

51st Meeting Weed Science Society of America

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Location of Special Committees and Activities February 2011

Photo Contest Judging*	Senate
Placement Service Information and Interviews	Boardroom West
Registration (Including Spouses)	Plaza Foyer
Board Meeting	Forum Suite
Presentation Preview Room	Boardroom West

Local Arrangements Committee 2011–Portland, Oregon

Chairs	Tim Miller, Carol Mallory-Smith
Nurseries/Vineyard Tour	Mark Czarnota

***Photos must be delivered to the Registration Desk by 11:00 a.m., Monday, February 7th.**

Welcome to Portland

It is my honor and pleasure to invite you to the 51st Annual Meeting of the Weed Science Society of America. Mike Barrett, Program Chair, Rod Lym, Program Vice-Chair, and the Program Committee strived to make this a gathering where Weed Scientists from around the world can present and share their latest research results, expand their awareness of critical emerging issues, network to identify new solutions in weed management and enjoy the fellowship of our Society. Our Local Arrangements Committee, led by Carol Mallory-Smith and Tim Miller, has done a wonderful job helping to insure that the meeting runs smoothly. Please come early and take advantage of the Sunday Plant Nurseries and Wine Tasting tour graciously arranged by Mark Czarnota.

The Hilton Portland & Executive Tower Hotel is an excellent venue and should provide a many opportunities to advance your knowledge in technical areas, renew old friendships, expand your networks and develop new and productive partnerships. This will be the first traditional WSSA meeting we've had in a while and it gives us a chance to relax, explore and enjoy the science.

The scientific program will feature six special-topic symposia as well as poster and oral paper presentations on the latest weed science research. Also, we're trying something completely new this year, a "Practitioners Forum", to address perceptions and misconceptions about weed management and research. This session is intended to start a conversation between On-the-Ground Weed Managers with University Extension and Research Faculty and Industry Personnel.

As a member of WSSA, I believe that Weed Science is critical to the ability of a society to grow food and feed itself, conserve and restore its lands, manage its forests and rangelands and deal with the impacts of climate change. I feel that the WSSA is well positioned to be a unifying force in bringing together the science and practice of plant management to ensure that, as a society, we make the right decisions and investment in research, education and outreach. This is an exciting time to be a Weed Scientist and there is no place I'd rather be than spending this time than with you.

Kind Regards,
John Jachetta, Ph.D.
Weed Science Society of America, President

The 2011 Program

Welcome to the Hilton Portland & Executive Tower, the location of the first meeting of the second half of WSSA's first century! The WSSA Board of Directors always meets at the conference location ahead of the meeting and I can tell you that Portland is a great city to visit. Hopefully, you will have an opportunity to explore some of the city during your stay. I am excited about the symposia, talks, and posters in the program and know you will find a wide variety of interesting presentations to attend. Special thanks to Mark Czarnota for putting together the pre-meeting **Plant Nurseries and Wine Tasting Tour** for Sunday, February 6. This tour will combine a look at two of Oregon's signature horticulture enterprises, specialty nurseries and a winery. The tour is limited to 40 persons and requires registration. See the WSSA website for more information.

The formal program will begin on **Monday afternoon at 4:15 in the Grand Ballroom with the General Session and Awards Ceremony followed by the Award Winners Reception from 6 to 9 PM.** David Shaw will present **Herbicide Resistance Management - WSSA Takes the Lead** to update the members on WSSA activities in this area. Barbara Glenn will report on a Crop Life of America program to bring weed science expertise to Africa. Based on experiences at the 2010 WSSA-SRM meeting, we will be holding the first part of the poster session in conjunction with the Award Winners Reception. So, grab some refreshments and wander over to discuss the posters with the authors. Based on a policy begun at the 2008 meeting, authors will stand by their posters based on section and not on an odd/even poster number system. Posters for turf and ornamentals, pasture, physiology, and weed biology will be presented from 6-7 on Monday evening and from 8-9 on Tuesday morning. The remaining poster sections will be presented from 7-8 on Monday evening and 9-10 on Tuesday morning. Hopefully this will encourage more discussion within each specific section.

Tuesday begins with the second half of the formal poster session followed by the paper and symposia sessions. A major change this year, again based on favorable comments about the 2010 WSSA-SRM meeting, is that volunteer **oral papers are now scheduled for 20 minutes** rather than the traditional 15 minutes. It is hoped that presenters will leave additional time for questions and discussion rather than filling the 20 minutes with the presentation.

In-depth symposia are critical to a successful program and I would like to thank the organizers for developing six excellent symposia on a diverse set of Weed Science topics. The first two symposia will be held on Tuesday afternoon.

Chad Brommer developed a professional development symposium on **Navigating the Universe of Grants, Contacts and Gifts in the 21st Century** which is information needed not only by new weed scientists in an academic career but also for many more experienced WSSA members. Prasanta Bhowmik worked with the Turf & Ornamental section to develop a symposium on the **Significance and Use of Sulfonylurea Herbicides in Turfgrass and Landscape Environments**. This chemistry has made a profound change in weed management in turfgrass and all the sulfonylurea diversity in selectivity, weed spectrum, and environmental behavior can be observed in its turfgrass applications. All day Wednesday, **The U.S. Witchweed Eradication Effort Turns 50: A Retrospective and Look-ahead on Parasitic Weed Management**, organized by Al Tasker, will detail a great weed and invasive plant management success story and discuss the future of managing parasitic weeds, a scourge to agriculture worldwide. On Wednesday morning, the symposium **Advances in Dose-Response Methodology Applied to the Science of Weed Control**, organized by Steve Seefeldt, will present the latest information in handling the data generated in these common weed management studies. And, for Wednesday afternoon, Prashant Jha organized a symposium on a critical current topic for Weed Science, **Non-chemical Tactics in Herbicide Resistance Management: Current Needs and Future Prospects**. Thursday morning brings the final symposium developed by Steve Duke and entitled **The Science of Herbicide Discovery**. Given that it has been 15 years since the last commercialization of a novel herbicide mechanism of action, this topic bears on the prospects for new weed management tools.

A special addition to the WSSA program on Thursday morning is the **Practitioners Forum, which we have called Boots On-the-Ground Calling Ivory Tower: Perceptions and Misconceptions about Weed Management and Research**. This is jointly organized by Fred Raish, president of the North American Weed Management Association (NAWMA), and Carol Mallory-Smith. This is promised to be a conversation between practicing weed managers from NAWMA and weed science researchers about the research needs of the managers and how to more effectively communicate research findings to the practitioners. I hope that those interested in seeing their research make a difference in weed management will attend and participate in this unique session.

The final program and abstracts are available by accessing the WSSA website (<http://www.wssa.net>). Abstracts of interest can be printed. The abstracts will also be available online, with search capability by author, subject (key word), or program section, after the meeting. All presentations will be made using PowerPoint and LCD projectors. Presenters must submit their final PowerPoint presentation to the

website prior to the meeting; section chairs will then organize and download the presentations to their computers prior to the meeting. A presentation preview room is available during the meeting. Presenters will need to coordinate with the section chair if you want to preview your presentation. The WSSA board will be meeting Saturday, Sunday, and Friday. The board has decided to meet earlier so members will have the chance to participate in the committee meetings held during the rest of the week. Most committee meetings will be held on Monday or Tuesday. If there are any issues that need to be brought to the board, please contact me or one of the other board members prior to or during the conference. The President's breakfast with regional presidents will occur on Wednesday morning. Committee chairs meet with the board on Thursday morning during breakfast. This meeting will allow the board to share its vision with the committee chairs and allow for discussion on integrating committee activities with priorities developed by the board.

The Program Chair receives a lot of help in organizing the annual meeting and I want to thank the section chairs, Larry Steckel, Rick Boydston, Dustin Lewis, Scott Wright, Christopher Mudge, Jon Joseph Armstrong, Richard Smith, Margaret Smither-Kopperl, Craig Ramsey, Doug Boyette, Franck Dayan, Sharon Clay, Darrin Dodds, and George Kegode for arranging the papers and posters in their area. Jim Steffel is coordinating the sustaining member exhibits. Carol Mallory-Smith and Tim Miller served as co-chairs of the local arrangements committee. The software developed by David Krueger greatly facilitated development of the program. Finally, Joyce Lancaster and Kate Counter are indispensable in making this all happen successfully.

Thank you for your support of WSSA activities. I look forward to seeing you in Portland and working with you this coming year.

Michael Barrett, 2011 Program Chair

2011 Program Committee

General Program Chairs	Mike Barrett
Vice Chair	Rod Lym
Abstract Editor	Wun Chao
Agronomic Crops	Larry Steckel
Horticultural Crops	Rick Boydston
Turf and Ornamentals	Dustin Lewis
Pastures, Rangelands, Forests, & Right-of-Ways	Scott Wright
Wildland and Aquatic Invasives	Christopher Mudge

Regulatory Aspects	Margaret Smither-Kopperl
Teaching and Extension	Jon-Joseph Armstrong
Formulation, Adjuvant, & Application	
Technology	Craig Ramsey
Weed Biology and Ecology	Richard G. Smith
Biocontrol of Weeds	Doug Boyette
Physiology	Franck Dayan
Soil and Environmental Aspects	Sharon Clay
Integrated Weed Management	Darrin Dodds
Sustaining Member Exhibits Session	James Steffel
Poster Sessions	George Kegode

General Information

Hotel: The **Hilton Portland & Executive Tower** hotel is located in the heart of Portland’s city center financial and entertainment districts. The Hilton’s central location is within blocks of downtown Portland’s best restaurants such as Jake’s Famous Crawfish and Higgins Restaurant and Bar. Upscale shopping is nearby at Nordstrom, Tiffany and Co., and Nike Town. Area attractions include the Portland Art Museum, Rose Garden Arena, Oregon Zoo, Oregon Museum of Science and Industry, Oregon Convention Center and Portland State University. These attractions are available by walking or by the MAX Light Rail system. The Portland International Airport is also accessible via the MAX Light Rail which is located just one short block from the hotel.

IMPORTANT INFORMATION: One of the reasons we have been able to retain relatively low meeting registration costs is that we receive free meeting space from the hotel. However, we are charged attrition fees if we do not meet our guest room block. Thus, your reservation at the Portland Hilton and Executive Tower rather than another location, ensures the success of the meeting for the Society and lower registration rates in the future.

The WSSA has reserved a block of discounted sleeping rooms for meeting attendees at the Hilton Portland and Executive Tower. Reservations may be made directly with the hotel by phoning them at (800) HILTONS and mentioning that you are with the Weed Science Society of America. Make sure to book early, as rates are only applicable through Thursday January 6th 2011. If you would prefer to make your reservations online, please visit the WSSA meeting registration site and follow the link for “Lodging”.

Check-in time at the Hilton Chicago is 4:00 pm, with check-out at Noon. Should you check-out prior to your initially-specified departure date, the hotel will assess an Early Departure fee to your credit card.

Transportation

The Portland International Airport is served by multiple commercial airlines. Typical taxi fares from the airport to the hotel are in the \$35 range. The Portland International Airport is also accessible via the MAX Light Rail which is located just one short block from the hotel. The fare for the MAX Light Rail is an exceptionally good rate - \$2.35 each way.

Driving directions from Portland International Airport (PDX):

Take I-205 SOUTH and exit onto I-84 WEST. At the end of I-84 West you will reach a junction of I-5 North and South. Go SOUTH toward Salem (to your left). Immediately follow the City Center signs, which will take you across the Morrison Bridge. Head STRAIGHT through the traffic light near the end of the bridge onto SW Washington St. Take Washington 5 blocks and then turn LEFT onto SW Broadway. Take Broadway 5 blocks and then turn LEFT onto SW Salmon St. Take Salmon 1 block and turn LEFT onto SW 6th Ave. The Hilton front doors will be on your left-hand side.

Parking fees at the Hilton Portland & Executive Tower:

Self Parking: \$20 USD per day with In/Out Privileges

Valet Parking: \$27 USD per day with In/Out Privileges

Program Booklet and Abstracts

All those registering for the annual meeting will receive a program booklet. The program will be mailed to those registering before January 7, 2011. To find the time and location of specific papers, look up the author in the author index in the back of the program.

No Smoking

By action of the Board of Directors, smoking is not permitted in the sessions.

Committee Meetings

SATURDAY, February 5

7:30 a.m. – 5:00 p.m.

Board of Directors Forum Suite

SUNDAY, February 6

7:00 a.m. – 5:30 p.m.

SWSS Plant Nurseries and Wine Tasting Tour

Buses will depart from the public bus loading/unloading zone on Salmon between 6th and Broadway (in front of Starbucks). Exit the front doors on the main building and

go right. Then cross the street to Starbucks. The bus zone is noticeable from the corner.

7:30 a.m. – 5:00 p.m.

Board of Directors Forum Suite

MONDAY, February 7

7:00 a.m. – 8:00 a.m.

2011 Program Committee (W1) Forum Suite

7:00 a.m. – 8:00 a.m.

Local Arrangements (W2) Boardroom East

8:00 a.m. – 9:00 a.m.

History and Archive Committee (W8) Galleria 3

8:00 a.m. – 10:00 a.m.

Herbicide Resistant Plants Committee (E12) ... Galleria 2

8:00 a.m. – 10:00 a.m.

Integrated Weed Management Committee (W17)
..... Studio

8:00 a.m. – 10:00 a.m.

Endowment Fund Committee (F3) Directors

8:00 a.m. – 10:00 a.m.

Federal Noxious and Invasive Weeds Committee (E4)
..... Parlor A

8:00 a.m. – 10:00 a.m.

Formulation, Adjuvant, and Application Technology Com-
mittee (W15) Senate

8:00 a.m. – 10:00 a.m.

International Affairs (F8) Parlor C

8:00 a.m. – 10:00 a.m.

Education Committee (W5) Parlor B

8:00 a.m. – 10:00 a.m.

Website Committee (P23) Galleria 1

8:00 a.m. – 10:00 a.m.

Public Awareness (E13) Salon 1

8:00 a.m. – 10:00 a.m.

Weed Science Editorial Committee (P2) Council

8:00 a.m. – 10:00 a.m.

CAST Committee (E3) Forum Suite

10:00 a.m. – 12:00 noon

Weed Alert Committee (W13) Galleria 2

10:00 a.m. – 12:00 noon
 Research and Competitive Grants Committee (E6)
 Parlor C

10:00 a.m. – 12:00 noon
Weed Technology Editorial Committee (P3) Council

10:00 a.m. – 12:00 noon
 Terminology Parent Committee (P22) Parlor A

10:00 a.m. – 12:00 noon
 Environmental Quality Control Committee (E8)
 Directors

10:00 a.m. – 12:00 noon
 Extension Committee (W11) Salon 1

10:00 a.m. – 12:00 noon
 Membership & Affiliations Committee (F4) Senate

10:00 a.m. – 12:00 noon
 Sustainable Agriculture Committee (W20) Galleria 1

10:00 a.m. – 12:00 noon
 Biological Control of Weeds Committee (W16) ... Studio

10:00 a.m. – 12:00 noon
 Science Policy Committee (E2) Forum

10:00 a.m. – 12:00 noon
 Herbicide Handbook Committee (P6) Galleria 3

10:00 a.m. – 12:00 noon
 Liaison Committee (E1) Parlor B

1:00 p.m. – 3:00 p.m.
 Biology of Weeds Committee (W4) Forum

1:00 p.m. – 3:00 p.m.
 Professional Development Committee (W21) Studio

1:00 p.m. – 3:00 p.m.
 Standardized Plant Names Committee (P22b) .. Parlor C

1:00 p.m. – 3:00 p.m.
Invasive Plant Science and Management Editorial Com-
 mittee (P4) Council

1:00 p.m. – 3:00 p.m.
 Weed Loss Committee (E11) Galleria 1

1:00 p.m. – 3:00 p.m.
 Sustaining Member Committee (F5) Galleria 3

1:00 p.m. – 3:00 p.m.
Herbicides for Minor Uses Committee (E10) .. Galleria 2

1:00 p.m. – 3:00 p.m.
WSSA Parent Awards Committee (W3) Directors

1:00 p.m. – 3:00 p.m.
Photo Contest Judging (W3j) Senate

TUESDAY, February 8

7:00 a.m. – 8:00 a.m.
2011/2012 Program Committee (W1a) Council

7:00 a.m. – 8:00 a.m.
Local Arrangements Boardroom East

8:00 a.m. – 10:00 a.m.
Finance Committee (F2) Boardroom East

6:00 p.m. – 8:00 p.m.
IWSS Board of Directors Broadway 3:4

WEDNESDAY, February 9

7:00 a.m. – 8:00 a.m.
President’s Breakfast with Regional Presidents
..... Alexanders

THURSDAY, February 10

7:00 a.m. – 8:00 a.m.
Board of Directors and Committee Chairs Breakfast
..... Council Suite

7:00 a.m. – 8:30 a.m.
Publication Board (P1) Broadway 1

FRIDAY, February 11

7:00 a.m. – 12:00 noon
Board of Directors Council Suite

WSSA Committee meetings are open to all WSSA members. However, some non-WSSA committee meetings (e.g., Herbicide Resistance Action Committee) are open only to invited participants. If in doubt, check at the beginning of the meeting with the Committee Chair.

Contact Kate Counter of Allen Press, Inc. (1-800-627-0326, Ext. 225) to arrange space for committee meetings or room assignments not scheduled in this program.

SUMMARY OF 2011 PROGRAM

SATURDAY MORNING, February 5

7:30 a.m. – 5:00 p.m.

Board of Directors Forum Suite

SUNDAY MORNING, February 6

7:00 a.m. – 5:30 p.m.

Plant Nurseries and Wine Tasting Tour

Buses will depart from the public bus loading/unloading zone on Salmon between 6th and Broadway (in front of Starbucks). Exit the front doors on the main building and go right. Then cross the street to Starbucks. The bus zone is noticeable from the corner.

7:30 a.m. – 5:00 p.m.

Board of Directors Forum Suite

MONDAY MORNING, February 7

10:00 a.m. – 4:00 p.m.

Registration Plaza Foyer

12:00 noon – 4:00 p.m.

Placement Service Information and Interviews

..... Boardroom West

12:00 noon – 4:00 p.m.

Exhibit & Poster Set-Up Pavilion

MONDAY AFTERNOON, February 7

1:00 p.m. – 3:00 p.m.

Photo Contest Judging Senate

3:00 p.m. – 4:00 p.m.

Presentation review for Tuesday's oral papers

..... Boardroom West

4:00 p.m. – 6:00 p.m.

General Session and Awards Presentations

..... Grand Ballroom I

6:00 p.m. – 9:00 p.m.

WSSA Awardees Reception Plaza Foyer

6:00 p.m. – 7:00 p.m.

Posters for Turf and Ornamentals, Pasture, Physiology, and Weed Biology will be present Pavilion

7:00 p.m. – 8:00 p.m.

Remaining Poster Sessions will be present Pavilion

TUESDAY MORNING, February 8

7:30 a.m. – 5:00 p.m.

Registration Plaza Foyer

7:45 a.m. – 8:00 a.m.

Poster Session Business Meeting Pavilion

8:00 a.m. – 5:00 p.m.

Exhibits Pavilion

8:00 a.m. – 5:00 p.m.

Placement Service Information and Interviews
..... Boardroom West

8:00 a.m. – 9:00 a.m.

Presentation review for Wednesday's oral papers
..... Boardroom West

8:00 a.m. – 9:00 a.m.

Poster Session Pavilion
Authors of Turf and Ornamentals, Pasture, Physiology,
and Weed Biology will be present

9:00 a.m. – 10:00 a.m.

Authors of all other poster sessions will be present
..... Pavilion

10:00 a.m. – 5:00 p.m.

Posters on display without authors Pavilion

10:30 a.m. – 12:00 noon

2. Horticultural Crops Galleria North

10:30 a.m. – 12:00 noon

5. Wildland and Aquatic Invasive Plants ... Broadway

10:30 a.m. – 12:00 noon

6. Regulatory Aspects Parlor

10:30 a.m. – 12:00 noon

12. Soil and Environmental Aspects Galleria South

12:00 noon – 1:00 p.m.

Graduate Student Luncheon and Business Meeting
..... Alexanders

TUESDAY AFTERNOON, February 8

1:00 p.m. – 5:00 p.m.

**Symposium: Navigating the Universe of Grants, Contracts,
and Gifts in the 21st Century** Grand Ballroom II

1:00 p.m. – 5:00 p.m.

**Symposium: Significance and Use of Sulfonylurea Herbicides
in Turf** Parlor

- 1:00 p.m. – 5:00 p.m.
 1. Agronomic Crops Grand Ballroom I
- 1:00 p.m. – 5:00 p.m.
 2. Horticultural Crops Galleria North
- 1:00 p.m. – 5:00 p.m.
 5. Wildland and Aquatic Invasive Plants ... Broadway
- 1:00 p.m. – 5:00 p.m.
 9. Weed Biology and Ecology Galleria South

WEDNESDAY MORNING, February 9

- 7:00 a.m. – 8:30 a.m.
 Regional Presidents Breakfast Alexanders
- 7:30 a.m. – 5:00 p.m.
 Registration Plaza Foyer
- 8:00 a.m. – 9:00 a.m.
 Presentation review for Thursday's oral papers
 Boardroom West
- 8:00 a.m. – 5:00 p.m.
 Poster Session Pavilion
 Posters on display without authors
- 8:00 a.m. – 5:00 p.m.
 Exhibits Pavilion
- 8:00 a.m. – 5:00 p.m.
 Placement Service Information and Interviews
 Boardroom West
- 8:00 a.m. – 12:00 noon
Symposium: The U.S. Witchweed Eradication Effort Turns 50: A Restrospective and Look-Ahead on Parasitic Weed Management Galleria North
- 8:00 a.m. – 12:00 noon
Symposium: Advances in Dose-Response Methodology Applied to the Science of Weed Control
 Grand Ballroom I
- 8:15 a.m. – 12:00 noon
 3. Turf and Ornamentals Parlor
- 8:00 a.m. – 12:00 noon
 4. Pastures, Rangelands, Forests and Right-of Ways
 Galleria South
- 8:00 a.m. – 12:00 noon
 13. Integrated Weed Management
 Grand Ballroom II

WEDNESDAY AFTERNOON, February 9

1:00 p.m. – 5:00 p.m.

Symposium: The U.S. Witchweed Eradication Effort Turns 50: A Retrospective and Look-Ahead on Parasitic Weed Management Galleria North

1:00 p.m. – 5:00 p.m.

Symposium: Nonchemical Tactics in Herbicide Resistance Management: Current Needs and Future Prospects Grand Ballroom I

1:00 p.m. – 5:00 p.m.

1. Agronomic Crops Grand Ballroom II

1:00 p.m. -5:00 p.m.

4. Pastures, Rangelands, Forests and Right-of Ways Galleria South

1:00 p.m. – 5:00 p.m.

11. Physiology Parlor

5:30 p.m. – 6:30 p.m.

WSSA Society Business Meeting Galleria South

6:30 p.m. – 8:30 p.m.

Willamette Valley Reception Grand Ballroom II

THURSDAY MORNING, February 10

7:00 a.m. – 8:30 a.m.

Board of Directors/Committee Chair Breakfast Council Suite

7:30 a.m. – 4:00 p.m.

Registration Plaza Foyer

8:00 a.m. – 12:00 noon

Posters on display without authors Pavilion

8:00 a.m. – 12:00 noon

Exhibits Pavilion

8:00 a.m. – 12:00 noon

Symposium: The Science of Herbicide Discovery Grand Ballroom II

8:00 a.m. – 12:00 noon

Practitioners Forum Parlor

8:00 a.m. – 12:00 noon

Agronomic Crops Grand Ballroom I

8:00 a.m. – 12:00 noon

9. Weed Biology and Ecology Galleria

12:00 noon – 1:00 p.m.

Dismantle Poster and Exhibits

THURSDAY AFTERNOON, February 10

1:00 p.m. – 5:00 p.m.

1. Agronomic Crops Grand Ballroom I

1:00 p.m. – 5:00 p.m.

7. Education and Extension Parlor

1:00 p.m. – 5:00 p.m.

9. Weed Biology and Ecology Galleria

1:00 p.m. – 5:00 p.m.

11. Physiology Grand Ballroom II

FRIDAY MORNING, February 11

7:30 a.m. – 12:00 noon

Board of Directors Council Suite

COMPLETE PROGRAM

**MONDAY PM, February 4
GENERAL SESSION**

Location: Grand Ballroom I and II

Chair: Mike Barrett

4:00 p.m.

Introduction and Announcements, Mike Barrett, President-Elect, WSSA

4:05 p.m.

President's Remarks, John Jachetta, President, WSSA

4:20 p.m.

Herbicide Resistance Management – WSSA Takes the Lead, David Shaw, Past-President, WSSA

4:35 p.m.

Keynote Address: Solving Africa's Weed Problem – Key to Improving Women's Lives and Increasing Crop Production, Barbara Glenn, CropLife America

5:00 p.m.

Presentation of Awards, Lori Wiles, Chair, Awards Committee, WSSA

5:40 p.m.

Presentation of Fellow and Honorary Member Awards, Jim Barrentine, Chair, Fellows and Honorary Member Subcommittee, WSSA

6:00 p.m. to 9:00 p.m.

WSSA Awardee Reception and Member Social

Location: Plaza Foyer

6:00 p.m. to 7:00 p.m.

Poster Session: Authors of Turf and Ornamentals, Pasture, Physiology, and Weed Biology will be present

..... Pavilion

7:00 p.m. to 8:00 p.m.

Poster Session: Authors of all other poster sessions will be present

Pavilion

**MONDAY PM to THURSDAY
February 7 to 10**

**WSSA SUSTAINING MEMBERS
EXHIBITS SESSION**

Location: Pavilion

Chair: James Steffel, LABServices

7:45 a.m. Tuesday

Sustaining Members Exhibits Session meeting to elect a Chair-Elect.

Setup 12:00 noon to 4:00 p.m. Monday

6:00 p.m. to 9:00 p.m. Monday

8:00 a.m. to 5:00 p.m. Tuesday

8:00 a.m. to 5:00 p.m. Wednesday

8:00 a.m. to 3:00 p.m. Thursday

Please remove exhibits by 3:00 p.m. on Thursday

**Sustaining Member Exhibitor and
Representative**

BioChambers, Inc	Ed Wiebe
Convicon	Graham Willson
DuPont	Wynn John
Gylling Data Management	Steve Gylling
Herbiseed	Steve Morton
LABServices	James Steffel
Weed Systems, Inc	Wayne Currey

POSTER SESSIONS

MONDAY PM, FEBRUARY 7

Section 1. Agronomic Crops

Dry Bean Tolerance to Halosulfuron Applied Postemergence.

N. Soltani*¹, R. E. Nurse², C. Shropshire¹, P. H. Sikkema¹;
¹University of Guelph, Ridgetown, ON, ²Agriculture and
Agri-Food Canada, Harrow, ON (1)

Evaluation of Herbicides to Control Suspected ALS Resistant *Solanum ptycanthum*.

K. M. Vollmer*¹, H. Wilson², T. Hines²; ¹Virginia Tech, Blacksburg, VA, ²Virginia Tech, Painter, VA (2)

Current Status of Weed Infestation in Soybean RR in Parana State, in Southern Brazil.

F. S. Adegas*; Embrapa, Londrina, Brazil (3)

Carryover Potential of Herbicides Used for *Conyza* Sp. Control.

D. G. Alonso*¹, J. Constantin¹, R. S. Oliveira Jr.¹, W. C. Koskinen², A. Oliveira Neto¹, H. A. Dan¹, N. Guerra¹; ¹Universidade Estadual de Maringá, Maringá, Brazil, ²USDA-ARS/University of Minnesota, St. Paul, MN (4)

Four Years of Dicamba-tolerant Soybeans in Kentucky.

S. Carter*¹, C. Slack¹, S. Seifert-Higgins²; ¹University of Kentucky, Lexington, KY, ²Monsanto Company, St. Louis, MO (5)

Soybean Spacing and Growing Habit and its Relationship with Weed Competition.

F. S. Adegas*; Embrapa, Londrina, Brazil (6)

Confirmation of Glyphosate-resistant *Conyza canadensis* in Oklahoma.

J. Armstrong*; Oklahoma State University, Stillwater, OK (7)

Susceptible Wild Oat (*Avena fatua*) Endangered in Manitoba.

H. J. Beckie*, C. Lozinski, S. Shirriff; Agriculture and Agri-Food Canada, Saskatoon, SK (8)

Multiple Herbicide-resistant *Sagittaria montevidensis* Population in Santa Catarina State (Brazil) Rice Fields.

J. A. Noldin*, D. S. Eberhardt; Epagri, Itajai, Brazil (9)

Row Spacing and Population Effects in Two Dry Bean Classes.

R. C. Holmes*, C. L. Sprague; Michigan State University, East Lansing, MI (10)

Comparison of Soybean Varieties with Different Herbicide-resistant Traits.

C. L. Sprague*, G. E. Powell, E. C. Taylor; Michigan State University, East Lansing, MI (11)

Peanut Response to Fomesafen Applied at Different Timings and Rates. P. A. Dotray*¹, W. Grichar², E. P. Prostko³, J. Ferrell⁴, D. L. Jordan⁵, L. V. Gilbert⁶; ¹Texas Tech University, Lubbock, TX, ²Texas AgriLife Research, Beeville, TX, ³University of Georgia, Tifton, GA, ⁴University of Florida, Gainesville, FL, ⁵North Carolina State University, Raleigh, NC, ⁶Texas AgriLife Research, Lubbock, TX (12)

Herbicide Programs for Optimum® GAT® Soybeans. D. W. Saunders*¹, S. K. Rick², K. D. Johnson³; ¹DuPont Crop Protection, Johnston, IA, ²DuPont Crop Protection, Waterloo, IL, ³DuPont Crop Protection, Grand Forks, ND (13)

Dicamba Tolerant Soybean in Nebraska No-till Production Systems. M. L. Bernards*¹, V. Mannam¹, S. Seifert-Higgins²; ¹University of Nebraska-Lincoln, Lincoln, NE, ²Monsanto Company, St. Louis, MO (14)

Response of Giant Reed to Postemergence Sugarcane Herbicides. D. C. Odero*; University of Florida, Belle Glade, FL (15)

Effects of Mesosulfuron on the Growth of Six Winter Wheat Varieties. M. R. Manuchehri*¹, I. C. Burke¹, T. Rauch², D. A. Ball³, D. Thill²; ¹Washington State University, Pullman, WA, ²University of Idaho, Moscow, ID, ³Oregon State University, Pendleton, OR (16)

Mid Season Control of Browntop Millet in Soybean. W. Molin*; USDA-ARS, Stoneville, MS (17)

Tolerance of Widestrike Cotton Varieties to Glufosinate. D. M. Dodds*¹, L. Barber², G. D. Collins³, C. L. Main⁴; ¹Mississippi State University, Mississippi State, MS, ²University of Arkansas, Little Rock, AR, ³University of Georgia, Tifton, GA, ⁴University of Tennessee, Jackson, TN (18)

Comparison of Alion Performance Between Fall or Spring Applications in Orchards Across the United States. S. A. Gersdorf*¹, D. Unland², M. Anderson³; ¹Bayer CropScience, Monmouth, OR, ²Bayer CropScience, Research Triangle Park, NC, ³Bayer CropScience, Spangle, WA (19)

Global Distribution of Glyphosate Resistant Weeds. I. M. Heap*; WeedSmart, Corvallis, OR (20)

Effect of Manganese on Glyphosate Activity. N. Soltani*, C. Shropshire, P. H. Sikkema; University of Guelph, Ridgeway, ON (21)

Herbicide Programs for Enhanced Glyphosate-resistant and Glufosinate-resistant Cotton. D. S. Riar*, J. K. Norsworthy, G. M. Griffith; University of Arkansas, Fayetteville, AR (22)

Comparisons of Various Hexazinone Formulations on Weed Efficacy in Alfalfa. L. K. Hinrichs*, R. E. Mack, M. W. Wayland; Helena Chemical Company, Memphis, TN (23)

Wheat Contributes to Weed Control as a Rotational Crop in Kentucky. J. R. Martin*, C. R. Tutt, D. L. Call; University of Kentucky, Princeton, KY (24)

Organic and Herbicide-free Systems Applied to Old Conservation Tillage Plots: The Weed Management Challenge. A. Legere*¹, C. Stevenson², A. Vanasse³, O. Lalonde³; ¹Agriculture and Agri-Food Canada, Saskatoon, SK, ²Private Consultant, Saskatoon, SK, ³Université Laval, Québec, QC (25)

Glufosinate Effects on Nitrogen Nutrition, Growth, and Yield of Glufosinate-resistant and Glufosinate-sensitive Soybean. K. N. Reddy*¹, R. M. Zablotowicz¹, N. Bellaloui¹, W. Ding²; ¹USDA-ARS, Stoneville, MS, ²Northeast Agricultural University, Harbin, Peoples Republic (26)

Weed Stress Duration Effects on Soybean Gene Expression and Yield. S. A. Hansen*¹, S. A. Clay¹, D. P. Horvath², G. Reicks¹; ¹South Dakota State University, Brookings, SD, ²USDA-ARS, Fargo, ND (27)

Camelina Tolerance to Soil-applied Herbicides. P. Jha*¹, R. Stougaard², J. O. Garcia¹; ¹Montana State University, Huntley, MT, ²Montana State University, Kalispell, MT (28)

Herbicides for Weed Management in Perennial Grasses Grown for Biofuel. R. Van Acker, J. O'Sullivan*, R. Grohs, R. Riddle; University of Guelph, Simcoe, ON (29)

BAS 810H: Application Timing and Rate for Improved Crop Safety and Weed Control in Spring Wheat. A. Anand*¹, P. Jha², J. O. Garcia²; ¹Montana State University, Bozeman, MT, ²Montana State University, Huntley, MT (30)

Modeling "Habitat Suitability" for a Herbicide Resistant Weed using a Species Distribution Model and Presence-only Data. L. Wiles*¹, S. Kumar², V. M. Davis³, B. Johnson⁴; ¹USDA-ARS, Fort Collins, CO, ²Natural Resource Ecology Laboratory, Colorado State University, Fort Collins, CO, ³University of Illinois, Urbana, IL, ⁴Purdue University, West Lafayette, IN (31)

Resistance to Herbicides in *Phalaris* spp. and *Avena fatua* in the Bajío Region of Mexico. T. Medina-Cazares*¹, R. Alarcón-Reverte², J. C. Streibig³, A. J. Fischer²; ¹INIFAP, Celaya, Mexico, ²University of California, Davis, Davis,

CA, ³Royal Veterinary and Agricultural University, Thorvaldsenvej, Denmark (32)

Can Inter-row Soil Disturbance at Seeding Lead to Efficient Localized Weed Control Using Plant Cover Detection? M. Simard*¹, B. Panneton², G. D. Leroux³, A. Vanasse⁴, R. E. Nurse⁵; ¹Agriculture and Agri-Food Canada, Quebec, QC, ²Agriculture and Agri-Food Canada, Saint-Jean-sur-Richelieu, QC, ³Université Laval, Quebec, QC, ⁴Université Laval, Québec, QC, ⁵Agriculture and Agri-Food Canada, Harrow, ON (33)

Effect of Herbicide Rate and Rotation on the Weed Seed Bank After Three Years of Transgenic Corn/soybean Cropping. M. Simard*¹, S. Rouane², G. D. Leroux²; ¹Agriculture and Agri-Food Canada, Quebec, QC, ²Université Laval, Quebec, QC (34)

Weed Control with Pindar GT in California Tree Nuts. R. K. Mann*¹, M. Sorribas¹, J. P. Mueller², B. Bisabri³, M. L. Fisher⁴, D. G. Shatley⁵, J. Richardson⁶; ¹Dow AgroSciences, Indianapolis, IN, ²Dow AgroSciences, Brentwood, CA, ³Dow AgroSciences, Orinda, CA, ⁴Dow AgroSciences, Fresno, CA, ⁵Dow AgroSciences, Lincoln, CA, ⁶Dow AgroSciences, Hesperia, CA (35)

LibertyLink Soybean: Is this the Answer? D. Lingenfelter*, W. Curran; The Pennsylvania State University, University Park, PA (36)

Progress in Canadian Minor Use Weed Science Program. K. Subedi*; Agriculture and Agri-Food Canada, Ottawa, ON (37)

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Efficacy of Post-directed Herbicide Applications for Weed Control in Pepper. L. Brandenberger*, L. Carrier; Oklahoma State University, Stillwater, OK (38)

The Effect of Vine Kill Herbicides on Potato Storage and Chip Quality. W. J. Everman*, C. M. Long, A. J. Chomas; Michigan State University, East Lansing, MI (39)

Post-directed Application of Pelargonic Acid for Squash. C. L. Webber*¹, J. W. Shrefler², L. Brandenberger³; ¹USDA-ARS, Lane, OK, ²Oklahoma State University, Lane, OK, ³Oklahoma State University, Stillwater, OK (40)

Quantifying the Costs and Benefits of Cover Crop Use for Weed Management. A. H. Cho, A. W. Hodges, C. A. Chase*; University of Florida, Gainesville, FL (41)

Effect of Controlled Release Nitrogen Fertilizer on Vine Desiccation and Potato Tuber Yield. L. E. Bast*, W. J. Everman, A. J. Chomas, D. D. Warncke; Michigan State University, East Lansing, MI (42)

Indaziflam for Control of Key Weeds in Tree, Nut, and Vine Crops. D. Unland*¹, H. Mager², M. Edenfield³; ¹Bayer CropScience, Research Triangle Park, NC, ²Bayer CropScience, Fountain Hills, AZ, ³Bayer CropScience, Lake Wales, FL (43)

Indaziflam: A New Pre-emergence Herbicide for Citrus. M. . Singh*¹, A. M. Ramirez¹, M. Edenfield²; ¹University of Florida, Lake Alfred, FL, ²Bayer CropScience, Lake Wales, FL (44)

Summer Weed Control with Glyphosate Tank Mixed with Indazaflam or Penoxsulam in California Orchards and Vineyards. B. D. Hanson, A. J. Jhala*; University of California, Davis, Davis, CA (45)

New Herbicides for Weed Control in Potato. C. J. Swanton, K. Chandler*; University of Guelph, Guelph, ON (46)

Natural Product Herbicides for Fruit and Vegetable Crops. R. Van Acker, J. O'Sullivan*, R. Grohs, R. Riddle; University of Guelph, Simcoe, ON (47)

Tolerance of Seed Radish to Clopyralid: Effect of Variety, Timing and Rate. E. Peachey*, A. Greco; Oregon State University, Corvallis, OR (48)

Weed Suppression Utilizing Mulch and Organic Herbicide Combinations. M. A. Rowley*¹, C. V. Ransom², J. Reeve², B. L. Black²; ¹Utah State University, Eureka, UT, ²Utah State University, Logan, UT (49)

Determine the Benefits of Cane Burning to Red Raspberry in the Pacific Northwest. Y. Duan*¹, T. W. Miller²; ¹Washington State University, Pullman, WA, ²Washington State University, Mount Vernon, WA (50)

Weed Management Options for Organic Cantaloupe Production. J. W. Shrefler¹, C. L. Webber*², M. J. Taylor¹, B. Roberts¹; ¹Oklahoma State University, Lane, OK, ²USDA-ARS, Lane, OK (51)

Section 3. Turf and Ornamental Crops

*PRESENTER

Turf, Weed or Weedy Turf? – My View on the Weed Transformed from Unwanted Turf Growing in Cultivated

Golf's Turf. X. Guang*; East China Weed Technology Institute, Nanjing, Peoples Republic (52)

Corn Gluten Meal Rate Affects Brown Patch Severity in Tall Fescue. A. Smith*, D. S. McCall, S. Askew; Virginia Tech, Blacksburg, VA (53)

Section 4. Pasture, Rangeland, Forest, and Rights of Way

*PRESENTER

Fire and Grazing Increase Invasive Opportunities for Salt Cedar in the Prairie Pothole Region. S. A. Clay*, M. Ohrtman, A. Smart; South Dakota State University, Brookings, SD (54)

Economic Assessment of Integrated Weed Management Practices Used to Improve Forage Productivity in Pastures. J. Tolson, J. Green*, K. Burdine, W. Witt, G. Schwab; University of Kentucky, Lexington, KY (55)

Ecology of Cutleaf Teasel Seeds. S. D. Eschenbach*, G. O. Kegode, D. B. Vlieger; Northwest Missouri State University, Maryville, MO (56)

Increasing Native Warm Season Grasses with Fire, Herbicide, and Nitrogen. S. M. Waughtel*; South Dakota State University, Brookings, SD (57)

Russian Knapweed Management in Southwestern Abandoned Pastures. W. B. McCloskey¹, K. McReynolds², E. Foster³, D. Arthun⁴; ¹University of Arizona, Tucson, AZ, ²University of Arizona, Willcox, AZ, ³NRCS USDA, Safford, AZ, ⁴BLM, Safford, AZ (58)

Influence of Spring Applications of Aminopyralid plus Metsulfuron on Forage Characteristics and Beef Steer Performance in Missouri Pastures. T. R. Legleiter*, J. Sexten, C. Roberts, K. W. Bradley; University of Missouri, Columbia, MO (59)

The Safety and Efficacy of Mesotrione in Longleaf Pine Seedlings. M. A. Czarnota*; University of Georgia, Griffin, GA (60)

Section 5. Wildland and Aquatic Invasive Plants

*PRESENTER

Using a Plant Dispersal Model for Yellow Starthistle for Landscape Level Weed Management Planning. L. W. Lass^{*1}, T. Prather¹, B. Shafii¹, S. Cook¹, T. Venn², W.

Chung², S. R. Radosevich³, P. Aracena², W. J. Price¹, C. Crabtree⁴, P. Green⁵, S. Kesoju¹; ¹University of Idaho, Moscow, ID, ²University of Montana, Missoula, MT, ³Oregon State University, Corvallis, OR, ⁴Idaho County Weed Superintendent, Grangeville, ID, ⁵USFS, Grangeville, ID (61)

Use of Endothall for Control of Eurasian Watermilfoil in Irrigation Canals. J. D. Vassios*¹, S. J. Nissen¹, C. J. Gray²; ¹Colorado State University, Fort Collins, CO, ²United Phosphorous, Inc., Peyton, CO (62)

Water Lettuce and Water Hyacinth Control Using Saflufenacil. J. D. Vassios*, S. J. Nissen; Colorado State University, Fort Collins, CO (63)

The Effect of Selected Herbicides on Growth and Hydrocarbon Content of *Botryococcus braunii* Kützing Berkeley Strain (vat. *showa*). L. Deng*, S. A. Senseman, T. Gentry, D. Zuberer, T. Weiss, T. Devarenne, E. R. Camargo; Texas A&M University, College Station, TX (64)

Monoecious Hydrilla Control With Endothall Over Two Years. S. L. True*, J. J. Nawrocki, R. J. Richardson; North Carolina State University, Raleigh, NC (65)

Multi-year Survival, Growth and Maturation of Invasive Swallow-wort Juveniles (*Vincetoxicum* spp.) across a Habitat Gradient. L. R. Milbrath¹, A. DiTommaso*², J. Biazzo¹, S. H. Morris²; ¹USDA-ARS, Ithaca, NY, ²Cornell University, Ithaca, NY (66)

Small Mammal Response to Chinese Privet Removal from Riparian Forests in Northeast Georgia. M. S. Murphy*; University of Georgia, Athens, GA (67)

Native and Invasive *Rubus* Hybridize to Produce Apomictic Offspring. L. V. Clark, M. Jasieniuk*; University of California, Davis, Davis, CA (68)

Hybridization and Invasion: Using Molecular Phylogenetic Methods to Reveal the Origins of North American French Broom Invasions. A. C. Kleist*, M. Jasieniuk; University of California, Davis, Davis, CA (69)

Management Options for Japanese Stiltgrass (*Microstegium vimineum*) in Natural Areas. T. L. Mervosh*¹, J. S. Ward², J. P. Barsky²; ¹Connecticut Agricultural Experiment Station, Windsor, CT, ²Connecticut Agricultural Experiment Station, New Haven, CT (70)

Section 6. Regulatory Aspects

No submissions in this section.

Section 7. Education and Extension

*PRESENTER

Changes in the Weed Species Composition of the Southern US: 1995 to 2010. T. M. Webster*¹, R. L. Nichols²; ¹USDA-ARS, Tifton, GA, ²Cotton Incorporated, Cary, NC (71)

Creating a Photographic Guide to Identify Herbicide Drift in Rice. J. B. Hensley*¹, E. P. Webster¹, B. Schultz²; ¹LSU AgCenter, Baton Rouge, LA, ²LSU AgCenter, Crowley, LA (72)

Invasive Plant Ecology and Management. S. L. Young*; University of Nebraska-Lincoln, North Platte, NE (73)

Section 8. Formulation, Adjuvant and Application Technology

*PRESENTER

Efficacy of A Low Volume, Low Pressure Glyphosate Application Compared to a Traditional Application. G. R. Kruger*¹, R. N. Klein¹, J. A. Golus¹, T. J. Dorr¹, J. A. Eastin²; ¹University of Nebraska-Lincoln, North Platte, NE, ²Kamterter Products, LLC., Lincoln, NE (74)

Adjuvant Certification through the Chemical Producers and Distributors Association. M. L. Bernards¹, G. K. Dahl*²; ¹University of Nebraska-Lincoln, Lincoln, NE, ²Winfield Solutions, LLC, Minneapolis, MN (75)

Section 9. Weed Biology and Ecology

*PRESENTER

Alternating Temperature Alters the Transcriptome of Leafy Spurge Seeds after Pretreatment at Constant Temperature. M. E. Foley*, W. S. Chao; USDA-ARS, Fargo, ND (76)

Response of Nebraska Kochia (*Kochia scoparia*) Populations to Dicamba. R. J. Crespo*¹, M. L. Bernards¹, G. R. Kruger², R. G. Wilson³, D. J. Lee¹; ¹University of Nebraska-Lincoln, Lincoln, NE, ²University of Nebraska-

Lincoln, North Platte, NE, ³University of Nebraska, Scottsbluff, NE (77)

Does the Dormancy of Weed Seeds Break by the Passage Through Digestive Tract in Holstein Cattle? S. Rahimi¹, H. Rahimian Mashhadi*², M. D. Banadaki¹; ¹University of Tehran, Karaj, Iran, ²University of Tehran, Tehran, Iran (78)

Preferential Predation of Cool-season Grass Seed by the Common Cricket (*Acheta domesticus*). R. D. Williams*¹, P. W. Bartholomew²; ¹USDA-ARS, Oklahoma City, OK, ²USDA-ARS, Langston, OK (79)

Microscopic Characterization of Rubber Particles in Prickly Lettuce (*Lactuca serriola*). J. L. Bell*, I. C. Burke, M. M. Neff; Washington State University, Pullman, WA (80)

Analyzing Crop, Soil, and Terrain Impacts on Weed Seed Banks Using Random Forests Regression. R. Unger*¹, D. R. Huggins¹, I. C. Burke¹, E. Gallandt², S. Higgins¹; ¹Washington State University, Pullman, WA, ²University of Maine, Orono, ME (81)

Seed Development on Weeds Controlled Prior to Maturity. E. C. Taylor*, C. L. Sprague, K. A. Renner; Michigan State University, East Lansing, MI (82)

Endophyte Status of Tall Fescue (*Lolium arundinaceum*) Affects Seed Predation. P. W. Bartholomew¹, R. D. Williams*²; ¹USDA-ARS, Langston, OK, ²USDA-ARS, Oklahoma City, OK (83)

Effects of Vegetative Cover and Food Load on Weed Seed Predation in the Upper Midwest. G. G. Gramig*; North Dakota State University, Fargo, ND (84)

Inheritance of EPSPS Gene Amplification in Palmer Amaranth. D. A. Giacomini*¹, S. Ward¹, T. A. Gaines², P. Westra¹; ¹Colorado State University, Fort Collins, CO, ²University of Western Australia, Crawley, WA, Australia (85)

Persistence and Survival of Hoary Alyssum (*Berteroa incana* (L.) DC). G. J. Stopps, M. K. Upadhyaya*; University of British Columbia, Vancouver, BC (86)

Weed Seedbank Dynamics in Four Contrasting Organic Feed and Forage Production Systems. R. G. Smith*¹, D. A. Mortensen², M. E. Barbercheck², D. J. Sandy²; ¹University of New Hampshire, Durham, NH, ²The Pennsylvania State University, University Park, PA (87)

Weed Emergence and Growth in Strip-Tilled Systems: Separating the Effects of Tillage, Cover Crops, and Crop

Competition. E. Haramoto*, D. C. Brainard; Michigan State University, East Lansing, MI (88)

Developing a Hydrothermal Model to Predict Emergence of Annual Weed Species in Iowa. R. Werle*¹, L. D. Sandell¹, M. L. Bernards¹, J. L. Lindquist¹, D. D. Buhler², R. G. Hartzler³; ¹University of Nebraska-Lincoln, Lincoln, NE, ²U.S. Department of Agriculture / Agricultural Research Service, Ames, IA, ³Iowa State University, Ames, IA (89)

Growth and Development of *Artemisia annua* in Eastern Washington. H. C. Malone*, I. C. Burke, B. Pan; Washington State University, Pullman, WA (90)

The Significance of Sorghum Exudates on the Germination of the Parasitic Weed, *Striga hermonthica*. L. C. Andresen*¹, J. C. Streibig¹, B. W. Strobel², A. M. Rimando³, T. H. Nielsen¹, V. Leth¹; ¹University of Copenhagen, Taastrup, Denmark, ²University of Copenhagen, Frederiksberg, Denmark, ³USDA-ARS, Oxford, MS (91)

Effect of Storage Conditions and Corn Competition on Seed Germination of Jimsonweed and Cocklebur. F. Kordbacheh*¹, H. Rahimian Mashhadi², H. Alizadeh¹, R. Tavakol Afshari¹; ¹Tehran University, Karaj, Iran, ²University of Tehran, Tehran, Iran (92)

Effects of Soil Water Level on Dormancy, Germination and Mortality of Weed Seed. T. Imaizumi*, M. Asai, H. Watanabe, A. Uchino; National Agricultural Research Center, Tsukuba, Japan (93)

Distribution of Glyphosate-resistant and -susceptible Hairy Fleabane (*Conyza bonariensis*) and their Phenology in Central California. A. Shrestha*¹, B. D. Hanson², M. L. Moretti¹; ¹California State University, Fresno, CA, ²University of California, Davis, CA (94)

Elucidating the Inheritance of Evolved Resistance to Glyphosate in Populations of Palmer Amaranth (*Amaranthus palmeri*) from North Carolina. A. Chandi*¹, S. Mila-Lewis¹, D. L. Jordan¹, J. D. Burton¹, A. York¹, J. Whitaker², A. S. Culpepper³; ¹North Carolina State University, Raleigh, NC, ²University of Georgia, Statesboro, GA, ³University of Georgia, Tifton, GA (95)

Parameterization of the Barnyardgrass Resistance Simulation Model for Rice. M. V. Bagavathiannan*¹, J. K. Norsworthy¹, K. L. Smith², P. Neve³; ¹University of Arkansas, Fayetteville, AR, ²University of Arkansas, Monticello, AR, ³University of Warwick, Wellesbourne, England (96)

Is the Biofuel Switchgrass an Invasion Risk in California? J. N. Barney*¹, J. M. DiTomaso²; ¹Virginia Tech, Blacksburg, VA, ²University of California, Davis, Davis, CA (97)

Intra- and Inter-specific Interference between Rice and Herbicide-resistant and -susceptible *Echinochloa phyllopogon*. L. G. Boddy*¹, M. S. Bhullar², J. C. Streibig³, A. J. Fischer¹; ¹University of California, Davis, Davis, CA, ²Punjab Agricultural University, Ludhiana, India, ³Royal Veterinary and Agricultural University, Thovorldsenvej, Denmark (98)

Applying the Concept of Hydrothermal Time to Model Dormancy and Germination in *Echinochloa phyllopogon*. L. G. Boddy*, K. J. Bradford, A. J. Fischer; University of California, Davis, Davis, CA (99)

Growth and Development Among Prickly Nightshades from Southeastern United States. C. T. Bryson*¹, K. N. Reddy¹, J. D. Byrd²; ¹USDA-ARS, Stoneville, MS, ²Mississippi State University, Mississippi State, MS (100)

Kochia with ALS (AHAS) Mutations: More on the Manitoba Conundrum. A. Legere*¹, H. G. Beckie¹, B. Hrynewich¹, C. Lozinski¹, E. N. Johnson², S. Warwick³, C. Stevenson⁴; ¹Agriculture and Agri-Food Canada, Saskatoon, SK, ²Agriculture and Agri-Food Canada, Scott, SK, ³Agriculture and Agri-Food Canada, Ottawa, ON, ⁴Private Consultant, Saskatoon, SK (101)

Spurred Anoda, Tall Morningglory, and Wright's Groundcherry are not Affected by *Meloidogyne incognita* and *Verticillium dahlia* Co-infection. J. Schroeder*¹, C. Fiore¹, S. Thomas¹, J. Trojan¹, S. Sanogo¹, L. Liess¹, N. Schmidt¹, L. Murray²; ¹New Mexico State University, Las Cruces, NM, ²Kansas State University, Manhattan, KS (102)

The Effect of Limited Irrigation on Weed Emergence and Seed Production in Corn and Sunflower. L. Wiles*¹, D. Remucal², W. Bausch³, T. Trout³, D. L. Shaner²; ¹USDA-ARS, Fort Collins, CO, ²USDA, Fort Collins, CO, ³USDA-ARS, Water Management Research Unit, Fort Collins, CO (103)

Effect of Saflufenacil on Glyphosate-resistant and -susceptible Horseweed (*Conyza canadensis*) Biotypes. A. Shrestha*, M. L. Moretti; California State University, Fresno, CA (104)

Factors Affecting Germination of Spanishneedles (*Bidens bipinnata* L.). A. M. Ramirez*, M. Singh; University of Florida, Lake Alfred, FL (105)

Novel use of Trinexapac-ethyl to Study Requirement of Gibberellins for Seed Dormancy Breakage. H. R. Huarte*, M. L. Zapiola; Universidad Católica Argentina, Buenos Aires, Argentina (106)

Breaking Seed Dormancy in Common Teasel. H. R. Huarte, M. L. Zapiola*; Universidad Católica Argentina, Buenos Aires, Argentina (107)

A Genomic Approach to Investigate the Weediness of Jointed Goatgrass (*Aegilps cylindrica*). E. Sanchez Olguin*, A. Liston, C. Mallory-Smith; Oregon State University, Corvallis, OR (108)

Potential Allelopathic Effects of Ruzi Grass (*Brachiaria ruziziensis*) Leaf and Stem Tissues on Weed Species. E. L. Ishii-Iwamoto*¹, R. S. Oliveira Jr.¹, J. Constantin¹, A. A. Silva², K. A. Kern Cardoso², F. A. Rios², M. S. Mito², M. Foletto²; ¹Universidade Estadual de Maringá, Maringá, Brazil, ²University of Maringá, Maringá, Brazil (109)

Recruitment Biology and Ecology of Large [*Digitaria sanguinalis* L. (Scop.)] and Small [*Digitaria ischaemum* (Schreb.) ex Muhl.] Crabgrass in Turf. F. A. Turner*¹, R. Van Acker²; ¹University of Guelph, Guelph, ON, ²University of Guelph, Simcoe, ON (110)

Section 10. Biocontrol of Weeds

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Biological control of Johnsongrass by means of *Bipolaris sorghicola*. H. A. Acciaresi*, G. A. Lampugnani, C. Abramoff, M. C. Stocco, M. S. Zuluaga, C. I. Monaco, N. Mercerat; Fac. Cs. Agrarias y Ftiles (UNLP), La Plata, Argentina (111)

Biocontrol of Hemp *Sesbania* in Rice with the Fungus *Colletotrichum gloeosporioides* f. sp. *aeschynomene* Formulated in an Invert Emulsion. C. D. Boyette*¹, D. R. Gealy², R. E. Hoagland³, K. C. Vaughn¹; ¹USDA-ARS, Stoneville, MS, ²USDA-ARS, Stuttgart, AR, ³USDA-ARS, CPSRU, Stoneville, MS (112)

Weed Suppression from Fall Seeded Brassica Cover Crops. D. Anderson, J. B. Masiunas*, J. DeDecker, M. Kushad; University of Illinois, Urbana, IL (113)

Section 11. Physiology

*PRESENTER

Glyphosate Driven Selection Strikes Again: Investigating the Mechanism of Resistance in *Echinochloa colona* from

California. R. Alarcón-Reverte*, A. García, M. Jasieniuk, T. Lanini, B. D. Hanson, A. J. Fischer; University of California, Davis, Davis, CA (114)

Characterization of Glyphosate Resistant Sourgrass in Brazil. M. S. Melo*¹, J. D. Vassios², M. Nicolai³, S. J. Nissen², P. J. Christoffoleti³, T. C. Banzato³; ¹University of Sao Paulo, Piracicaba, Brazil, ²Colorado State University, Fort Collins, CO, ³Univeristy of Sao Paulo - ESALQ - Brazil, Piracicaba, Brazil (115)

Glyphosate Resistance in Sorghum halepense. L. Lorentz*¹, R. Beffa², H. J. Streck³; ¹Universität Bonn, Frankfurt, Germany, ²Bayer CropScience, Frankfurt am Main, Germany, ³Bayer CropScience, Frankfurt, Germany (116)

Assimilate Translocation Changes Caused by Glyphosate in Lolium perenne Biotypes of Diferencial Herbicide Sensitivity. M. E. Yannicari*¹, D. Gimenez², H. A. Acciaresi², A. M. Castro²; ¹Instituto de FisiologÃa Vegetal (UNLP-CONICET), La Plata, Argentina, ²Fac. Cs. Agrarias y Ftales (UNLP), La Plata, Argentina (117)

Absorption and Translocation of Aminocyclopyrachlor in Foliar and Basal Applications. I. C. Burke*, J. L. Bell, H. C. Malone; Washington State University, Pullman, WA (118)

Resistance of Conyza spp Brazilian Biotypes to Glyphosate. M. Nicolai*¹, P. J. Christoffoleti¹, J. D. Vassios², M. S. Melo³, S. J. Nissen², P. Westra²; ¹Univeristy of Sao Paulo - ESALQ - Brazil, Piracicaba, Brazil, ²Colorado State University, Fort Collins, CO, ³University of Sao Paulo, Piracicaba, Brazil (119)

Transpiration-use Efficiency Coefficient of Eight Weed Species as Affected by Fraction of Transpirable Soil Water and Growth Stage. V. Mannam*, M. L. Bernards, J. L. Lindquist, T. J. Arkebauer, S. Z. Knezevic, S. Irmak; University of Nebraska-Lincoln, Lincoln, NE (120)

Resistance of Digitaria insularis Brazilian Biotypes to Glyphosate. P. J. Christoffoleti*¹, M. Nicolai¹, M. S. Melo², J. D. Vassios³, S. J. Nissen³, P. Westra³; ¹Univeristy of Sao Paulo - ESALQ - Brazil, Piracicaba, Brazil, ²University of Sao Paulo, Piracicaba, Brazil, ³Colorado State University, Fort Collins, CO (121)

Glyphosate Resistance in Italian Ryegrass (Lolium multiflorum) Biotypes from Brazil. F. P. Lamego*, M. Gallon, Q. Ruchel, T. E. Kaspary, S. T. Peruzzo, I. B. Pagliarini; Federal University of Santa Maria/CESNORS, Frederico Westphalen, Brazil (122)

Involvement of Cytochrome P450 in Bensulfuronmethyl Responsive Photon Emission from Rice Cells. H. Nukui*, H. Iyozumi, K. Kato, C. Kageyama; Shizuoka Research Institute of Agriculture and Forestry, Iwata, Japan (123)

Investigations into Suspected Goosegrass Resistance to Glyphosate in Mississippi. V. K. Nandula*¹, W. Molin²; ¹Mississippi State University, Stoneville, MS, ²USDA-ARS, Stoneville, MS (124)

Localization of an ABC Transporter in a Glyphosate Resistant Mutant of Conyza. R. E. Hoagland*¹, W. Molin², K. C. Vaughn²; ¹USDA-ARS, CPSRU, Stoneville, MS, ²USDA-ARS, Stoneville, MS (125)

Panicle Changes in Rice Resulting from MSMA Application. H. Belefant-Miller*; USDA, Stuttgart, AR (126)

Glyphosate Resistance Confirmed in Waterhemp from Mississippi. V. K. Nandula*¹, C. H. Koger¹, J. A. Bond¹, R. C. Bond¹, T. W. Eubank¹, K. N. Reddy², J. D. Ray²; ¹Mississippi State University, Stoneville, MS, ²USDA-ARS, Stoneville, MS (127)

Section 12. Soil and Environmental Aspects

*PRESENTER

Comparison of Biochar with Activated Charcoal on Soil Activity of Atrazine and Metribuzin. D. L. Shaner*¹, R. A. Boydston², L. Krutz³, H. Collins⁴; ¹USDA, Fort Collins, CO, ²USDA-ARS, Prosser, WA, ³USDA-ARS, Stoneville, MS, ⁴USDA, Prosser, WA (128)

Response of Pennsylvania Native Plant Species, Corn and Soybean to Tank Mixes of Dicamba and Glyphosate. D. Olszyk*¹, T. Griffin², A. Ramsower³, T. Pfleeger², E. Lee², M. Plocher⁴; ¹US EPA, 97404, OR, ²US EPA, Corvallis, OR, ³EPA GRO Fellow, Yuma, AZ, ⁴Dynamac Corp., Corvallis, OR (129)

Degradation of Saflufenacil as Affected by Moisture Content and Soil Characteristics. E. R. Camargo*¹, S. A. Senseman¹, R. Haney², J. B. Guice³, G. McCauley⁴; ¹Texas A&M University, College Station, TX, ²United States Department of Agriculture, Temple, TX, ³BASF Corporation, Winnsboro, LA, ⁴Texas AgriLife Research, Eagle Lake, TX (130)

Sorption-desorption of Aminocyclopyrachlor in Selected Brazilian Soils. R. S. Oliveira Jr.*¹, W. C. Koskinen², D. G. Alonso¹; ¹Universidade Estadual de Maringá, Maringá, Brazil, ²USDA-ARS/University of Minnesota, St. Paul, MN (131)

Herbicide Imazethapyr + Imazapic Carryover to Non-tolerant Rice as Affected by the Thickness of the Soil Profile. A. Bundt*, L. de Avila, D. Agostinetto, M. Nohatto, M. Ramos, T. Vieira Duarte, A. Langaro; Universidade Federal de Pelotas, Pelotas, Brazil (132)

Dissipation of Pyroxasulfone and S-metolachlor Over Two Years in Two Fields. E. P. Westra*¹, D. L. Shaner², P. Westra¹; ¹Colorado State University, Fort Collins, CO, ²USDA, Fort Collins, CO (133)

Section 13. Integrated Weed Management

*PRESENTER

Impact of the Quality of Organic Amendments on Size and Composition of the Weed Seedbank. B. De Cauwer, R. Bulcke*, D. Reheul; Ghent University, Ghent, Belgium (134)

Weed Suppression and Soil Nitrogen Benefits Associated with Legume Cover Crop-Winter Wheat Intercrops. R. E. Blackshaw*, L. Molnar, J. Moyer; Agriculture and Agri-Food Canada, Lethbridge, AB (135)

Weed Remote Sensing using LEDs as Spectral Selective Light Detectors. C. Weber, H. A. Acciaresi*; Fac. Cs. Agrarias y Ftiles (UNLP), La Plata, Argentina (136)

New Target Site Mutation in a Glyphosate Resistant Sumatran Fleabane (*Conyza sumatrensis*). F. González-Torralva¹, J. Gil-Humanes², F. Barro², R. De Prado*¹; ¹University of Córdoba, Córdoba, Spain, ²Instituto de Agricultura Sostenible CSIC, Córdoba, Spain (137)

Glyphosate Resistance Biomarker: *Digitaria insularis* as a Case of Study. A. M. Rojano¹, L. Bianco de Carvalho², F. Priego-Capote¹, M. Luque de Castro¹, R. De Prado*¹; ¹University of Córdoba, Córdoba, Spain, ²University of Sao Paulo, Sao Paulo, Brazil (138)

Respect the Rotation: A Comprehensive Partnership to Preserve Herbicide and Trait Technology. J. Rutledge*; Bayer CropScience, Research Triangle Park, NC (139)

Weed Population Dynamics and Economics: Optimizing Weed Management in Organic Small Grains. L. N. Kolb*; University of Maine, Orono, ME (140)

Winter Cover Crop Effects on Weed Communities in Strip-tilled Sweet Corn. B. E. Henshaw*, D. C. Brainard; Michigan State University, East Lansing, MI (141)

Economics of Using Hand-held Flame Cultivators for Weed Management in Cranberry. H. A. Sandler*, K. M. Ghan-tous; UMass Cranberry Station, East Wareham, MA (142)

TUESDAY AM, FEBRUARY 8
Section 2. Horticultural Crops

LOCATION: Galleria North

TIME: 10:30 AM - 12:00 PM

CHAIR: Rick Boydston, USDA-ARS, Prosser, WA

***SPEAKER**

10:30 AM

Replacing Methyl Bromide on Georgia Farms. L. M. Sosnoskie¹, T. M. Webster², A. S. Culpepper¹; ¹University of Georgia, Tifton, GA, ²USDA-ARS, Tifton, GA (143)

10:50 AM

Brassica Genotype and Planting Time Influence Weed Control and Pumpkin Yield. J. B. Masiunas*, D. Anderson, J. DeDecker; University of Illinois, Urbana, IL (144)

11:10 AM

Rye and Vetch Management for No-till Snap Bean Production. R. A. Boydston¹, M. M. Williams²; ¹USDA-ARS, Prosser, WA, ²USDA-ARS, Urbana, IL (145)

11:30 AM

Control of Perennial and Persistent Weeds in Old Blueberry Plantings. R. V. Tocco Jr.*, B. H. Zandstra, C. M. Herrmann; Michigan State University, East Lansing, MI (146)

TUESDAY AM, FEBRUARY 8
Section 5. Wildland and Aquatic Invasive Plants

LOCATION: Broadway

TIME: 10:30 AM - 12:00 PM

CHAIR: Christopher Mudge, US Army Engineer Research and Development Center, Vicksburg, MS

***SPEAKER**

10:30 AM

Field Evaluations of Herbicides for Bohemian Knotweed (*Polygonum X bohemicum*) Control. K. Patten¹, C. Metzger², V. F. Peterson³; ¹WSU, Long Beach, WA,

²Washington State University, Long Beach, WA, ³Dow AgroSciences, Mulino, OR (147)

10:50 AM

Examining the Unpredictable Nature of Yellow Toadflax in Colorado. N. J. Krick*; Colorado State University, Fort Collins, CO (148)

11:10 AM

Absorption and Translocation of Fluridone, Penoxsulam, and Triclopyr by Eurasian Watermilfoil and Hydrilla. J. D. Vassios*¹, S. J. Nissen¹, T. J. Koschnick²; ¹Colorado State University, Fort Collins, CO, ²SePRO Corporation, Carmel, IN (149)

11:30 AM

Impact of Herbicide Combinations on Non-target and Invasive Submersed Aquatic Plants. C. R. Mudge*¹, L. M. Glomski²; ¹US Army Engineer Research and Development Center, Vicksburg, MS, ²US Army Engineer Research and Development Center, Lewisville, TX (150)

TUESDAY AM, FEBRUARY 8

Section 6. Regulatory Aspects

LOCATION: Parlor

TIME: 10:30 AM - 12:00 PM

CHAIR: Margaret Smither-Kopperl, USDA-NRCS, Lockeford, CA

***SPEAKER**

10:30 AM

Rapid Response: Putting Early Detection & Rapid Response into Practice. A. V. Tasker*; USDA, APHIS, Plant Protection & Quarantine, Riverdale, MD (151)

10:50 AM

New Federal Weed Risk Assessment Guidelines in Action: Examples for Three Species. B. P. Caton*¹, A. Koop², L. Fowler², L. Newton²; ¹USDA-APHIS-PPQ-CPHST, Raleigh, NC, ²USDA, Raleigh, NC (152)

11:10 AM

Guidelines for the Molecular Identification of Invasive Plants. S. M. Talley*¹, L. J. Cseke²; ¹USDA, Fort Collins, CO, ²UAHuntsville, Huntsville, AL (153)

11:30 AM

Detection of Significant Infestation of Goatsrue in McKean County Pennsylvania. M. Bravo*, J. Zoschg; Pennsylvania Department of Agriculture, Harrisburg, PA (154)

11:50 AM

Business Meeting

TUESDAY AM, FEBRUARY 8
Section 12. Soil and Environmental Aspects

LOCATION: Galleria South

TIME: 10:30 AM - 12:00 PM

CHAIR: Sharon Clay, South Dakota State University, Brookings, SD

***SPEAKER**

10:30 AM

Effects of Irrigation with Reclaimed Wastewater on the Efficacy and Fate of ALS Inhibitors in Soil. G. Dvorkin, B. Rubin*, B. Chefetz; Hebrew University of Jerusalem, Rehovot, Israel (155)

10:50 AM

Enhanced Atrazine Degradation: Degraders Numbers and Activity Four Years after Last s-triazine Application. L. Krutz*, R. M. Zablotowicz, K. N. Reddy; USDA-ARS, Stoneville, MS (156)

11:10 AM

Contributions of Agronomic Practices, Precipitation Patterns, and Landscape Vulnerability to Atrazine Load in the Big Blue River Basin. K. Dhakal*¹, M. L. Bernards¹, M. Milner¹, P. L. Barnes², P. J. Shea¹; ¹University of Nebraska-Lincoln, Lincoln, NE, ²Kansas State University, Manhattan, KS (157)

11:30 AM

Reductions in Runoff of Chlorotriazine Herbicides to Surface Water due to Adoption of Best Management Practices. R. S. Fawcett*; Fawcett Consulting, Huxley, IA (158)

11:50 AM

Business Meeting

TUESDAY PM, FEBRUARY 8
Graduate Student Luncheon

LOCATION: Alexanders

TIME: 12:00 PM - 1:00 PM

CHAIR: Sarah True, North Carolina State University, Raleigh, NC

TUESDAY PM, FEBRUARY 8
Navigating the Universe of Grants, Contracts,
and Gifts in the 21st Century

LOCATION: Grand Ballroom II

TIME: 1:00 PM - 5:00 PM

CHAIR: Chad Brommer, BASF, Raleigh, NC

***SPEAKER**

1:00 PM

Musings of a Weed Science Grant Writer. C. L. Brommer*; BASF, Raleigh, NC (159)

1:30 PM

The Industry Perspective on Grants and Aid. D. Refsell*; Valent, U.S.A. Co., Lathrop, MO (160)

2:00 PM

Ethical Concerns When You Accept Funding. C. L. Brommer*; BASF, Raleigh, NC (161)

2:30 PM

Web Gems. 21st Century Steps to Seek out Funding in Weed Science. C. L. Brommer*; BASF, Raleigh, NC (162)

3:00 PM

Break

3:20 PM

“Ask the elders” A Round Table of Weed Scientists on Both Sides of the Grant and Aid Process. C. L. Brommer*; BASF, Raleigh, NC (163)

3:50 PM

Group Driven Grant and Aid Session. How to Leave WSSA 2011 Ready to Write or Acquire a Grant or Aid. C. L. Brommer*; BASF, Raleigh, NC (164)

TUESDAY PM, FEBRUARY 8
Significance and Use of Sulfonylurea
Herbicides in Turfgrass

LOCATION: Parlor

TIME: 1:00 PM - 5:00 PM

CHAIR: Prasanta Bhowmik, University of Massachusetts, Amherst, MA

*SPEAKER

1:00 PM

Introduction to the Symposium: History of Sulfonylurea Herbicides in Turfgrass Environments. P. C. Bhowmik*; University of Massachusetts, Amherst, MA (165)

1:20 PM

Behavior of Sulfonylurea Herbicides in Plants: Mode-of-Action, Uptake, Translocation and Metabolism. J. S. Claus*, C. A. Silcox, H. M. Brown; DuPont Crop Protection, Wilmington, DE (166)

1:40 PM

Sulfonylurea Herbicides Fate in Soil: Dissipation Mechanisms, Mobility, and Other Processes. T. L. Grey*¹, P. E. McCullough²; ¹University of Georgia, Tifton, GA, ²University of Georgia, Griffin, GA (167)

2:00 PM

Movement of Sulfonylurea Herbicides to Nontarget Sites. A. Post*, S. Askew; Virginia Tech, Blacksburg, VA (168)

2:20 PM

Role of Adjuvants on Sulfonylurea Herbicide Efficacy. D. Sanyal*¹, P. C. Bhowmik²; ¹Monsanto Company, St. Louis, MO, ²University of Massachusetts, Amherst, MA (169)

2:40 PM

Environmental and Seasonal Effects on Efficacy and Cool-Season Turfgrass Tolerance to ALS Inhibiting Herbicides. S. Hart*; Rutgers, The State University of New Jersey, New Brunswick, NJ (170)

3:00 PM

Break

3:20 PM

Use of Sulfonylurea Herbicides for Broadleaf Weed Control in Warm-Season Turfgrass. B. J. Brecke*; University of Florida, Jay, FL (171)

3:40 PM

Broadleaf Weed Control with Sulfonylurea Herbicides in Cool-Season Turfgrass. J. Derr*; Virginia Tech, Virginia Beach, VA (172)

4:00 PM

Cool-Season Grass Removal for Bermudagrass Spring Transition. K. Umeda*; University of Arizona, Phoenix, AZ (173)

4:20 PM

Sulfonylurea Herbicides for Sedge & Kyllinga Control. F. H. Yelverton*¹, P. C. Bhowmik²; ¹North Carolina State

University, Raleigh, NC, ²University of Massachusetts, Amherst, MA (174)

4:40 PM

Sufonylurea Resistance in Weeds of Turf: Potential for Prevention. C. Mallory-Smith*, R. Golembiewski; Oregon State University, Corvallis, OR (175)

TUESDAY PM, FEBRUARY 8

Section 1. Agronomic Crops

LOCATION: Grand Ballroom I

TIME: 1:00 PM - 5:00 PM

CHAIR: Lawrence Steckel, University of Tennessee, Jackson, TN

***SPEAKER**

1:00 PM

Benchmark Study: Economics of Glyphosate-Resistant Weed Management. D. R. Shaw*¹, M. D. Owen², S. C. Weller³, B. G. Young⁴, R. G. Wilson⁵, D. L. Jordan⁶; ¹Mississippi State University, Mississippi State, MS, ²Iowa State University, Ames, IA, ³Purdue University, West Lafayette, IN, ⁴Southern Illinois University, Carbondale, IL, ⁵University of Nebraska, Scottsbluff, NE, ⁶North Carolina State University, Raleigh, NC (176)

1:20 PM

Benchmark Study: Efficacy and Economics of Weed Management Tactics of Growers versus University Recommendations. B. G. Young*¹, J. M. Matthews¹, D. L. Jordan², P. M. Dixon³, R. G. Wilson⁴, S. C. Weller⁵, M. D. Owen³, D. R. Shaw⁶; ¹Southern Illinois University, Carbondale, IL, ²North Carolina State University, Raleigh, NC, ³Iowa State University, Ames, IA, ⁴University of Nebraska, Scottsbluff, NE, ⁵Purdue University, West Lafayette, IN, ⁶Mississippi State University, Mississippi State, MS (177)

1:40 PM

Managing Glyphosate-resistant Italian ryegrass in the Mississippi Delta. J. A. Bond*, T. W. Eubank, R. C. Bond, V. K. Nandula; Mississippi State University, Stoneville, MS (178)

2:00 PM

Potential Tank-mix Combinations to Control Glyphosate-Resistant Giant Ragweed in Cotton. K. A. Barnett*, L. E. Steckel; University of Tennessee, Jackson, TN (179)

2:20 PM

Management of Glyphosate-Resistant Palmer Amaranth in Roundup Ready Soybeans. L. E. Steckel*, K. A. Barnett; University of Tennessee, Jackson, TN (180)

2:40 PM

Control of HPPD-Resistant Waterhemp in Corn and Soybeans. G. D. Vail*¹, C. L. Foresman¹, N. D. Polge², V. K. Shivrain¹, D. A. Thomas³; ¹Syngenta, Greensboro, NC, ²Syngenta, Vero Beach, FL, ³Syngenta, Monticello, IL (181)

3:00 PM

Break

3:20 PM

Competition of Transgenic Volunteer Corn with Soybean and Implications for Weed and Insect Resistance Management. P. T. Marquardt*, C. H. Krupke, W. G. Johnson; Purdue University, West Lafayette, IN (182)

3:40 PM

Grower Attitudes Regarding Glyphosate Resistance: A Five Year Follow-up to the Benchmark Study. J. M. Prince*¹, D. R. Shaw¹, W. A. Givens¹, S. C. Weller², B. G. Young³, R. G. Wilson⁴, M. D. Owen⁵, D. L. Jordan⁶; ¹Mississippi State University, Mississippi State, MS, ²Purdue University, West Lafayette, IN, ³Southern Illinois University, Carbondale, IL, ⁴University of Nebraska, Scottsbluff, NE, ⁵Iowa State University, Ames, IA, ⁶North Carolina State University, Raleigh, NC (183)

4:00 PM

Benchmark Study: Four Years Later - Trends in Weed Spectrum and Population Density. M. D. Owen¹, S. C. Weller*², D. R. Shaw³, B. G. Young⁴, D. L. Jordan⁵, R. G. Wilson⁶, P. M. Dixon¹; ¹Iowa State University, Ames, IA, ²Purdue University, West Lafayette, IN, ³Mississippi State University, Mississippi State, MS, ⁴Southern Illinois University, Carbondale, IL, ⁵North Carolina State University, Raleigh, NC, ⁶University of Nebraska, Scottsbluff, NE (184)

4:20 PM

Postemergence Weed Control in Sorghum Containing the DuPont™ Inzen™ AII and Inzen™ Z Herbicide Tolerance Traits. R. N. Rupp*¹, E. Castner², R. Edmund², M. Edwards², J. Harbour², C. Medlin², D. W. Saunders³; ¹DuPont Crop Protection, Edmond, OK, ²DuPont Crop Protection, Wilmington, DE, ³DuPont Crop Protection, Johnston, IA (185)

4:40 PM

Stewardship of DuPont™ Inzen™ AII and Inzen™ Z Herbicide Tolerant Traits in Sorghum. D. R. Forney*¹, D. W. Saunders², C. B. Hazel³, R. N. Rupp⁴; ¹DuPont Crop Protection, Newark, DE, ²DuPont Crop Protection, Johnston, IA, ³DuPont Crop Protection, Wilmington, DE, ⁴DuPont Crop Protection, Edmond, OK (186)

TUESDAY PM, FEBRUARY 8

Section 2. Horticultural Crops

LOCATION: Galleria North

TIME: 1:00 PM - 5:00 PM

CHAIR: Rick Boydston, USDA-ARS, Prosser, WA

***SPEAKER**

1:00 PM

Annual Strawberry Tolerance to Herbicides applied under Polyethylene Mulch. A. W. MacRae*, R. Kelly; University of Florida/IFAS, Wimauma, FL (187)

1:20 PM

Weed Management in Green Onions with Oxyfluorfen. D. Doohan*, T. Koch; The Ohio State University, Wooster, OH (188)

1:40 PM

Preemergence and Postemergence Herbicides for Maximum Weed Control in Dry Bulb Onion. B. H. Zandstra*, C. M. Herrmann, R. V. Tocco Jr.; Michigan State University, East Lansing, MI (189)

2:00 PM

Evaluation of PRE Application of s-metolachlor and Dimethenamid-p on Direct Seeded Onions Using Activated Carbon. J. Felix*, K. Osborne, J. Ishida; Oregon State University, Ontario, OR (190)

2:20 PM

Postemergence Weed Control in Snap Bean, Carrot, and Lettuce Using a Precision-Guided Flame Weeder. C. M. Herrmann*, R. V. Tocco Jr., B. H. Zandstra; Michigan State University, East Lansing, MI (191)

2:40 PM

Evaluation of an In-Row Rotating Cultivator in Vegetable Crops. S. A. Fennimore*¹, R. F. Smith², J. Rachuy²; ¹University of California, Davis, Salinas, CA, ²University of California, Salinas, CA (192)

3:00 PM

Break

3:20 PM

Using Less Atrazine in Sweet Corn: Challenges to Overcome.

M. M. Williams II*¹, R. A. Boydston², E. Peachey³, D. E. Robinson⁴; ¹USDA-ARS, Urbana, IL, ²USDA-ARS, Prosser, WA, ³Oregon State University, Corvallis, OR, ⁴University of Guelph, Ridgetown, ON (193)

3:40 PM

Can Linuron Replace Atrazine in Sweet Corn?

J. B. Masiunas*, D. Anderson, L. Sun, X. Zhu; University of Illinois, Urbana, IL (194)

4:00 PM

Indaziflam Applied Alone and in Tankmixture With Other Herbicides for Weed Control in Perennial Crops.

D. Unland*¹, H. Mager², M. Edenfield³; ¹Bayer CropScience, Research Triangle Park, NC, ²Bayer CropScience, Fountain Hills, AZ, ³Bayer CropScience, Lake Wales, FL (195)

4:20 PM

An Update on the Pending New Registrations of Flazasulfuron in the United States.

M. D. Grove*; ISK Biosciences, Spring, TX (196)

4:40 PM

The IR-4 Project: Update on Weed Control Projects.

M. Arsenovic*¹, D. L. Kunkel², J. J. Baron²; ¹IR-4 Project, Princeton, NJ, ²Rutgers University, Princeton, NJ (197)

5:00 PM

Business Meeting

TUESDAY PM, FEBRUARY 8

Section 5. Wildland and Aquatic Invasive Plants

LOCATION: Broadway

TIME: 1:00 PM - 5:00 PM

CHAIR: Christopher Mudge, US Army Engineer Research and Development Center, Vicksburg, MS

***SPEAKER**

1:00 PM

Ecology and Management of Natalgrass (*Melinis repens*) in Florida.

C. Stokes¹, G. MacDonald*¹, K. Langeland¹, C. Reinhardt-Adams¹, D. Miller²; ¹University of Florida, Gainesville, FL, ²University of Florida, Milton, FL (198)

1:20 PM

Potential for Spread and Control of Western milfoil (*Mryiophyllum hippuroides*) in western US canals.

L. W. Anderson*; USDA-ARS, Davis, CA (199)

1:40 PM

The Life History of Common Reed: *Phragmites australis* (Cav.) Trin. Ex Steud. J. C. Cheshier*, J. D. Madsen, R. M. Wersal; Mississippi State University, Starkville, MS (200)

2:00 PM

Ecological Determinants of Invasion by Sahara Mustard in Southwest Deserts. J. S. Holt*¹, R. G. Marushia²; ¹University of California, Riverside, CA, ²University of Toronto, Scarborough, ON (201)

2:20 PM

Effects of Non-Native Earthworms on the Spread of Garlic Mustard (*Alliaria petiolata*) in Indiana Deciduous Forests. P. M. Quackenbush*, N. Emery, E. Kladvik, M. Jenkins, K. Gibson; Purdue University, West Lafayette, IN (202)

2:40 PM

The Effect of Spotted Knapweed, *Centaurea maculosa*, on Germination and Survival of the Rare, Threatened Pitcher's Thistle, *Cirsium pitcheri*. S. M. Louda¹, T. Rand², K. Bradley³, K. K. Crider*⁴; ¹University of Nebraska, Lincoln, NE, ²USDA-ARS, Sidney, MT, ³University of Nevada, Reno, NV, ⁴USDA Forest Service, Athens, GA (203)

3:00 PM

Break

3:20 PM

Weed Contaminants in Seed as a Pathway for Movement of Invasive Plants. J. S. Conn*; USDA-ARS, Fairbanks, AK (204)

3:40 PM

Integrating Systematics and Invasion Biology: A Case Study from *Antigonon leptopus*. J. M. Burke*, A. DiTommaso; Cornell University, Ithaca, NY (205)

4:00 PM

Stem Propagule Escape Potential of the Bioenergy Crops *Miscanthus x giganteus* and *Arundo donax*. J. Mann*¹, J. N. Barney², J. M. DiTomaso¹; ¹University of California, Davis, Davis, CA, ²Virginia Tech, Blacksburg, VA (206)

4:20 PM

Business Meeting

TUESDAY PM, FEBRUARY 8 Section 9. Weed Biology and Ecology

LOCATION: Galleria South

TIME: 1:00 PM - 5:00 PM

CHAIR: Richard Smith, University of New Hampshire, Durham, NH

*SPEAKER

1:00 PM

Molecular Genotyping to Distinguish Subspecies of *Oplismenus*. L. J. Cseke*¹, S. M. Talley²; ¹UAHuntsville, Huntsville, AL, ²USDA, Fort Collins, CO (207)

1:20 PM

A Study to Evaluate the Morphological and Seed Persistence Changes Associated with Domestication of Cow Cockle Genotypes (*Saponaria vaccaria* .L). H. S. Duddu*; University of Saskatchewan, Saskatoon, SK (208)

1:40 PM

Endodormancy Release in Crown Buds of Leafy Spurge Involves Overlapping Molecular Networks Responsive to Abiotic Stress. M. Dogramaci*¹, M. J. Christoffers¹, D. P. Horvath², J. V. Anderson²; ¹North Dakota State University, Fargo, ND, ²USDA-ARS, Fargo, ND (209)

2:00 PM

Intergeneric Transgenic Hybrid in the Bentgrass Complex Produced in situ. M. L. Zapiola*¹, C. Mallory-Smith²; ¹Universidad Católica Argentina, Buenos Aires, Argentina, ²Oregon State University, Corvallis, OR (210)

2:20 PM

Use of AFLP Markers to Assess Genetic Diversity in Palmer Amaranth (*Amaranthus palmeri*) Populations from North Carolina and Georgia. A. Chandi*¹, S. Mila-Lewis¹, D. L. Jordan¹, J. D. Burton¹, A. York¹, J. Whitaker², A. S. Culpepper³; ¹North Carolina State University, Raleigh, NC, ²University of Georgia, Statesboro, GA, ³University of Georgia, Tifton, GA (211)

2:40 PM

Molecular Genotyping within the *Mikania* Species Complex. L. J. Cseke*¹, S. M. Talley²; ¹UAHuntsville, Huntsville, AL, ²USDA, Fort Collins, CO (212)

3:00 PM

Break

3:20 PM

Inferring the Origins and Spread of Agricultural Weeds and Invasive Plants Using Molecular Tools. M. Jasieniuk*; University of California, Davis, Davis, CA (213)

3:40 PM

Do White-Tailed Deer Affect Plant Invasion?: Insights from a Meta-Analysis. K. M. Averill*, D. A. Mortensen; The Pennsylvania State University, University Park, PA (214)

4:00 PM

Secondary Seed Dispersal by Vehicles: Simulating Colonization on a Heterogeneous Landscape. L. J. Rew*, A. Wing, K. Taylor, B. D. Maxwell; Montana State University, Bozeman, MT (215)

4:20 PM

Intra- and Inter-Specific Competition among Invasive and Native Species during Early Stages of Plant Growth. S. Mangla*¹, R. L. Sheley², J. J. James², S. R. Radosevich¹; ¹Oregon State University, Corvallis, OR, ²Oregon State University, Burns, OR (216)

4:40 PM

Nontoxic Roles of Polyphenols in Facilitating Plant Invasions: Case Study with Japanese Knotweed (*Polygonum cuspidatum*). N. Tharayil*¹, S. Nirmalkumar¹, D. Triebwasser¹, P. Alpert², P. C. Bhowmik²; ¹Clemson University, Clemson, SC, ²University of Massachusetts, Amherst, MA (217)

WEDNESDAY AM, FEBRUARY 9

The US Witchweed Eradication Effort Turns 50

LOCATION: Galleria North

TIME: 8:00 AM - 12:00 PM

CHAIR: Alan Tasker, USDA, APHIS, Plant Protection & Quarantine, Riverdale, MD

*SPEAKER

8:00 AM

Parasitic Weeds - a World Challenge. D. M. Joel*; Agricultural Research Organization (ARO), Ramat-Yishay, Israel (218)

8:30 AM

Overview of Methods Development Support for the USDA-Carolinas Witchweed Eradication Program - 1959-1995. R. G. Westbrook*¹, R. Eplee², M. Langston²; ¹U.S. Geological Survey, Whiteville, NC, ²USDA APHIS, Retired, Whiteville, NC (219)

9:00 AM

Current Eradication Program for the Witchweed Infestation in the US. R. Iverson*; NC Dept Ag & Consumer Serv., Raleigh, NC (220)

9:30 AM

Current Parasitic Weed Control Methods Development Efforts in the US. C. L. Ramsey*; USDA-APHIS, Fort Collins, CO (221)

10:00 AM

Break

10:20 AM

Orobanche minor and the 3 R's: Regulation, Research, and Reality. C. Mallory-Smith*; Oregon State University, Corvallis, OR (222)

10:50 AM

Technologies for Precision Control of Orobanche. H. Eizenberg*; Newe Ya'ar Research Center, Ramat Yishay, Israel (223)

WEDNESDAY AM, FEBRUARY 9

Advances in Dose-Response Methodology Applied to the Science of Weed Control

LOCATION: Grand Ballroom I

TIME: 8:00 AM - 12:00 PM

CHAIR: Steven Seefeldt, USDA-ARS, Fairbanks, AK

***SPEAKER**

8:00 AM

Dose-Response: Background and Perspectives on the Development of Analysis Methodology. S. S. Seefeldt*¹, W. J. Price², B. Shafii²; ¹USDA-ARS, Fairbanks, AK, ²University of Idaho, Moscow, ID (224)

8:20 AM

Estimation Techniques for Dose-response Functions. B. Shafii*¹, W. J. Price¹, S. S. Seefeldt²; ¹University of Idaho, Moscow, ID, ²USDA-ARS, Fairbanks, AK (225)

9:00 AM

Applied Dose-Response Models in Weed Science. W. J. Price*¹, B. Shafii¹, S. S. Seefeldt²; ¹University of Idaho, Moscow, ID, ²USDA-ARS, Fairbanks, AK (226)

10:00 AM

Break

10:20 AM

Discussion

WEDNESDAY AM, FEBRUARY 9

Section 3. Turf and Ornamental Crops

LOCATION: Parlor

TIME: 8:15 AM - 12:00 PM

CHAIR: Dustin Lewis, North Carolina State University, Raleigh, NC

*SPEAKER

8:15 AM

Efficacy of Liquid CO₂ for Weed Control in Turfgrass Systems. D. F. Lewis*, T. W. Gannon, F. H. Yelverton; North Carolina State University, Raleigh, NC (227)

8:35 AM

Growing Turfgrass Without Conventional Herbicides: Examining the Role of Alternative Strategies. C. Siva*, E. M. Lyons, F. J. Tardif, K. S. Jordan; University of Guelph, Guelph, ON (228)

8:55 AM

Reduced Chemical Programs for Crabgrass Control in Cool Season Turf Using Corn Gluten Meal. A. Smith*, S. Askew; Virginia Tech, Blacksburg, VA (229)

9:15 AM

Duration of Perennial Ryegrass Competition Affects Bermudagrass Quality. B. McNulty*, T. Middlesteadt, S. Askew; Virginia Tech, Blacksburg, VA (230)

9:35 AM

Partial Control: A Novel Approach to Spring Transition of Overseeded Bermudagrass. B. McNulty*, T. Middlesteadt, S. Askew; Virginia Tech, Blacksburg, VA (231)

10:00 AM

Break

10:20 AM

Mesotrione Translocation in Kentucky Bluegrass and Annual Bluegrass. A. Post*¹, M. Goddard², S. Askew¹; ¹Virginia Tech, Blacksburg, VA, ²Monsanto, Scott, MS (232)

10:40 AM

Preemergence Control of Parthenium hysterophorus and Commelina benghalensis. B. Stamps*; University of Florida/IFAS, Apopka, FL (233)

11:00 AM

Business Meeting

**WEDNESDAY AM, FEBRUARY 9
Section 4. Pasture, Rangeland, Forest,
and Rights of Way**

LOCATION: Galleria South

TIME: 8:00 AM - 12:00 PM

CHAIR: Ronald Wright, Mississippi State University, Mississippi State, MS

*SPEAKER

8:00 AM

Stewardship of Land Management Products and Solutions From DuPont Crop Protection. D. R. Forney*¹, J. S. Claus², R. R. Magee³, R. G. Turner⁴; ¹DuPont Crop Protection, Newark, DE, ²DuPont Crop Protection, Wilmington, DE, ³DuPont Crop Protection, League City, TX, ⁴DuPont Crop Protection, Memphis, TN (234)

8:20 AM

Chopper Gen2 Applied to Bareground for Pine Site Preparation. J. L. Yeiser*¹, A. W. Ezell²; ¹Stephen F Austin State University, Nacogdoches, TX, ²Mississippi State University, Starkville, MS (235)

8:40 AM

Invasive Species Distribution Among Large Urban Park Forests in the Northeastern United States. R. E. Loeb*; The Pennsylvania State University, DuBois, PA (236)

9:00 AM

New Developments in Woody Brush Control with aminopyralid Tank Mixes. V. F. Peterson*¹, W. N. Kline², P. L. Burch³; ¹Dow AgroSciences, Mulino, OR, ²Dow AgroSciences, Duluth, GA, ³Dow AgroSciences, Christianburg, VA (237)

9:20 AM

The Effect of Herbicides and Timing on Longleaf Seedling Survival and Height Growth on Old-Field Planted Sites in Georgia. E. D. Dickens*¹, D. Moorhead², B. McElvany³, R. Joyce⁴, W. Parker⁵; ¹University of Georgia, Statesboro, GA, ²University of Georgia, Tifton, GA, ³University of Georgia, Soperton, GA, ⁴University of Georgia, Dublin, GA, ⁵University of Georgia, Millen, GA (238)

9:40 AM

Control of Unwanted Hardwoods with Mixtures Containing aminocyclopyrachlor in Pine Site Preparation Areas. A. W. Ezell*¹, J. L. Yeiser²; ¹Mississippi State University, Starkville, MS, ²Stephen F Austin State University, Nacogdoches, TX (239)

10:00 AM

Break

10:20 AM

Use of indaziflam for Herbaceous Weed Control in First-Year Loblolly Pine Plantations. A. W. Ezell*¹, J. L. Yeiser²; ¹Mississippi State University, Starkville, MS, ²Stephen F Austin State University, Nacogdoches, TX (240)

10:40 AM

Indaziflam for Railroad Weed Control. J. Ferrell*¹, B. A. Sellers², G. MacDonald¹, J. Michel³, D. Spak⁴; ¹University of Florida, Gainesville, FL, ²University of Florida, Ona, FL, ³Bayer CropScience PL, Orlando, FL, ⁴Bayer CropScience LP, Research Triangle Park, NC (241)

11:00 AM

Aminocyclopyrachlor for Range and Pasture Weed Control. S. K. Rick*¹, J. H. Meredith², J. S. Claus³, C. Alford⁴; ¹DuPont Crop Protection, Waterloo, IL, ²DuPont Crop Protection, Memphis, TN, ³DuPont Crop Protection, Wilmington, DE, ⁴DuPont Crop Protection, Denver, CO (242)

11:20 AM

Rush Skeletonweed Management in Grasslands with aminocyclopyrachlor. T. Prather*¹, I. C. Burke², J. Wallace¹; ¹University of Idaho, Moscow, ID, ²Washington State University, Pullman, WA (243)

11:40 AM

Weed Control with aminocyclopyrachlor in Pastures and Rangeland. R. N. Rupp*¹, M. Edwards², J. Harbour², J. H. Meredith³, S. K. Rick⁴; ¹DuPont Crop Protection, Edmond, OK, ²DuPont Crop Protection, Wilmington, DE, ³DuPont Crop Protection, Memphis, TN, ⁴DuPont Crop Protection, Waterloo, IL (244)

WEDNESDAY AM, FEBRUARY 9

Section 13. Integrated Weed Management

LOCATION: Grand Ballroom II

TIME: 8:00 AM - 12:00 PM

CHAIR: Darrin Dodds, Mississippi State University, Mississippi State, MS

***SPEAKER**

8:00 AM

IWM is Level I IPM; Let's Aim Higher. R. F. Norris*; University of California, Davis, Davis, CA (245)

8:20 AM

Do Beetles Eat Weed Seeds: The Effect of Site and Season on the Diet Composition of a Common Ground Beetle (*Pterostichus melanarius*) in Western Oregon Vegetable Crops. L. A. Moulton*, E. Peachey, A. Greco; Oregon State University, Corvallis, OR (246)

8:40 AM

Utilizing the Critical Period of Weed Control Concept to Optimize Herbicide Timing in Lentil. L. Fedoruk¹, S.

Shirtliffe*², E. N. Johnson³; ¹BASF Canada, Saskatoon, SK, ²University of Saskatchewan, Saskatoon, SK, ³Agriculture and Agri-Food Canada, Scott, SK (247)

9:00 AM

A Review of Smother Cropping and Associated Mechanisms of Weed Suppression. S. Wedryk*¹, J. Cardina²; ¹The Ohio State University, Columbus, OH, ²The Ohio State University, Wooster, OH (248)

9:20 AM

Synergism Between Cereal Rye Mulch and Soybean Planting Density. M. R. Ryan*¹, S. B. Mirsky², D. A. Mortensen¹, J. R. Teasdale², W. Curran¹; ¹The Pennsylvania State University, University Park, PA, ²USDA-ARS, Beltsville, MD (249)

9:40 AM

Effect of Nitrogen Rates and Plant Density on Growth Indices of Corn (*Zea mays* L.) Under Stale Seed-Bed Planting System. M. Farhang far*¹, H. Rahimian Mashhad², M. R. Bihamta²; ¹University of Tehran, Karaj, Iran, ²University of Tehran, Tehran, Iran (250)

10:00 AM

Break

10:20 AM

Evaluation of Interaction Between Fertilizer Rates and Herbicide Doseage on Corn Weed Control. A. Zare*; University of Tehran, Karaj, Iran (251)

10:40 AM

Respect the Rotation - The Key to Weed Resistance Management. H. J. Strek*¹, M. Hess¹, D. Hurst²; ¹Bayer CropScience, Frankfurt, Germany, ²Bayer CropScience, Raleigh, NC (252)

11:00 AM

Common Ragweed in Glyphosate-Resistant Sugarbeet. J. M. Stachler*, J. L. Luecke, J. M. Fisher; North Dakota State University and University of Minnesota, Fargo, ND (253)

11:20 AM

Systems to Manage Perennial Weeds in Organic Transition. W. C. Johnson III*; USDA-ARS, Tifton, GA (254)

11:40 AM

Weed Management in Organic Vineyards. A. Shrestha*¹, M. W. Fidelibus², K. Kurtural¹, M. L. Moretti¹; ¹California State University, Fresno, CA, ²University of California, Davis, Parlier, CA (255)

12:00 AM

Business Meeting

WEDNESDAY PM, FEBRUARY 9
The US Witchweed Eradication Effort Turns 50

LOCATION: Galleria North

TIME: 1:00 PM - 5:00 PM

CHAIR: Alan Tasker, USDA, APHIS, Plant Protection & Quarantine, Riverdale, MD

***SPEAKER**

1:00 PM

The Parasitic Plant Genome Project: New Tools for Understanding the Biology of Orobanche and Striga. J. Westwood*; Virginia Tech, Blacksburg, VA (256)

1:20 PM

Race-Specific Host Resistance to Striga - New Insights into an Old Foe. M. Timko*; University of Virginia, Charlottesville, VA (257)

1:40 PM

Biotechnological Approaches to Parasitic Weed Control. R. Aly*; Newe Yaar Research Center, Ramat Yeshai, Israel (258)

2:00 PM

Control of Striga using IR-Maize: A Success Story – How Long Will it Last? J. Ransom*¹, F. Kanampiu², M. Burnet³, J. Gressel⁴; ¹North Dakota State University, Fargo, ND, ²CIMMYT, Nairobi, Kenya, ³Hi-Cap Formulations, Tubingen, Germany, ⁴Weizmann Institute of Science, Rehovot, Israel (259)

2:20 PM

Current Approaches to Control of Cuscuta. T. Lanini*; University of California, Davis, Davis, CA (260)

2:40 PM

Discussion

WEDNESDAY PM, FEBRUARY 9
Nonchemical Tactics in Herbicide Resistant Management

LOCATION: Grand Ballroom I

TIME: 1:00 PM - 5:00 PM

CHAIR: Prashant Jha, Montana State University, Huntley, MT

***SPEAKER**

1:00 PM

Integrated Cropping Practices Reduce the Risk of Resistance Development. R. E. Blackshaw*; Agriculture and Agri-Food Canada, Lethbridge, AB (261)

1:30 PM

Weed Control Tactics and Weed Population Dynamics. N. R. Burgos*¹, A. Lawton-Rauh²; ¹University of Arkansas, Fayetteville, AR, ²Clemson University, Clemson, SC (262)

2:00 PM

The Needle in the Haystack: Keeping it Lost. F. Forcella*; USDA, Morris, MN (263)

2:30 PM

Preventing the spread of herbicide resistance. B. D. Maxwell*; Montana State University, Bozeman, MT (264)

3:00 PM

Break

3:20 PM

Gene Flow from Herbicide Resistant Crops: Will it Revive Non-chemical Weed Management Tactics? C. Mallory-Smith*, A. G. Hulting; Oregon State University, Corvallis, OR (265)

3:50 PM

Integrating Nonchemical Practices into Simulation Modeling for Herbicide Resistance: A Proactive Strategy. J. K. Norsworthy*¹, M. V. Bagavathiannan¹, P. Neve², K. L. Smith³, I. Zelaya⁴; ¹University of Arkansas, Fayetteville, AR, ²University of Warwick, Wellesbourne, England, ³University of Arkansas, Monticello, Monticello, AR, ⁴Syngenta, Jealot Hills, England (266)

4:20 PM

Impact of Cover Crop Residue and Tillage on the Control of Glyphosate-Resistant Palmer amaranth. A. S. Culpepper*¹, L. M. Sosnoskie¹, J. Kichler², L. E. Steckel³; ¹University of Georgia, Tifton, GA, ²University of Georgia, Oglethorpe, GA, ³University of Tennessee, Jackson, TN (267)

WEDNESDAY PM, FEBRUARY 9

Section 1. Agronomic Crops

LOCATION: Grand Ballroom II

TIME: 1:00 PM - 5:00 PM

CHAIR: Lawrence Steckel, University of Tennessee, Jackson, TN

***SPEAKER**

1:00 PM

Engineered Resistance to HPPD Inhibitors, the Next Generation of Weed Management in Soybean. B. S. Manley*¹, G. D. Vail², B. Vernooij¹, K. Terpstra³, A. Silverstone¹; ¹Syngenta Biotechnology, Inc., Research Triangle Park, NC, ²Syngenta, Greensboro, NC, ³Syngenta Seeds, Inc., Clinton, IL (268)

1:20 PM

Crop Tolerance and Yield of Dow AgroSciences Herbicide Trait Technology in Corn. J. M. Ellis*¹, S. C. Ditmarsen², D. M. Simpson³, D. C. Ruen⁴, S. M. Ferguson⁵, N. N. Carranza⁶, C. A. Gallup⁷, B. W. Hopkins⁸; ¹Dow AgroSciences, Smithville, MO, ²Dow AgroSciences, Madison, WI, ³Dow AgroSciences, Indianapolis, IN, ⁴Dow AgroSciences, Lanesboro, MN, ⁵Dow AgroSciences, Omaha, NE, ⁶Dow AgroSciences, Bogota, Colombia, ⁷Dow AgroSciences, Davenport, IA, ⁸Dow AgroSciences, Westerville, OH (269)

1:40 PM

DHT Soybean Yield Components Response to Postemergence Applications of 2,4-D. A. P. Robinson*¹, D. M. Simpson², W. G. Johnson¹; ¹Purdue University, West Lafayette, IN, ²Dow AgroSciences, Indianapolis, IN (270)

2:00 PM

Weed Control in Dicamba-Resistant Soybeans. C. B. Brabham*¹, B. Johnson¹, B. G. Young², J. M. Matthews², P. T. Marquardt¹, C. Slack³, K. W. Bradley⁴, A. York⁵, A. S. Culpepper⁶, A. Hager⁷, K. Al-Khatib⁸, L. E. Steckel⁹, M. Moechnig¹⁰, M. Loux¹¹, M. L. Bernards¹², R. J. Smeda⁴; ¹Purdue University, West Lafayette, IN, ²Southern Illinois University, Carbondale, IL, ³University of Kentucky, Lexington, KY, ⁴University of Missouri, Columbia, MO, ⁵North Carolina State University, Raleigh, NC, ⁶University of Georgia, Tifton, GA, ⁷University of Illinois, Urbana, IL, ⁸Kansas State University, Manhattan, KS, ⁹University of Tennessee, Jackson, TN, ¹⁰South Dakota State University, Brookings, SD, ¹¹The Ohio State University, Columbus, OH, ¹²University of Nebraska-Lincoln, Lincoln, NE (271)

2:20 PM

Management of Glyphosate-Resistant Waterhemp and Common Ragweed in Dicamba-Resistant Soybeans. R. J. Smeda*¹, S. Seifert-Higgins²; ¹University of Missouri, Columbia, MO, ²Monsanto Company, St. Louis, MO (272)

2:40 PM

Effect of Dicamba Rates on Soybean Yield Components. A. P. Robinson*, W. G. Johnson; Purdue University, West Lafayette, IN (273)

3:00 PM

Break

3:20 PM

Saflufenacil Efficacy on Horseweed (*Conyza canadensis*) and Effects on the Absorption and Translocation of Glyphosate.

T. W. Eubank*¹, V. K. Nandula¹, K. N. Reddy², D. R. Shaw³; ¹Mississippi State University, Stoneville, MS, ²USDA-ARS, Stoneville, MS, ³Mississippi State University, Mississippi State, MS (274)

3:40 PM

Pindar[™] GT Control of *Conyza* sp. Biotypes in California.

M. Sorribas*¹, M. L. Moretti², A. Shrestha², R. K. Mann¹, G. W. Sthur³, M. L. Fisher³; ¹Dow AgroSciences, Indianapolis, IN, ²California State University, Fresno, CA, ³Dow AgroSciences, Fresno, CA (275)

4:00 PM

Pindar GT: Results of Large Scale Demonstration Trials in California in 2010.

J. P. Mueller*¹, B. Bisabri², M. L. Fisher³, M. Sorribas⁴, R. K. Mann⁴, D. G. Shatley⁵, J. Yerneni³; ¹Dow AgroSciences, Brentwood, CA, ²Dow AgroSciences, Orinda, CA, ³Dow AgroSciences, Fresno, CA, ⁴Dow AgroSciences, Indianapolis, IN, ⁵Dow AgroSciences, Lincoln, CA (276)

4:20 PM

Herbicide Programs for the Management of Palmer Amaranth and Waterhemp in Conventional, Glyphosate-Resistant, and Glufosinate-Resistant Soybeans.

K. K. Rosenbaum*, T. R. Legleiter, K. W. Bradley; University of Missouri, Columbia, MO (277)

4:40 PM

Grain Sorghum Response to Pyrasulfotole & Bromoxynil and Growth Regulators.

N. G. Lally*¹, C. R. Thompson¹, D. Peterson¹, L. Maddux²; ¹Kansas State University, Manhattan, KS, ²Kansas State University, Rossville, KS (278)

WEDNESDAY PM, FEBRUARY 9 Section 4. Pasture, Rangeland, Forest, and Rights of Way

LOCATION: Galleria South

TIME: 1:00 PM - 5:00 PM

CHAIR: Ronald Wright, Mississippi State University, Mississippi State, MS

***SPEAKER**

1:00 PM

Evaluation of Cattle Grazing Patterns in Response to Herbicide Applications and Subsequent Weed Removal in Tall Fescue Pastures. K. W. Bradley*, B. C. Sather, T. R. Legleiter; University of Missouri, Columbia, MO (279)

1:20 PM

Safening of metsulfuron with 2,4-D in Bahiagrass. B. A. Sellers*¹, J. Ferrell², G. MacDonald²; ¹University of Florida, Ona, FL, ²University of Florida, Gainesville, FL (280)

1:40 PM

The Effect of Weed Management following Glyphosate-resistant Alfalfa Stand Establishment on Forage Productivity and Stand Longevity. W. J. Everman*¹, J. J. Kells¹, R. H. Leep¹, D. Min², A. J. Chomas¹, T. Dietz¹; ¹Michigan State University, East Lansing, MI, ²Michigan State University, Chatham, MI (281)

2:00 PM

Warm Season Perennial Weed Control in Cool Season Grass Hay. W. Witt*; University of Kentucky, Lexington, KY (282)

2:20 PM

SolviNix LC, the First Plant Virus-Based Bioherbicide. R. Charudattan*, E. Hiebert; BioProdex, Inc., Gainesville, FL (283)

2:40 PM

Utility of aminopyralid + metsulfuron for Weed Control, Seedhead and Grass Height Suppression in Bahia and Fescue Roadsides. V. F. Peterson*¹, W. N. Kline², B. B. Sleugh³, P. L. Burch⁴, J. Ferrell⁵, W. Witt⁶, R. J. Smeda⁷, S. F. Enloe⁸, J. L. Belcher⁸, F. H. Yelverton⁹, L. S. Warren⁹; ¹Dow AgroSciences, Mulino, OR, ²Dow AgroSciences, Duluth, GA, ³Dow AgroSciences, Des Moines, IA, ⁴Dow AgroSciences, Christianburg, VA, ⁵University of Florida, Gainesville, FL, ⁶University of Kentucky, Lexington, KY, ⁷University of Missouri, Columbia, MO, ⁸Auburn University, Auburn, AL, ⁹North Carolina State University, Raleigh, NC (284)

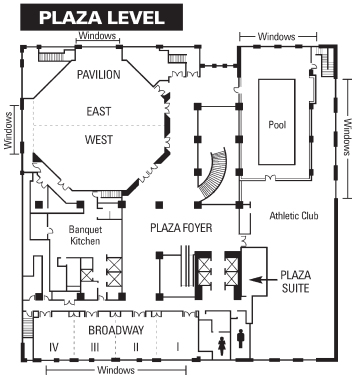
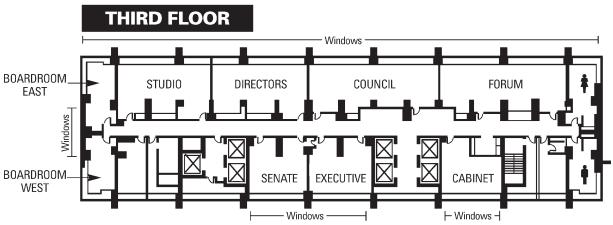
3:00 PM

Break

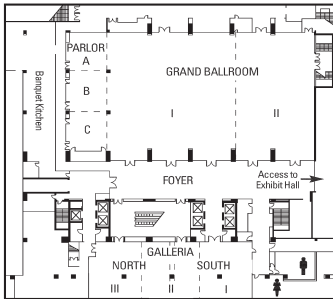
3:20 PM

Suppression of Medusahead Establishment with Preemergence aminopyralid and aminocyclopyrachlor Treatments. J. M. DiTomaso*, G. B. Kyser; University of California, Davis, Davis, CA (285)

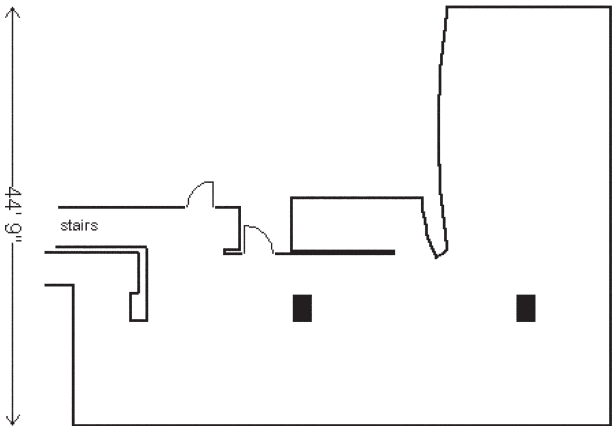
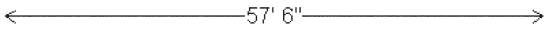
Function Space



BALLROOM LEVEL



23rd Floor-Alexanders



3:40 PM

Continuing aminocyclopyrachlor Research at Colorado State University. B. Lindenmayer*¹, P. Westra¹, S. J. Nissen¹, D. L. Shaner²; ¹Colorado State University, Fort Collins, CO, ²USDA, Fort Collins, CO (286)

4:00 PM

Alternatives for MSMA along Roadsides. R. S. Wright*, J. D. Byrd; Mississippi State University, Mississippi State, MS (287)

4:20 PM

Business Meeting

WEDNESDAY PM, FEBRUARY 9

Section 11. Physiology

LOCATION: Parlor

TIME: 1:00 PM - 5:00 PM

CHAIR: Franck Dayan, USDA-ARS, University, MS

***SPEAKER**

1:00 PM

A Framework for Defining Herbicide-Resistant Weed Biotypes. W. Vencill*¹, R. L. Nichols², D. G. Shilling¹; ¹University of Georgia, Athens, GA, ²Cotton Incorporated, Cary, NC (288)

1:20 PM

Waterhemp Evolves Resistance to a Fifth Class of Herbicides, HPPD Inhibitors. P. J. Tranel*, N. E. Hausman, S. Singh, L. Gonzini, D. Maxwell, D. E. Riechers, A. Hager; University of Illinois, Urbana, IL (289)

1:40 PM

Palmer Amaranth Biotypes Response to HPPD Inhibiting Herbicides. C. R. Thompson*, N. G. Lally, D. Peterson; Kansas State University, Manhattan, KS (290)

2:00 PM

Cross-Resistance Patterns of Acetolactate Synthase (ALS) Inhibitor-Resistant Globe Fringerush (*Fimbristylis miliacea*) Biotypes in Southern Brazil. C. E. Schaedler*¹, J. A. Noldin², D. Agostinetto¹, N. R. Burgos³, L. C. Fontana¹; ¹Universidade Federal de Pelotas, Pelotas, Brazil, ²Epagri, Itajai, Brazil, ³University of Arkansas, Fayetteville, AR (291)

2:20 PM

Investigating Cross-Resistance to Glufosinate in Glyphosate-Resistant Italian Ryegrass Populations. W. V. Avila*, C.

Mallory-Smith; Oregon State University, Corvallis, OR (292)

2:40 PM

Potential for Evolution of Resistance to Pyroxasulfone in *Lolium rigidum* Populations. R. Busi*, T. A. Gaines, S. B. Powles; University of Western Australia, Crawley, WA, Australia (293)

3:00 PM

Break

3:20 PM

Biokinetics and Mechanism of Selectivity of Saflufenacil (Kixor™). C. L. Brommer*¹, K. Grossmann², R. A. Liebl³; ¹BASF, Raleigh, NC, ²BASF Agricultural Research Center, Limburgerhof, Germany, ³BASF Corporation, Research Triangle Park, NC (294)

3:40 PM

Feral Rye Stage of Growth Effects on Imidazolinone Translocation and Efficacy. M. Ostlie*¹, D. L. Shaner², P. Westra¹; ¹Colorado State University, Fort Collins, CO, ²USDA, Fort Collins, CO (295)

4:00 PM

Absorption, Translocation, and Metabolism of Quizalofop and Rimsulfuron in Herbicide-Resistant Grain Sorghum. J. Abit*¹, K. Al-Khatib¹, M. Tuinstra²; ¹Kansas State University, Manhattan, KS, ²Purdue University, West Lafayette, IN (296)

4:20 PM

Influence of Light Intensity in Mechanism of Paraquat Resistance in Resistant (*Conyza bonariensis*) Biotype from California. M. L. Moretti*¹, B. D. Hanson², K. J. Hembree³, A. Shrestha¹; ¹California State University, Fresno, CA, ²University of California, Davis, Davis, CA, ³UCCE, Fresno, CA (297)

4:40 PM

Impact of Pesticides on the Nutritional Content of Fruit and Leafy Tissue of Crops. G. Armel*, D. Kopsell, C. Sams, J. Vargas, R. Koepke-Hill; University of Tennessee, Knoxville, TN (298)

WEDNESDAY PM, FEBRUARY 9 WSSA Business Meeting

LOCATION: Galleria South

TIME: 5:30 PM - 6:30 PM

WEDNESDAY PM, FEBRUARY 9
Willamette Valley Reception

LOCATION: Grand Ballroom I and II

TIME: 6:30 PM - 8:00 PM

THURSDAY AM, FEBRUARY 10
Practitioners Forum

LOCATION: Parlor

TIME: 8:00 AM - 12:00 Noon

CHAIR: Carol Mallory-Smith, Oregon State University, Corvallis, OR; Fred Raish, North American Weed Management Association, Yuma, CO.

THURSDAY AM, FEBRUARY 10
The Science of Herbicide Discovery

LOCATION: Grand Ballroom II

TIME: 8:00 AM - 12:00 Noon

CHAIR: Stephen Duke, USDA-ARS, Oxford, MS

***SPEAKER**

8:00 AM

Why Are There No New Herbicide Modes of Action in Recent Years? S. O. Duke*; USDA-ARS, Oxford, MS (299)

8:30 AM

QSAR and QSPR in Herbicide Discovery. R. D. Clark*; Simulations Plus, Inc., Lancaster, CA (300)

9:00 AM

High Throughput Screening and Followup on Enzymes of the Non Mevalonate Pathway. M. C. Witschel*; BASF, Ludwigshafen, Germany (301)

9:30 AM

Approaches to the Use of Natural Products for Herbicide Discovery. F. E. Dayan*; USDA-ARS, University, MS (302)

10:00 AM

Break

10:20 AM

Using “Physionomics and Metabolomics” Approaches to Discovery of New Modes of Action. K. Grossmann*; BASF Agricultural Research Center, Limburgerhof, Germany (303)

10:50 AM

Chemical Genetic Approaches to Herbicide Discovery. T. A. Walsh*; Dow AgroSciences, Indianapolis, IN (304)

11:20 AM

Discussion

THURSDAY AM, FEBRUARY 10

Section 1. Agronomic Crops

LOCATION: Grand Ballroom I

TIME: 8:00 AM - 12:00 PM

CHAIR: Lawrence Steckel, University of Tennessee, Jackson, TN

***SPEAKER**

8:00 AM

Impact of Tillage Intensity, Post-Harvest Residue Management, and Herbicide Placement on Bermudagrass Interference in Sugarcane. C. D. Dalley*, E. P. Richard, Jr., R. P. Viator; USDA-ARS, Houma, LA (305)

8:20 AM

Glyphosate Application Timing(s) and Tank Mixes for Weed Control and Resistance Management in Glyphosate-Resistant Sugar Beet. A. Anand*¹, P. Jha², J. O. Garcia²; ¹Montana State University, Bozeman, MT, ²Montana State University, Huntley, MT (306)

8:40 AM

Differences in Herbicide Response Among Barnyardgrass Populations from Mississippi. J. A. Bond*, V. K. Nandula, R. C. Bond, T. W. Eubank; Mississippi State University, Stoneville, MS (307)

9:00 AM

Synergism of Imazethapyr plus Propanil Combinations for Red Rice Control in Clearfield Rice. E. P. Webster*, J. B. Hensley; LSU AgCenter, Baton Rouge, LA (308)

9:20 AM

RebelEX for Broad Spectrum Weed Control in U.S. Rice. J. D. Siebert*¹, A. T. Ellis¹, V. B. Langston², R. B. Lassiter³, R. K. Mann⁴, D. G. Shatley⁵, L. C. Walton⁶; ¹Dow AgroSciences, Greenville, MS, ²Dow AgroSciences, The Woodlands, TX, ³Dow AgroSciences, Little Rock, AR, ⁴Dow AgroSciences, Indianapolis, IN, ⁵Dow AgroSciences, Lincoln, CA, ⁶Dow AgroSciences, Tupelo, MS (309)

9:40 AM

Shade Avoidance: the Importance of Plant-to-Plant Variability. C. J. Swanton*¹, E. Page¹, P. Westra², M. Loux³, A.

Dobbels³, K. L. Smith⁴, J. Bullington⁴, H. Wright⁵, C. L. Foresman⁶; ¹University of Guelph, Guelph, ON, ²Colorado State University, Fort Collins, CO, ³The Ohio State University, Columbus, OH, ⁴University of Arkansas, Monticello, AR, ⁵Syngenta Crop Protection Canada Inc, Guelph, ON, ⁶Syngenta, Greensboro, NC (310)

10:00 AM

Break

10:20 AM

Pyroxasulfone: Profile of New Herbicide for Residual Weed Control. Y. Yamaji^{*1}, H. Honda¹, M. Kobayashi², O. Watanabe²; ¹Kumiai America, White Plains, NY, ²Kumiai Chemical Industry, Tokyo, Japan (311)

10:40 AM

Utility of Pyroxasulfone for Residual Weed Control in Corn and Soybean. W. E. Thomas^{*1}, J. S. Harden¹, R. Bond¹, S. J. Bowe¹, R. A. Liebl¹, Y. Yamaji², H. Honda², T. Ambe³; ¹BASF Corporation, Research Triangle Park, NC, ²Kumiai America, White Plains, NY, ³Kumiai Chemical Industry, Tokyo, Japan (312)

11:00 AM

Management of Italian Ryegrass with Pyroxasulfone in Winter Wheat. S. Tan^{*1}, R. Bond¹, S. J. Bowe¹, R. A. Liebl¹, Y. Yamaji², H. Honda², T. Ambe³; ¹BASF Corporation, Research Triangle Park, NC, ²Kumiai America, White Plains, NY, ³Kumiai Chemical Industry, Tokyo, Japan (313)

11:20 AM

Evaluation of Pyroxasulfone for Grass Weed Management in Winter Wheat in Western Oregon. A. G. Hulting^{*}, B. Hinds-Cook, D. Curtis, C. Mallory-Smith; Oregon State University, Corvallis, OR (314)

11:40 AM

Impact of Volunteer Roundup-Ready Corn in Wheat-Corn-Fallow. A. Schlegel¹, B. D. Olson², J. D. Holman^{*3}; ¹Kansas State University, Tribune, KS, ²Dow Agro-Sciences, Geneva, NY, ³Kansas State University, Garden City, KS (315)

THURSDAY AM, FEBRUARY 10

Section 9. Weed Biology and Ecology

LOCATION: Galleria

TIME: 8:00 AM - 12:00 PM

CHAIR: Richard Smith, University of New Hampshire, Durham, NH

*SPEAKER

8:00 AM

Empirical Insights Inform a Spatially Explicit Invasive Species Model. E. Rauschert*, D. A. Mortensen; The Pennsylvania State University, University Park, PA (316)

8:20 AM

Ecology, Biology and Control of Exotic-Invasive Weeds in Coastal Forestry of British Columbia, Canada. R. R. Prasad*; Pacific Forestry Centre, Victoria, BC (317)

8:40 AM

Survey of Invasive Plants on Guam and Identification of the 20 Most Widespread. G. P. Reddy*; University of Guam, Mangilao, GU (318)

9:00 AM

Top 10 Worst Herbicide Resistant Weeds Globally. I. M. Heap*; WeedSmart, Corvallis, OR (319)

9:20 AM

Geographical Distribution of ACCase Inhibitor Resistant Echinochloa Species in Reclaimed Paddy Fields, Seosan, Korea. D. Kim, S. Lim*, M. Park; Seoul National University, Seoul, South Korea (320)

9:40 AM

ALS Inhibitor Resistant Echinochloa Species Evolved in Korean Paddy Fields. D. Kim*, S. Kang, M. Yook, J. Song; Seoul National University, Seoul, South Korea (321)

10:00 AM

Break

10:20 AM

Status of Glyphosate-Resistant Italian Ryegrass in Mississippi. R. C. Bond*, V. K. Nandula, J. A. Bond, T. W. Eubank; Mississippi State University, Stoneville, MS (322)

10:40 AM

Growth and Fitness of Glyphosate-Resistant Giant Ragweed. C. B. Brabham*, W. G. Johnson; Purdue University, West Lafayette, IN (323)

11:00 AM

Studies on Glyphosate Resistant Giant Ragweed in Ontario. J. Vink¹, F. J. Tardif², P. H. Sikkema¹, D. E. Robinson¹, M. B. Lawton³; ¹University of Guelph, Ridgetown, ON, ²University of Guelph, Guelph, ON, ³Monsanto Canada, Guelph, ON (324)

11:20 AM

A Modelling Approach for Understanding the Risks of Barnyardgrass Evolving Resistance to Herbicides in Rice. M.

V. Bagavathiannan*¹, J. K. Norsworthy¹, K. L. Smith², P. Neve³; ¹University of Arkansas, Fayetteville, AR, ²University of Arkansas, Monticello, Monticello, AR, ³University of Warwick, Wellesbourne, England (325)

11:40 AM

Differential Tolerance to Glufosinate and HPPD Inhibitors among Palmer Amaranth Populations. G. M. Botha*, N. R. Burgos, E. L. Alcobar; University of Arkansas, Fayetteville, AR (326)

THURSDAY PM, February 10

Section 1. Agronomic Crops

LOCATION: Grand Ballroom I

TIME: 1:00 PM - 5:00 PM

CHAIR: Lawrence Steckel, University of Tennessee, Jackson, TN

***SPEAKER**

1:00 PM

Timing the Removal of Winter Peas Intercropped with Winter Wheat to Optimize Available Soil Nitrogen and Moisture in a Dryland Small Grain System. K. A. Borrelli*, I. C. Burke, R. T. Koenig, D. R. Huggins, S. H. Hulbert; Washington State University, Pullman, WA (327)

1:20 PM

The Impact of Two Years of Wild Oat Management After Four Years of Low Crop Inputs in Barley and Canola. K. N. Harker*¹, S. Brandt², J. T. O'Donovan¹, R. E. Blackshaw³, E. N. Johnson², R. Kutcher⁴; ¹Agriculture and Agri-Food Canada, Lacombe, AB, ²Agriculture and Agri-Food Canada, Scott, SK, ³Agriculture and Agri-Food Canada, Lethbridge, AB, ⁴Agriculture and Agri-Food Canada, Melfort, SK (328)

1:40 PM

Environmental Conditions, Growth Stages and Fungicides Affect Herbicide Tolerance of Winter Wheat. M. De Jong*¹, P. H. Sikkema², F. J. Tardif¹, M. Cowbrough³; ¹University of Guelph, Guelph, ON, ²University of Guelph, Ridgeway, ON, ³OMAFRA, Guelph, ON (329)

2:00 PM

Preemergence Ethofumesate Increases Postemergence Spray Retention on Common Lambsquarters. A. R. Kniss¹, D. C. Odera*²; ¹University of Wyoming, Laramie, WY, ²University of Florida, Belle Glade, FL (330)

2:20 PM

BAS762ACH for Postemergence Weed Control in Dry Beans. P. Jha*¹, J. O. Garcia¹, A. Anand²; ¹Montana State University, Huntley, MT, ²Montana State University, Bozeman, MT (331)

2:40 PM

Impact of Time of Day on Herbicide Efficacy in Soybean. P. H. Sikkema*¹, R. E. Nurse², N. Soltani¹; ¹University of Guelph, Ridgetown, ON, ²Agriculture and Agri-Food Canada, Harrow, ON (332)

3:00 PM

Break

3:20 PM

Efficacy and Crop Tolerance of GF-2654 and GF-2726 in Corn. E. F. Scherder*¹, M. E. Schultz², A. T. Ellis³, J. S. Richburg⁴, J. A. Huff⁵, B. D. Olson⁶, G. R. Tofoli⁷; ¹Dow AgroSciences, Huxley, IA, ²Dow AgroSciences, Indianapolis, IN, ³Dow AgroSciences, Greenville, MS, ⁴Dow AgroSciences, Headland, AL, ⁵Dow AgroSciences, Herrin, IL, ⁶Dow AgroSciences, Geneva, NY, ⁷Dow AgroSciences, Goiania, Brazil (333)

3:40 PM

Colorado Light Avoidance Corn Ecology Study. P. Westra*¹, C. J. Swanton², E. Page², M. Loux³, A. Dobbels³, K. L. Smith⁴, J. Bullington⁴, H. Wright⁵, C. L. Foresman⁶; ¹Colorado State University, Fort Collins, CO, ²University of Guelph, Guelph, ON, ³The Ohio State University, Columbus, OH, ⁴University of Arkansas, Monticello, Monticello, AR, ⁵Syngenta Crop Protection Canada Inc, Guelph, ON, ⁶Syngenta, Greensboro, NC (334)

4:00 PM

Maize (/Zea mays/ L.) Fitness in Response to Light Quality and Drought Stress. W. Obeidat*, C. J. Swanton; University of Guelph, Guelph, ON (335)

4:20 PM

Sidedress Nitrogen Application Rate and Common Lamb-quarters Effect on Corn Grain Yield. L. E. Bast*, W. J. Everman, D. D. Warncke; Michigan State University, East Lansing, MI (336)

4:40 PM

The Effect of the R:Fr Ratio on Maize Root Morphology. M. Afifi*, C. J. Swanton; University of Guelph, Guelph, ON (337)

5:00 PM

Business Meeting

THURSDAY PM, February 10
Section 7. Education and Extension

LOCATION: Parlor

TIME: 1:00 PM - 5:00 PM

CHAIR: Joe Armstrong, Oklahoma State University, Stillwater, OK

***SPEAKER**

1:00 PM

Teaching Undergraduate Weed Science as a “Blended Course:” Instructor and Student Perspectives. P. B. Trewatha*; Missouri State University, Springfield, MO (338)

1:20 PM

Forming Undergraduate Research Partnerships Focused On Invasive Plants. R. E. Loeb*; The Pennsylvania State University, DuBois, PA (339)

1:40 PM

Status of Weed Science at Land-Grant Universities in the United States and its Territories. J. Derr*, A. Rana; Virginia Tech, Virginia Beach, VA (340)

2:00 PM

Teaching Spray Nozzle Tip Selection. R. N. Klein*; University of Nebraska-Lincoln, North Platte, NE (341)

2:20 PM

UGA Weed Science Survival Kit. E. P. Prostko*; University of Georgia, Tifton, GA (342)

2:40 PM

Improved Herbicide-Resistance Management Through Education: Implementation of WSSA Training Modules to Increase Awareness of Herbicide-Resistance Management. J. M. Stachler*¹, W. J. Everman², L. Glasgow³, J. Schroeder⁴, D. R. Shaw⁵, J. K. Soteres⁶, F. J. Tardif⁷; ¹North Dakota State University and University of Minnesota, Fargo, ND, ²Michigan State University, East Lansing, MI, ³Syngenta Crop Protection, Greensboro, NC, ⁴New Mexico State University, Las Cruces, NM, ⁵Mississippi State University, Mississippi State, MS, ⁶Monsanto Company, St. Louis, MO, ⁷University of Guelph, Guelph, ON (343)

3:00 PM

Break

3:20 PM

Risk Assessment of Glyphosate Resistance in Western Canada. H. J. Beckie*¹, K. N. Harker², L. M. Hall³, F.

A. Holm⁴, R. H. Gulden⁵; ¹Agriculture and Agri-Food Canada, Saskatoon, SK, ²Agriculture and Agri-Food Canada, Lacombe, AB, ³University of Alberta, Edmonton, AB, ⁴University of Saskatchewan, Saskatoon, SK, ⁵University of Manitoba, Winnipeg, MB (344)

3:40 PM

Preparing Vineyard Managers for 2,4-D Tolerant Corn and Soybean. L. Jiang*, D. Doohan; The Ohio State University, Wooster, OH (345)

4:00 PM

Development of the University of Alaska Fairbanks Invasive Plant Management Plan. M. E. Heidemann*¹, S. Todd¹, S. S. Seefeldt², T. Wurtz³; ¹University of Alaska Fairbanks, Fairbanks, AK, ²USDA-ARS, Fairbanks, AK, ³US Forest Service, Fairbanks, AK (346)

4:20 PM

WeedImages.org: An Easy Way to Share Images, Maps and Information. J. H. LaForest*¹, T. M. Webster²; ¹University of Georgia, Tifton, GA, ²USDA-ARS, Tifton, GA (347)

4:40 PM

ANOVA Under Different Approaches of Expressing Treatment Means as a Percentage of Control Mean. R. K. Godara*¹, J. P. Geaghan², B. J. Williams¹; ¹LSU AgCenter, Baton Rouge, LA, ²Louisiana State University, Baton Rouge, LA (348)

5:00 PM

Business Meeting

THURSDAY PM, February 10

Section 9. Weed Biology and Ecology

LOCATION: Galleria

TIME: 1:00 PM - 5:00 PM

CHAIR: Richard Smith, University of New Hampshire, Durham, NH

***SPEAKER**

1:00 PM

Updated Report on Gene Flow. P. Byrne, P. Westra, C. T. Beil*; Colorado State University, Fort Collins, CO (349)

1:20 PM

Shattercane x Sorghum Outcrossing in the Field. J. J. Schmidt*¹, M. L. Bernards¹, J. F. Pedersen², J. L. Lindquist¹; ¹University of Nebraska-Lincoln, Lincoln, NE, ²USDA-ARS, University of Nebraska-Lincoln, Lincoln, NE (350)

1:40 PM

The Effect of Digestive Tract in Different Holstein Cattle on Weed Seed Survival. H. Rahimian Mashhadi*¹, M. D. Banadaki², S. Rahimi²; ¹University of Tehran, Tehran, Iran, ²University of Tehran, Karaj, Iran (351)

2:00 PM

Identification of Weedy Species in Algae Production Systems. S. T. Chisholm*¹, S. Fulbright¹, J. Lang², G. Wardle², K. Dean², P. Lammers²; ¹Colorado State University, Fort Collins, CO, ²Solix Biofuels, Ft. Collins, CO (352)

2:20 PM

Aspects of Floral Biology and Pollination Ecology of White Cockle (*Silene latifolia*). J. F. Anderson*; University of Saskatchewan, Saskatoon, SK (353)

2:40 PM

Jointed Goatgrass (*Aegilops cylindrica*), a Secondary Product of Wheat Domestication? E. Sanchez Olguin*, J. Leonard, O. Riera-Lizarazu, C. Mallory-Smith; Oregon State University, Corvallis, OR (354)

3:00 PM

Break

3:20 PM

Role of Benzoxazinoid Compounds in Rye Allelopathy in Soil. J. R. Teasdale*, C. P. Rice, G. Cai; USDA-ARS, Beltsville, MD (355)

3:40 PM

Modelling Herbicide Effects on Rice-Weed Competition in Transplanted Rice Cultivation. D. Kim¹, B. Moon*², J. Kim¹; ¹Seoul National University, Seoul, South Korea, ²Rural Development Administration, Suwon, South Korea (356)

4:00 PM

Mulching Cover Crop Mixtures for Improved Weed Suppression in Organic Grain Crops. S. E. Wortman*, J. L. Lindquist, M. L. Bernards, R. Drijber, C. Francis; University of Nebraska-Lincoln, Lincoln, NE (357)

4:20 PM

Emergence and Development of Red Sorrel (*Rumex acetosella* L.) and Wild Blueberry Ramets (*Vaccinium angustifolium* Ait.). S. N. White*; University of Guelph, Truro, NS (358)

4:40 PM

The Interaction of Shade Avoidance and Stress on Growth Development and Yield of Maize. E. Page, W. Liu, D.

Cerrudo, C. J. Swanton*; University of Guelph, Guelph, ON (359)

5:00 PM

Business Meeting

THURSDAY PM, February 10
Section 11. Physiology

LOCATION: Grand Ballroom II

TIME: 1:00 PM - 5:00 PM

CHAIR: Franck Dayan, USDA-ARS, University, MS

***SPEAKER**

1:00 PM

A Quick and Colorful Method to Detect and Quantify Shikimic Acid in Whole Plant Tissues or Plant Extracts. K. A. Kretzmer*¹, D. Sammons², J. P. Frantz¹, P. J. Morris¹; ¹Monsanto Company, St Louis, MO, ²Monsanto Company, St. Louis, MO (360)

1:20 PM

Temporal Affects on the Glyphosate Chlorimuron Interaction. R. K. Bethke*¹, J. Michael², D. Penner²; ¹Auburn University, Auburn, AL, ²Michigan State University, East Lansing, MI (361)

1:40 PM

Response of *Conyza* spp to Glyphosate is Temperature and Plant Age Dependent. B. Rubin*, Z. Kleinman, G. Ben-Ami, M. Sibony; Hebrew University of Jerusalem, Rehovot, Israel (362)

2:00 PM

Response Patterns of Suspected Glyphosate Resistant Kochia Accessions. A. Wiersma*¹, P. Westra¹, J. E. Leach¹, C. Preston²; ¹Colorado State University, Fort Collins, CO, ²University of Adelaide, Adelaide, Australia (363)

2:20 PM

Glyphosate Resistance in *Conyza bonariensis* and *Lolium rigidum* in Israel. Z. Kleinman, M. Matzrafi, M. Sibony, B. Rubin*; Hebrew University of Jerusalem, Rehovot, Israel (364)

2:40 PM

Glyphosate Resistance in a Johnsongrass (*Sorghum halepense* L.) Biotype from Arkansas. D. S. Riar*, J. K. Norsworthy, D. B. Johnson, R. C. Scott, M. V. Bagavathiannan; University of Arkansas, Fayetteville, AR (365)

3:00 PM

Break

3:20 PM

Summarizing Glyphosate Resistance Mechanisms: More Exclusion Examples. D. Sammons*¹, E. Ostrander², B. Duncan², X. Ge³, A. D'Avignon³, J. Ackerman³, K. L. Smith⁴, A. Collavo⁵, M. Sattin⁶; ¹Monsanto Company, St. Louis, MO, ²Monsanto, St. Louis, MO, ³Washington University, St. Louis, MO, ⁴University of Arkansas, Monticello, Monticello, AR, ⁵Consiglio Nazionale delle Ricerche (CNR), Padua, Italy, ⁶CNR, Padua, Italy (366)

3:40 PM

Understanding the Mn Chelation Properties of Glyphosate in Glyphosate-Resistant Soybean. D. Sammons*¹, S. Murdock², M. Bleeke², A. Mehrsheikh², R. Grabiak², W. Harris³; ¹Monsanto Company, St. Louis, MO, ²Monsanto, St. Louis, MO, ³University of Missouri St. Louis, St. Louis, MO (367)

4:00 PM

Evidence for Maternal Inheritance of Glyphosate Resistance in *Amaranthus palmeri*. D. N. Ribeiro*¹, F. E. Dayan², P. Zhiqiang³, S. O. Duke³, D. R. Shaw⁴, V. K. Nandula⁵; ¹Mississippi State University, Starkville, MS, ²USDA-ARS, University, MS, ³USDA-ARS, Oxford, MS, ⁴Mississippi State University, Mississippi State, MS, ⁵Mississippi State University, Stoneville, MS (368)

4:20 PM

Characterization of EPSPS Gene Amplification in Palmer Amaranth (*Amaranthus palmeri*). T. A. Gaines*¹, S. Ward², J. E. Leach², S. T. Chisholm², P. Westra²; ¹University of Western Australia, Crawley, WA, Australia, ²Colorado State University, Fort Collins, CO (369)

4:40 PM

Business Meeting

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Common Herbicides

This is a quick reference guide for use during the conference. It does not contain all experimental and commercial herbicides, all trade names and manufacturers for herbicides available from more than one source, herbicide mixtures, or safeners used with these herbicides.

Common or Code Name*	Trade Name	Manufacturer
Acetochlor	Harness	Monsanto
Acifluorfen	Blazer	BASF
Aclonifen	Challenge	Bayer CropScience
Acrolein	Magnacide	Baker
Alachlor	Lasso	Monsanto
Alloxydim	Fervin	Bayer CropScience
Ametryn	Evik	Syngenta
Amicarbazone		Arysta
Amidosulfuron	Adret, Gratil	Bayer CropScience
Aminocyclopyrachlor, Aptexor*	Imprelis	DuPont
Aminopyralid	Milestone	Dow AgroSciences
Amitrole	Amitrol T	Bayer CropScience
Anilofos	Aniloguard	Ghardat
Asulam	Asulox	Bayer CropScience
Atrazine	Aatrex	Syngenta
Atrazine		Terra
Azimsulfuron	Gulliver	DuPont
Beflubutamid	Herbaflex	Ube Industries
Benazolin	Asset	Bayer CropScience
Benefin	Balan	Dow AgroSciences
Bensulfuron	Londax	DuPont
Bensulide	Pefar	Gowan
Bentazon	Basagran	BASF
Benzofenap	Taipan	Bayer CropScience
Bifenox	Modown	Bayer CropScience
Bispyribac	Regiment, Velocity	Valent
Bromacil	Hyvar	DuPont
Bromoxynil	Buctril	Bayer CropScience
Butachlor	Machete	Monsanto
Butafenacil	Rebin, Inspire	Syngenta
Butroxydim	Falcon	Syngenta
Butylate	Sutan	Cedar
Cacodylic acid	Cotton-Aide HC	Monterey
Carbetamide	Carbetamex	Feinchemie
Carfentrazone	Aim, Shark, QuickSilver	FMC
Chlorsulfuron	Glean, Telar	DuPont
Chlortoluron	Dicuran, Shuat	Syngenta
Cinmethylin	Argold, Cinch	BASF
Clethodim	Select, Prism	Valent
Clodinfop	Topik	Syngenta
Clodinafop-propargy*	Discover	Syngenta
Clomazone	Command	FMC
Clopyralid	Stinger, Lontrel	Dow AgroSciences
Cloransulam-methyl	Firstrate	Dow AgroSciences
Cyanazine	Bladex	DuPont
Cycloate	RoNeet	Cedar
Cyclosulfamuron	Invest	BASF
Cycloxydim	Focus	BASF
Cyhalofop	Clincher	Dow AgroSciences
DCPA	Dacthal	Amvac

Common or Code Name*	Trade Name	Manufacturer
2,4-D	Several	Several
2,4-DB	Several	Several
Dazomet	Basamid	Certis
Desmedipham	Betamix	Bayer CropScience
Desmetryn	Semeron	Syngenta
Dicamba	Banvel, Clarity	BASF
Dichlobenil	Casoron	Chemtura
Dichlorprop	Several	Bayer CropScience
Diclofop	Hoelon	Bayer CropScience
Diclosulam	Strongarm	Dow AgroSciences
Difenzoquat	Avenge	BASF
Diflufenican	Javelin	Bayer CropScience
Dimethenamid	Frontier	BASF
Diquat	Reward, Reglone	Syngenta
Dithiopyr	Dimension	Dow AgroSciences
Diuron	Karmex	DuPont
DSMA	Several	Several
Endothall	Several	Atochem
EPTC	Eptam	Gowan
Ethalfuralin	Sonalan	Dow AgroSciences
	Curbit	UAP
Ethametsulfuron	Muster	DuPont
Ethofumesate	Nortron, Prograss	Bayer Crop Science
Ethoxysulfuron	Sunrice	Bayer Crop Science
Fenoxaprop	Acclaim, Whip	Bayer CropScience
Fentrazamide	Lecs	Bayer CropScience
Flazasulfuron	Katana	ISK Biosciences
Florasulam	Primus, Boxer	Dow AgroSciences
Fluazifop-P	Fusilade DX	Syngenta
	Fusilade 11	
Flucarbazone-sodium	Everest	Arvesta
Flufenacet	Axiom (flufenacet + p metribuzin)	Bayer CropScience
	Radius (flufenacet p isoxaflutole)	Bayer CropScience
Flufenpyr-ethyl*	S-3153	Valent
Flumetsulam	Python	Dow AgroSciences
Flumiclorac	Resource	Valent
Flumioxazin	Valor	Valent
	Chateau	
Fluometuron	Cotoran	MANA
	Others	Others
Flupyr-sulfuron	Lexus	DuPont
Flurchloridone	Racer	Syngenta
Fluridone	Sonar	SePro
Fluroxypyr	Starane, Vista, Spotlight	Dow AgroSciences
Fluthiacet	Cadet	FMC
Fomesafen	Reflex, Flexstar	Syngenta
Foramsulfuron	Option	Bayer CropScience
Fosamine	Krenite	DuPont
Glufosinate	Ignite Liberty, Rely	Bayer CropScience
Glyphosate	Roundup, Ultra, Rodeo, Touchdown Pro	Monsanto, Syngenta
Halosulfuron	Permit, Battalion	Monsanto
	SedgeHammer	Gowan
Haloxypyr	Verdict	Dow AgroSciences
Hexazinone	Velpar	DuPont
Imazamethabenz	Assert	NuFarm
Imazamox	Raptor, Beyond	BASF

Common or Code Name*	Trade Name	Manufacturer
Imazapic	Cadre, Plateau	BASF
Imazapyr	Arsenal, Habitat	BASF
Imazaquin	Image, Scepter	BASF
Imazethapyr	Pursuit	BASF
Iodosulfuron	Autum	Bayer CropScience
Indaziflam		Bayer CropScience
Isoxaben	Gallery	Dow AgroSciences
Isoxaflutole	Balance	Bayer CropScience
Lactofen	Cobra	Valent
Linuron	Lorox, Others	Dupont
MCPA	Several	Several
MCPB	Several	Several
Mecoprop	MCPP, Mecopex	Several
Mesosulfuron	Osprey	Bayer CropScience
Mefluidide	Embark	PBI-Gordon
Mesotrione	Callisto, Tenacity	Syngenta
Metham	Metham Sodium	Amvac
Metolachlor	Dual	Syngenta
	Dual Magnum	
	Pennant Magnum	
Metribuzin	Sencor,	Bayer CropScience
Metsulfuron	Ally, Escort	DuPont
MSMA	Several	Several
Napropamide	Devrinol	United Phosphorus
Nicosulfuron	Accent	DuPont
Norflurazon	Solicam	Syngenta
Oryzalin	Surflan	UPI
Oxadiazon	Ronstar	Loveland
Oxasulfuron*	Expert	Syngenta
Oxyfluorfen	Goal	Dow AgroSciences
Paraquat	Gramoxone Inteon,	Syngenta
	Gramoxone Max	
Pebulate	Tillam	Monterey
Pelargonic acid	Scythe	Dow AgroSciences
Pendimethalin	Prowl	BASF
Penoxsulam	Grasp, Granite	Dow AgroSciences
Phenmedipham	Spin-Aid	Bayer CropScience
Picloram	Tordon	Dow AgroSciences
Picolinafen*	Pico	BASF
Pinoxaden	Axia	Syngenta
Primisulfuron	Beacon	Syngenta
Prodiamine	Barricade	Syngenta
Prometon	Pramitol	Agriliance
Prometryn	Caparol	Syngenta
Pronamide	Kerb	Dow AgroSciences
Propanil	Stam	UPI
Propaquizafop	Shogun	MANA
Propoxycarbazone	Olympus	Bayer CropScience
Propazine	MiloPro	Albaugh
Prosulfocarb	Boxer (in France)	Syngenta
Pyrasulfotole	Huskie	Bayer CropScience
Pyroxasulfone*		Kumiai
Pyrazon	Pyramin	BASF
Pyrazosulfuron	Sirius	Bayer CropScience
Pyrithiobac	Staple	DuPont
Pyroxulam	Powerflex	Dow AgroSciences
Quinclorac	Drive, Facet	BASF
	Paramount	
Quinmerac*	Fiesta (UK)	BASF
Quizalofop	Assure	DuPont

Common or Code Name*	Trade Name	Manufacturer
Rimsulfuron	Matrix, Basis, TranXit	DuPont
Saflufenacil	Kixor, Sharpen	BASF
Sethoxydim	Poast Poast Plus	BASF
Siduron	Tupersan	Gowan
Simazine	Princep Others	Syngenta, Generic
Sulcotrione	Mikado Galleon	Bayer CropScience
Sulfentrazone	Dismiss, Spartan, Authority	FMC
Sulfometuron	Oust	DuPont
Sulfosulfuron	Certainty, Monitor, Outrider, Maverick	Monsanto
Tebuthiuron	Spike	Dow AgroSciences
Tembotrione	Laudis	Bayer CropScience
Tepaloxymidim	Equinox	BASF
Terbacil	Sinbar	Generic
Terbutryn	Igran	Generic
Thiazopyr	Visor	Dow AgroSciences
Thifensulfuron	Affinity, Harmony	DuPont
Thiencarbazone	mixtures only;	Bayer CropScience
Thiobencarb	Bolero	Valent
Topramezone	Impact	Amvac
Tralkoxydim	Achieve	Syngenta
Triallate	FarGo	Gowan
Triasulfuron	Amber, Fuego	Syngenta
Tribenuron	Express	DuPont
Triclopyr	Renovate Garlon	SePro Dow AgroSciences
Trinexpac-ethyl	Primo	Syngenta
Trifloxysulfuron	Envoke, Monument	Syngenta
Triflusulfuron	Upbeet	DuPont

* Common names marked with an asterisk have not been approved by WSSA. Some herbicides are listed under both a proposed common name and a code number.

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Graduate Student Representative: Sarah True (2011), NC State University, Campus Box 7620, Williams Hall, Raleigh, NC 27695

Aquatic Plant Management Society: Cody Gray (2012), United Phosphorus Inc., 11417 Cranston Drive, Peyton, CO 80831

CWSS: Peter Sikkema (2012), University of Guelph, Dept of Plant Agriculture, Ridgetown Campus, 120 Main St E, Ridgetown, ON N0P 2C0, Canada

NCWSS Representative: Kevin Bradley (2012), University of Missouri, 206A Waters Hall, Columbia, MO 65211

NEWSS Representative: Shawn Askew (2011), Virginia Tech, Glade Road Research Facility. Plant Pathology Physiology & Weed Science, 435 Old Glade Rd Box 0330, Blacksburg, VA 24061-0330

SWSS Representative: Jason Norsworthy (2011), University of Arkansas, 1366 W Altheimer Dr, Fayetteville, AR 72704

WSWS Representative: Tim Miller (2012), Washington State University, 16650 State Route 536, Mount Vernon, WA 98273-4768

Executive Secretary: Joyce Lancaster, Allen Press, Inc., 810 East 10th Street, Lawrence, KS 66044-7050

WSSA Founder Award

1974 - R.H. Beatty

WSSA Original Honorary Members*

1964—A.S. Craft	1967—W.S. Ball
K.P. Buchholtz	W.B. Ennis, Jr.
F.L. Timmons	1968—G.F. Warren
C.J. Willard	1969—E.P. Sylvester
1966—R.H. Beatty	

*Society members being honored were originally referred to as Honorary Members. Beginning in 1970 the term was changed to WSSA Fellows and the term Honorary Member has since been reserved for honoring contributions to weed science regardless of WSSA membership status.

WSSA Fellows*

1970—W.C. Shaw	T.J. Sheets
F.W. Slife	A.F. Wiese
1971—W.A. Harvey	1980—J.D. Bandeen
L.G. Holm	S.N. Fertig
D.D. Hemphill	C.L. Foy
1972—B.E. Day	L.S. Jordan
W.H. Minshall	R.A. Peters
1973—E.K. Alban	1981—J.F. Ahrens
W.R. Furtick	L.H. Hannah
R. Behrens	W.F. Meggitt
G.C. Klingman	R.R. Romanowski
1974—D.L. Klingman	C.R. Swanson
R.D. Sweet	1982—J. Antognini
P.W. Santelmann	G.H. Bayer
L.L. Danielson	J.H. Dawson
1975—D.E. Davis	C.L. Switzer
J.R. Hay	R.B. Taylorson
E.G. Rodgers	1983—R.N. Andersen
R.P. Upchurch	W.D. Carpenter
1976—A.P. Appleby	J.E. Gallagher
R.D. Ilnicki	D.L. Linscott
D.E. Moreland	L.W. Mitich
1977—E.L. Knake	1984—G.A. Buchanan
C.G. McWhorter	W.A. Gentner
H.S. Friesen	M.M. Schrieber
L. Southwick	R.L. Zimdahl
1978—O.H. Fletchall	1985—S.R. McLane
J.L. Hilton	J.F. Miller
H.M. LeBaron	W.J. Saidak
D.W. Staniforth	E.E. Schweizer
1979—H.P. Alley	R.J. Smith, Jr.
R.E. Frans	J.B. Weber
K.C. Hamilton	1986—L.C. Burrill

- R.D. Comes
 R.A. Evans
 R.H. Schieferstein
 1987—F.M. Ashton
 J.W. Herron
 G.R. Miller
 M.G. Merkle
 J.D. Nalewaja
 W.H. Vanden Born
 1988—D.E. Bayer
 G.H. Friesen
 M.C. McGlamery
 J.A. Meade
 A.R. Putnam
 J.D. Riggleman
 1989—O.C. Burnside
 W.R. Mullison
 E.C. Spurrier
 G.R. Stephenson
 L.M. Wax
 A.D. Worsham
 1990—S.W. Bingham
 R.W. Bovey
 T.J. Monaco
 E.W. Stoller
 E.W. Stroube
 R.E. Talbert
 1991—R.M. Devlin
 T.L. Lavy
 M. Newton
 C.J. Scifres
 B. Truelove
 J.A. Young
 1992—R.J. Aldrich
 C.C. Dowler
 S.O. Duke
 C.G. Messersmith
 A.G. Ogg, Jr.
 J.V. Parochetti
 1993—R.E. Doersch
 C.L. Elmore
 R.E. Eplee
 J.O. Evans
 L.R. Oliver
 D. Penner
 W.V. Welker
 1994—J.R. Abernathy
 J.R. Baker
 J.F. Ellis
 R.E. Hoagland
 G. Kapusta
 W.A. Skroch
 1995—E.F. Eastin
 A.S. Hamill
 K.K. Hatzios
 H.D. Tripple
 H.J. von Amsberg
 H.P. Wilson
 1996—F.L. Baldwin
 W.L. Barrentine
 P.C. Bhowmik
 J.C. Graham
 F.D. Hess
 A.E. Smith, Jr.
 1997—H.D. Coble
 R.G. Harvey
 R. Prasad
 R.L. Rogers
 M. Singh
 W.W. Witt
 1998—J.L. Barrentine
 M.D. Devine
 A.G. Dexter
 C. V. Eberlein
 S.D. Miller
 P.S. Zorner
 1999—I. Morrison
 D.S. Murray
 R.F. Norris
 H.D. Skipper
 D.C. Thill
 R.D. Wauchope
 2000—L.K. Binning
 N.D. Camper
 R. Charudattan
 J.S. Holt
 D.L. Shaner
 G.A. Wicks
 2001—C.E. Beste
 R.R. Hahn
 A. Legere
 A. Martin
 R.D. Williams
 G. Wills
 2002—R.E. Blackshaw
 J.M. Chandler
 J.D. Doll
 J.C. Hall
 D.R. Shaw
 S.C. Weller
 2003—S. A. Dewey
 R.M. Hayes
 R. Nishimoto
 A. Watson
 T. Whitson
 J. Wilcut
 2004—B.J. Brecke
 J.L. Griffin

	A.E. Miller	B. Majek
	M.K. Upadhyaya	K. Vaughn
2005—	D.D. Buhler	2008—M.A. Locke
	J.E. McFarland	R. Wilson
	M.D.K. Owen	C. Mallory-Smith
	C. Swanton	2009—K. Renner
2006—	M. Foley	M. Barrett
	J. Kells	A.R. Bonanno
	R. Lym	2010—J. Schroeder
	A. York	J. Dusky
2007—	K. N. Harker	K. Reddy
	R. Kremer	

Honorary Members*

1974—	Hans Gysin	1994—	Peter Böger
1975—	A. John Speziale	1995—	Keith Moody
1976—	Keith C. Barrons	1996—	Su Shao Quan
1978—	John D. Fryer	1997—	Stephen B. Powles
1979—	Menashe Horowitz	1998—	Jens C. Streibig
1980—	Virgil H. Freed	1999—	Jost Harr
1981—	Les J. Mathews	2000—	Allan Walker
1982—	Gideon D. Hill, Jr.	2001—	Baruch Rubin
1983—	Shoichi Matsunaka	2002—	Karl Hurler
1985—	Abed R. Saghir	2003—	Helmut Walter
1986—	Beatriz L. Mercado	2004—	Aldo Alves
1987—	Yang-han Li	2005—	Aurora M. Baltazar
1988—	Werner Koch	2006—	Robinson A. Pitelli
1989—	Tetsuotakema Tsu	2007—	Bernal Valverde
1990—	Agustin Mitidieri	2008—	R. Labrada Romero
1991—	Okezie Akobundu	2009—	H. Matsumoto
1993—	Hwan Seung Ryang	2010—	None awarded

WSSA Past Presidents

R.H. Beatty	1956–1957
W.B. Ennis, Jr.	1957–1959
A.S. Crafts	1959–1960
K.C. Buchholtz	1960–1962
W.C. Shaw	1962–1964
G.F. Warren	1964–1966
W.R. Furtick	1966–1967
R. Behrens	1967–1968
B.E. Day	1968–1969
G.C. Klingman	1969–1970
L.L. Danielson	1970–1971
D.L. Klingman	1971–1972
R.P. Upchurch	1972–1973
E.G. Rodgers	1973–1974
E.L. Knake	1974–1975
C.R. Swanson	1975–1976
F.W. Slife	1976–1977
C.L. Foy	1977–1978

P.W. Santelmann	1978–1979
J.R. Hay	1979–1980
W.D. Carpenter	1980–1981
D.E. Davis	1981–1982
T.J. Sheets	1982–1983
C.G. McWhorter	1983–1984
J.D. Nalewaja	1984–1985
J.D. Riggleman	1985–1986
O.C. Burnside	1986–1987
J.H. Dawson	1987–1988
J.F. Ahrens	1988–1989
H.M. LeBaron	1989–1990
L.W. Mitich	1990–1991
J.R. Abernathy	1991–1992
J. Antognini	1992–1993
H.D. Coble	1993–1994
A.G. Ogg, Jr.	1994–1995
J.L. Barrentine	1995–1996
S.O. Duke	1996–1997
C.G. Messersmith	1997–1998
F.D. Hess	1998–1999
J.M. Chandler	1999–2000
L.R. Oliver	2000–2001
C. V. Eberlein	2001–2002
B.A. Majek	2002–2003
A.S. Hamill	2003–2004
D.C. Thill	2004–2005
C. Mallory-Smith	2005–2006
D. Shaner	2006–2007
J. Schroeder	2007–2008
J. Derr	2008–2009
D. Shaw	2009–2010

NOTES

PERSONAL TIME SCHEDULE

Time	Monday	Tuesday	Wednesday	Thursday
7:30				
8:00		Poster Session		
8:15				
8:30				
8:45				
9:00				
9:15				
9:30				
9:45				
10:00				
10:15				
10:30				
10:45				
11:00				
11:15				
11:30				
11:45				
Noon				
1:00				
1:15				
1:30				
1:45				
2:00				
2:15				
2:30				
2:45				
3:00				
3:15				
3:30				
3:45				
4:00	General Session and Awards Presentation			
4:15				
4:30				
4:45				
5:00				
5:15				
5:30				
5:45			Business Meeting	
6:00				
6:15	WSSA Awardee Reception and Poster Sessions		Willamette Valley Reception	
6:30				
6:45				
7:00				
7:15				
7:30				
7:45				
8:00				
8:15				
8:30				
8:45				