models, the Virginia Tech research team stressed the importance of field evaluations to determine whether crops are escaping field borders.

NAS GE Crops Study to be Released in Spring of 2016

Many people around the world have a wide range of questions and opinions about the agronomic, environmental, socioeconomic, and health impacts of genetically engineered (GE) crops, and claims and research that extol both the benefits and the risks of these crops have created a confusing landscape for the public and for policy makers.

An ongoing study by the National Academies of Sciences, Engineering, and Medicine (NAS) seeks to address the confusion. The goal is to bring an independent, objective voice to the sometimes contentious debate around genetic engineering of crop plants. The study is reviewing current understanding of the socioeconomic,



Committee chair Fred Gould, Professor of Entomology at North Carolina State University, outlines the study's objectives in this short video.

http://nas-sites.org/ge-crops/2015/02/19/study-objectives-video/

agronomic, environmental, and health effects of GE crops. In addition to assessing whether initial concerns and promises have been realized since the introduction of GE crops, it is also focused on the opportunities and challenges related to genetic-engineering technologies coming down the pike such as RNA-interference (RNAi) technology. WSSA member Carol Mallory-Smith from Oregon State is one of the twenty scientists serving on the committee that is conducting the study. The committee plans to complete the study and publish its report in the spring of 2016.

Since the launch of the study last year, the committee has heard from 80 presenters at a series of public meetings and webinars on a wide range of topics. All the presentations were recorded. Weed scientists may be particularly interested in: 1) Pest Management Practices Workshop, which included a panel on Contemporary Practices for Suppressing Weeds; 2) a webinar on US Agricultural Extension, which included a presentation by Dallas Peterson, Professor and Extension Weed Specialist,

Kansas State University; 3) a presentation by Andreas Weber, Head of the Institute of Plant Biochemistry, University of Dusseldorf, on converting C3 plants to C4 plants; and 4) an introduction to RNAi technology and a discussion of strategies for using plant mediated RNAi in crop protection.

More about the NAS study, including all the meeting and webinar recordings, can be found at the study website, http://nas-sites.org/ge-crops. If you have comments for the committee, they can be sent through the website, and you can stay informed about the study by subscribing to the email newsletter or following the study on Twitter, @NASciences_Ag, #GECropStudy.

The Next Great GMO Debate – RNAi?

A good article in the *MIT Technology Review* on the various issues surrounding the advancement of RNA interference technology for pest management:

http://www.technologyreview.com/featuredstory/540136/the-next-great-gmo-debate/

Update on Bromus tectorum Biocontrol Agent

Management of *Bromus tectorum* (downy brome, cheatgrass) remains a hot topic on several fronts as it fuels wildfires in the West and destroys sage grouse habitat. The New York Times recently published the following article: "Researcher Finds Way to Fight Cheatgrass, a Western Scourge". The article provides a nice update on the progress being made for a couple strains of *Pseudomonas fluorescens*, a native soil bacterium that inhibits root growth in *Bromus tectorum*, *Taeniatherum caput-medusae*, and *Aegilops cylindrica*. EPA approved the use of *Pseudomonas fluorescens* strain D7 as a biopesticide in August 2014. Dr. Ann Kennedy with USDA-ARS discovered and developed an application method for the bacterial strains. While the bacterium isn't a

silver bullet for eradicating cheatgrass, the biocontrol agent can be a critical component in an area-wide cheatgrass management program that should be modeled after the successful **TEAM Leafy Spurge** area wide management program.

Sage Grouse Not to be Listed as Endangered Species

The U.S. Fish and Wildlife Service (FWS) announced on Sept. 22, that it would not list the greater sage-grouse under the Endangered Species Act. This decision represents a change of direction for FWS, which announced in 2010 that the grouse was "warranted for listing", but now says that new information about the status of the species, potential threats, regulatory mechanisms, and conservation efforts by Federal, State, and private landowners indicate that listing is not warranted.

There is no shortage of controversy on either side of this decision. A *Washington Post* article by Darryl Fears titled "Decision not to list sage grouse as endangered is called life saver by some, death knell by others" does a good job of capturing this debate and providing an overall "big picture" in this precedent setting conservation effort. No matter your political persuasion, there is still much research that needs to be done on restoring the sage brush habitat of the sage grouse and more importantly, on developing and establishing an area wide weed management program for *Bromus tectorum*. These sentiments are captured in an excellent commentary by Steve Williams, former Director of FWS from 2002-2005 and now president of the Wildlife Management Institute (WMI). His commentary "Sage Grouse Listing Decision is Hugh Accomplishment, But Not the Finish Line" is published in WMI's Outdoor News Bulletin.

EPA Proposes Changes to Certification and Training Requirements for Pesticide Applicators

On August 24, EPA proposed changes to the existing regulations concerning the certification and training standards that have been implemented by individual states for the past 40 years. The proposed changes are intended to improve the competency of certified applicators of restricted use pesticides (RUPs), increase protection for noncertified applicators of RUPs operating under the direct supervision of a certified applicator through enhanced pesticide safety training and standards for supervision of noncertified applicators, and establish a minimum age requirement for certified and noncertified applicators. The proposed rule will have significant impacts on state lead agencies, university extension programs, and the applicators subject to regulatory certification. The proposed rule is complex. It includes numerous new, revised, and deleted definitions, and would change the way both state lead agencies and university extension programs do business with the public.

Chart - Comparisons of the major new proposed protections to the existing protections Full Rule Proposal – Pesticides: Certification of Pesticide Applicators

EPA is accepting comments on the proposal until **November 23, 2015**. However, due to the complexity of the rule, many stakeholder groups are asking EPA for an additional 60 days. To comment, please see docket number **EPA-HQ-OPP-2011-0183** at **regulations.gov**

Lee Van Wychen, Ph.D.
Science Policy Director - National and Regional Weed Science Societies
Lee.VanWychen@wssa.net
cell: (202) 746-4686

www.wssa.net

WSWS Students compete in the National Collegiate Weed Contest

Would you be able to identify 130 species of weeds and their seeds on sight? While for most of us the answer is a resounding "no," many of the nation's top student weed scientists proved they were up to the challenge during the recent 2015 National Collegiate Weed Science Contest. Sixty-five teams from 25 schools participated in the event hosted by Ohio State University's Agricultural Research and Development Center, including 140 graduate students and 73 undergrads. The WSWS was well represented with teams or individuals competing from the University of Nebraska, University of California – Davis, University of Wyoming, North Dakota State University, Kansas State University, and Washington State University.

Students competed both as individuals and as teams to tackle several tough challenges. They were asked to identify weeds at various stages of growth and development – from seeds to mature plants. During live role-playing sessions, they were asked to problem-solve weed management issues faced by farmers and land managers. They had to identify which of 30 herbicides had been used to treat various field plots based on visual indicators of impact on plants. Finally, they had to prove they could calibrate the sprayers commonly used in weed control – on the spot.

"It was a great day, with lots of enthusiasm from students, their coaches and the many volunteers who were there to help," said Bruce Ackley, Ph.D., a weed scientist at Ohio State University and a co-chair of the event. "The caliber of the competitors was outstanding, and I can't wait to see how their careers unfold."

Awards were given for placement in the overall contest (National Awards) and each regional weed science society recognized placement of teams for their respective universities during the awards reception.

From the WSWS the top undergraduate team nationally was from the University of Nebraska (Brad Meusch, Jacob Nikodym, Bret Rausch, and Don Treptow) and the graduate team also from the University of Nebraska placed third overall. Brad Meusch was the third place winner in the undergraduate individual competition.

Regionally, a graduate-level team from Kansas State University took top honors, as did a team from University of Nebraska at the undergraduate level. Individual winners were Chelsea Ahlquist, a graduate student at Kansas State University, and Brad Meusch, an undergraduate at the University of Nebraska.

In addition to bragging rights, the winners will get a free registration and lodging during the Weed Science Society of America annual meeting to be held February 8-11, 2016, in San Juan, Puerto Rico.



1st Undergraduate Team – University of Nebraska



3rd Graduate Team – University of Nebraska



3rd Undergraduate Individual –
Brad Meusch

STUDENT PAPER AND POSTER CONTEST INFORMATION

Ryan Rector - Chair

The Student Paper and Poster contest at the Western Society of Weed Science Annual Meeting offers students an opportunity to improve their presentation skills and increase their visibility within the Society. The top students in each division of the contest will be recognized with a plaque and receive a cash award to honor their achievement.

All graduate students are encouraged to enter one paper and/or one poster in the contest. Undergraduate students may enter one poster in the contest. Other papers or posters may be submitted in the project sessions outside the context of the contest. Information presented in the WSWS Student Paper and

Poster Contest is to be original and unique. If a topic has been used by the author in another presentation, additional data must be included to constitute a unique presentation. Information regarding the scoring of papers and posters is listed in the table below.

As the chair of the 2016 Student Paper and Poster contest, I am asking for volunteers to participate as judges for this competition. If you haven't done this before, it is a rewarding experience to provide valuable feedback to our students who are giving oral or poster presentations. If you are interested in volunteering, please contact me by email or phone: (ryan.j.rector@monsanto.com) or (314) 610-5145).

Paper Contest*	Points	Criteria
Abstract	10	Format, grammar, and content
Introductions	10	Rational, hypothesis, and objectives
Methods	15	Experimental design, treatments, measurements, and statistical analysis
Results and Discussion	25	Results, interpretation, conclusions, future directions, and implications
Visual Aids	15	Easily red; uncluttered; in focus; balance to text, tables, figures, and photographs
Oration	20	Voice, confidence, enthusiasm, enunciations, and response to questions
Time	5	Allowed 2 to 4 minutes for questions (all-or-nothing points)
Total	100	

^{*}Previous first place winners in the paper contest are ineligible for the paper contest, but may enter the poster contest.

Poster Contest*	Points	Criteria	
Abstract	10	Format, grammar, and content	
Content and Mechanics	15	Grammar, style, and quantity of information	
Development	20	Rationale, hypothesis, objectives, organization, and methods	
Analysis of Results	20	Results, interpretation, conclusions, future directions, and implications	
Appearance	20	Easily read, uncluttered, well-designed tables and figures, clear and relevant photographs, and balanced layout	
Oration	10	Voice, confidence, enthusiasm, enunciations, and response to	
Physical Presence	5	Interaction with audience and mannerisms	
Total	100		

^{*}Previous first place winners in the poster contest are ineligible for the poster contest, but may enter the paper contest.



INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES DEPARTMENT OF AGRONOMY AND HORTICULTURE

GRADUATE RESEARCH ASSISTANTSHIP (Crop and Weed Genetics)

The University of Nebraska-Lincoln (UNL) invites applications for a graduate research assistantship with specialization in Crop and Weed Genetics. The candidate is expected to lead a project to study the genetics of johnsongrass × ALS-inhibiting herbicide-resistant sorghum hybrids. Johnsongrass (*Sorghum halepense*) is a tetraploid (2n=2x=40) grass weed with two diploid parental genomes (2n=4x=20) originating from the crop sorghum (*S. bicolor*) and the weed *S. propinquum*. Hybrids between johnsongrass and sorghum have been observed, but little is known about their underlying genetics. Cytogenetic, molecular, greenhouse, and field techniques will be used to characterize genetic recombination in the hybrids and determine the inheritance and expression of herbicide resistance among their progeny. The candidate will collaborate with other University of Nebraska scientists and colleagues at other institutions, present research results at professional meetings, and publish in peer-reviewed journals. Successful completion of this project will provide valuable insight in determining the impact of novel crop genes on the ecology of related species when the crop genome is ancestral to the wild species.

Interested applicants should contact Dr. Amit Jhala, amit.jhala@unl.edu, 402-840-2259, Dr. John Lindquist, jlindquist1@unl.edu, 402-472-2771, or Dr. Ismail Dweikat, idweikat2@unl.edu, 402-472-5328 for more information.

Qualifications:

B.S./M.S. in Plant Biology, Plant Biotechnology, Agronomy, Agriculture, or closely related field with interest in Plant Genetics. The qualifying degree must be completed before the graduate

research assistantship start date.

Student Stipend:

Annual Basis - \$23,400-\$25,200, depending on degree program

Tuition Waiver:

A tuition waiver of up to 12 credit hours per semester and 12 credit hours during summer sessions

is provided with the GRA.

Health Insurance:

Students on assistantships are provided health insurance at a reduced rate.

Application:

Formal application for graduate studies is required. Follow the admission instructions at:

http://www.unl.edu/gradstudies/prospective

Dr. Mark Lagrimini, Graduate Chair Department of Agronomy & Horticulture University of Nebraska-Lincoln

PO Box 830914, Lincoln, NE 68583-0914

Phone: 402-472-1560 FAX: 402-472-7904

E-Mail: AGRO HORT GradChair@unl.edu

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WSWS REGISTRATION FORM 69th ANNUAL WESTERN SOCIETY OF WEED SCIENCE MEETING

Hyatt Regency Albuquerque, New Mexico (see the WSWS website www.wsweedscience.org for room booking details)

MARCH 7-10, 2016

Deadline: Mail-in registration must be postmarked by February 13, 2016. PAYMENT MUST ACCOMPANY REGISTRATION-NO EXCEPTIONS. Check or Money Order (U.S. Dollars) Only. Credit card payments may be made with online registration. Visit: www.wsweedscience.org No refunds after March 1, 2016. Questions? wsws@marathonag.com or (575) 649-7157.

Registration	<u>M</u>	ail by 2/13/16	After 2/13/16 Total					
Regular Meeting		\$ 250.00	\$ 350.00					
Student		\$ 100.00	\$ 100.00					
Spouse		\$ 30.00	\$ 30.00					
	To	otal Remittance	\$					
Do you want to particip	ate in Student Night	Out?Yes	sNo					
The Student Night Out program matches students with weed science professionals for an evening out to dinner during the Annual Meeting. If you checked Yes, someone will follow-up with you before the meeting.								
Note: Onsite registration posted at the website in	9	t the higher rates	es listed above. The full program will be	e				
IF NOT ATTENDING, BUT \$30.00 FOR DUES \$		MEMBER, FILL II	IN THE INFORMATION BELOW AND SENI)				
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Phone number with are	a code		e-mail address					
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Classification: Student Private Industry (manu Unemployed Reti	facturing and sales)	Private Ind	lustry (consulting)					
Send to: WSWS/Phil B	anks							

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Publications Available From the Western Society of Weed Science

	, ,	ing and handling; bulk ord	•	•
	Aquatic and Riparian W	eeds of the West		\$45.00
	Weeds of California and	d Other Western States		\$85.00
	Weed Control in Natura	al Areas in the Western Ur	nited States	\$40.00
	Interactive Encyclopedi	a of North American Wee	ds DVD	\$50.00
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All publica	tions can be ordered online	e at www.wsweedscience	org (click on <i>publica</i> :	tions)
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WSWS Objectives

To foster and encourage education and research in weed science.

e-mail:

- ❖ 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.

