

**46<sup>th</sup> Meeting  
Weed Science Society of America**

Location of Special Committees & Activities .....	1
Local Arrangements Committee.....	1
History Committee .....	2
50th Anniversary Committee .....	2
50th Anniversary of WSSA.....	2
President's Welcome .....	2
The 2006 Program.....	3
2006 Program Committee .....	4
General Information .....	5
Committee Meetings .....	7
Summary of 2006 Program .....	10
Complete Program.....	15
Meeting Room Maps.....	46
Author Index .....	65
Common Herbicides.....	80
WSSA Board of Directors .....	84
WSSA Founder Award .....	85
WSSA Original Honorary Members.....	85
WSSA Fellows.....	85
WSSA Honorary Members.....	87
WSSA Past Presidents .....	87
Notes .....	89
Personal Time Schedule .....	92
Sustaining Members.....	Inside Back Cover

**Location of Special Committees  
and Activities  
February 2006**

Photo Contest Display .....	Westside Ballroom
Photo Contest Judging* .....	Lyceum
Placement Service Information and Interviews .....	Imperial
Press and Public Relations .....	Imperial
Registration (Including Spouses & Guests) .....	45 <sup>th</sup> St Registration Booth
Board Meeting .....	Odets
CD Preview Room .....	Juilliard
50 <sup>th</sup> Anniversary Display .....	Westside Ballroom

**\*Photos must be delivered to Registration Desk by  
1:00 p.m. Monday, February 13.**

**Local Arrangements Committee  
2006 – New York, New York**

Co-Chairs .....

Brad Majek and Rich Bonanno

## History Committee

Chair ..... Jerry Doll

Members:

J. Allen	A. Appleby
R. D. Sweet	R. L. Zimdahl
M. A. Ross	M. D. K. Owen
R. F. Norris	

## 50<sup>th</sup> Anniversary Committee

Chair ..... Al Hamill

Members:

P. Upchurch	H. M. LeBaron
J. L. Barrentine	D. Penner
J. M. Chandler	R. Parker
C. L. Foy	J. Evans

## 50<sup>th</sup> Anniversary of WSSA

This meeting marks the 50<sup>th</sup> Anniversary of the charter meeting of the Weed Society of America, which met in New York City on January 4–5, 1956. Both the History Committee and the 50<sup>th</sup> Anniversary Committee have spent many hours developing the plans for this celebration. Be sure to spend time at the 50<sup>th</sup> Anniversary display located in a special section of the Westside Ballroom, 5th Floor and view the History posters in the Poster Section. There will also be historical presentations at the beginning of each section's oral presentations.

In addition to the work of the two committees, special recognition must go to Arnold Appleby, Professor Emeritus, Oregon State University for the compilation of all of the information and photos in the history book, *Weed Science Society of America, Origin and Evolution, the First 50 Years*. Each attendee will receive a copy of the history book and the book will be available for purchase at the business office after the meeting. The Society would also like to thank Allen Press, Inc. who donated all production and printing costs of the history book in recognition of the Weed Science Society of America's 50<sup>th</sup> Anniversary celebration and in honor of the business partnership between WSSA and Allen Press, Inc.

## Welcome to New York

Welcome to the 50<sup>th</sup> Anniversary and the 46<sup>th</sup> Annual Meeting of the Weed Science Society of America. This is a special meeting for the society. Dale Shaner, Program Chair, the Program Committee, and the 50<sup>th</sup> Anniversary Committee have planned both a meeting that is educational and a celebration. Please take the time to thank them and the Local Arrangements Committee for the hard work that has gone into planning the meeting. The meeting is being held in New York City because

the 1<sup>st</sup> meeting of the Weed Science Society was held here 50 years ago.

The Awards Reception and 50<sup>th</sup> Anniversary Celebration will be held Monday from 6:30 to 9:30 pm. Please attend to congratulate the winners and to renew friendships. We are hoping that many retired members will join us for the celebration. The Monday night reception will be the only social gathering held this year.

Please participate in the Business Meeting on Tuesday evening at 5:15. This meeting is an opportunity for all members to speak and offer input for the direction of the society. The Board of Directors is interested in your ideas and opinions so please attend.

This meeting is the end of my term as President. Thank you for allowing me to serve in this capacity. It has been a busy year and I have enjoyed it. I want to thank Joyce Lancaster and Rhonda Green for all of the help and support that they provided during the past two years of my tenure on the Board. Thanks also to the Board of Directors and all of the other volunteers who donate their time to WSSA.

Carol Mallory-Smith, President

## **THE 2006 WSSA PROGRAM**

The General Session and Awards Presentations will be held on Monday night beginning at 4:15 p.m. in the Astor Ballroom at the Marriott Marquis followed by the Award Winners' Reception and 50<sup>th</sup> Anniversary Celebration from 6:30 p.m. to 9:30 p.m. in the Broadway Lounge. This reception will be the only society wide social event, freeing up your evenings for many of the other opportunities in New York City. Tuesday through Thursday, the commercial exhibits, poster session, and all breaks will be held in the Westside Ballroom. Approximately 165 posters and 190 oral papers will be presented during the meeting. The Business Meeting will be held Tuesday afternoon beginning at 5:15 p.m. in the Booth/Edison Room. The 16th floor Skylobby has been reserved all week as a meeting place for spouses.

There are five formal symposia this year. The "Obtaining Grant Funds: Experience and Advice" a symposium proposed and organized by the WSSA Graduate Student Organization will be held on Tuesday morning. "Advances and Regulatory Implications of Modeling Approaches to Environmental Fate and Exposure Assessment of Pesticides," will be held on Tuesday afternoon. The "Challenge of minor crop weed control and future direction" symposium will be held Wednesday afternoon. Two symposia will be held on Thursday. "Natural Products in Weed Management and Biology" will be held from

8:30 a.m. to 12:00 noon and “Grass Weed Resistance: Fighting Back” will be held from 1:00 p.m. to 5 p.m.

New to this year’s program are discussion sections on posters in specific groups. On Tuesday morning, Franck Dayan will lead a discussion on posters in the Physiology section 10:00 a.m. to 12:00 noon. On Tuesday afternoon, discussions of posters in the Education and Extension and the Horticultural Crops section will be held at 4:00 p.m. On Thursday morning at 10:45 a.m., Cade Smith will lead the discussion on the posters for the Soil and Environmental Aspects section. These discussion sessions are an opportunity for open exchange of ideas on the topics. These are meant to be informal discussions without prepared presentations to allow plenty of time for everyone to participate.

All presentations will be made using PowerPoint and LCD projectors. A CD preview room is available during the meeting. The WSSA Abstracts, Volume 46, will be provided on a CD. There will be no printed, hardcopy version of the proceedings.

The WSSA Board of Directors will meet all day Sunday and Monday. Committee meetings are scheduled for Monday and Tuesday. The Board will meet with Committee chairs on Thursday morning. The new Board will meet all day Friday.

Special thanks to the Program Section Chairs, the Local Arrangements Committee, Joyce Lancaster and Rhonda Green and their staff for working so hard to make all of the extra arrangements needed for this year’s meeting, the WSSA Board of Directors for supporting the program changes and to the WSSA members who were willing to try something new with the program this year.

Dale Shaner, Program Chair

### **2006 Program Committee**

General Program Chair ..... Dale Shaner  
Vice Chair ..... Jill Schroeder  
Abstract Editor ..... Robert Kremer  
Agronomic Crops ..... John Harden  
Horticultural Crops ..... Russell Wallace  
Turf and Ornamentals ..... Todd Mervosh  
Pasture, Range, Forest, & Right-of-Ways ..... Jimmie Yeiser  
Wildland and Aquatic Invasives ..... John Madsen  
Regulatory Aspects ..... Donald Givens  
Teaching and Extension ..... Timothy Grey  
Formulation, Adjuvant & Application  
    Technology ..... Robert Klein  
Weed Biology and Ecology ..... Jeffery Conn  
Biocontrol of Weeds ..... Sharon Anderson  
Physiology ..... Franck Dayan

Soil and Environmental Aspects .....	Michael Smith
Integrated Weed Management .....	Larry Steckel
Sustaining Member Exhibits Session .....	Bert Schou
Poster Sessions .....	W. Brien Henry

## General Information

### Hotel

The New York Marriott Marquis Hotel in Times Square features first-class service in a world-class New York City hotel that sparkles after a recent \$150 million renovation, with new rooms, a new high-speed elevator system and newly designed restaurants. Times Square and the New York Marquis offer easy access to New York’s popular business destinations, best shopping, Broadway theatre, Midtown Manhattan attractions like Rockefeller Center, Radio City Music Hall, Good Morning America studios, the Fashion District and more.

Guest room amenities include individual climate control, dual telephones with voice mail and data-port for laptop computers, On-Command Video, in-room safe, iron and ironing board, coffeemaker, work desk, and electronic programmable locks.

**Room Reservations:** To make your room reservations, please complete the Hotel Reservation Form online or in the registration brochure return it to the address listed on the form or call the hotel directly at 212/398-1900. **Please be sure to mention you are with the Weed Science Society, to obtain the group-discounted rate. Our room block will be held until January 27, 2006. Accommodations requested beyond the cut-off date will be offered based on availability**

### Transportation

There are many internet sites—either official airport sites or New York city government sites—that can provide specific Airtran, subway, and bus transportation information for the best routes from the airport of your choice to the Marriott Marquis.

#### Air Transportation Into New York

##### **John F. Kennedy International Airport (JFK)**

Jamaica, Queens, New York, 718/244-4444. This airport is New York’s largest, serving more than 110 primarily international airlines. It is approximately 15 miles from midtown Manhattan. Follow signs marked “Ground Transportation” as you exit the airport.

**Taxi: \$45 flat-fee (non-metered) plus bridge and tunnel tolls and gratuity; 30–60 minutes to midtown Manhattan. 212/NYC-TAXI (212/692-8294).** One fare covers all passengers.

##### **Fiorello LaGuardia Airport (LGA)**

Jackson Heights, Queens, New York, 718/533-3400. This is

New York's second largest airport, serving more than 20 airlines to mostly domestic destinations, Canada, and the Caribbean. It is on the northern shore of Queens, directly across the East River, about 9 miles from midtown Manhattan. Follow signs marked "Ground Transportation" as you exit the airport.

**Taxi: Metered fare; \$16-\$26 plus bridge and tunnel tolls and gratuity; 20–25 minutes to midtown Manhattan 212/NYCTAXI, 212/676-1000.** One fare covers all passengers.

#### **Liberty Newark International Airport (EWR)**

Newark, New Jersey, 973/961-6000. Newark Airport, with service from 47 airlines (36 of them international), is across the river from New York City, 16 miles and 45–60 minutes from midtown. Follow signs marked "Ground Transportation" as you exit the airport.

**Taxis serving Terminal A:** City of Elizabeth Taxi and Limousine Commission, 908/820-4178.

**Taxis serving Terminals B and C:** City of Newark Taxi and Limousine Commission, 973/733-8912 \$34-\$55 plus tolls to Midtown Manhattan. There is a \$1 charge for each piece of luggage over 24 inches (60cm); 40–50 minutes to midtown Manhattan. One fare pays for all passengers.

If you're taking a NYC taxi to Newark Airport, there's a \$15 surcharge. Accept taxi ride offers only from uniformed airport agents and only in yellow medallion taxis. Do not accept rides from people who approach you in the airport if you have not booked a private car service in advance. Tipping is not mandatory, but 15%-20% gratuity is expected.

#### **Rail Transportation**

New York City has two main rail stations, **Grand Central Terminal** and **Pennsylvania Station**. Grand Central is on the East Side, in midtown, and Penn Station is on the West Side, just below midtown. Both are served by numerous *bus* and *subway lines*. **Metro-North Commuter Railroad**, which goes to NYC suburbs in New York, Connecticut, and, New Jersey, serves Grand Central. Penn Station serves **Long Island Railroad (LIRR)**, a commuter railroad serving New York's Long Island; **Amtrak**, the U.S. national passenger railroad, serving many points throughout the U.S.; **New Jersey Transit**, a commuter line serving points in New Jersey; and **PATH (Port Authority Trans Hudson)**, a subway line serving Manhattan and New Jersey.

#### **Rail Terminals**

**Grand Central Station**, 42nd Street and Park Avenue (between Lexington and Vanderbilt Avenues) 212/ 532–4900. Grand Central is on New York's East Side; subway lines here include the 4, 5, 6, 7, and S (shuttle between Times Square and Grand Central). Buses stopping here include M1, M2, M3,

M4, M5, M42, M98, M101, M102, M104, Q32. This is the main station for train service provided by Metro-North Railroad.

**Pennsylvania Station (Penn Station).** 31–33rd Streets between Seventh and Eighth Avenues Penn Station is on Manhattan’s West Side, just below midtown. Subway lines serving the station are the A, C, E, 1, 2, and 3; **Buses** include the M4, M5, M6, M7, M34, and Q42. This is the central station for train service provided by Amtrak, Long Island Railroad, and New Jersey Transit, PATH.

### **Getting Around NYC By Subway**

Subways are a fast, easy, and inexpensive way to get around the city. Trains run 24 hours a day, with waiting time between trains normally just a few minutes, depending on the time of day. The 714 mile New York City subway system has 468 stations serving 24 routes—more than any other system in the world. It operates 24 hours a day, is safe, and is used daily by more than 3.5 million people. Subways traverse Manhattan, Queens, Brooklyn, and the Bronx; Staten Island is served by the Staten Island Railway, with connections to the Staten Island Ferry from the St. George station. The SIR trains run 24/7; the fare is the same as for bus/subway. Routes are identified by letters, such as A B C and by numbers, such as 1 2 3. The different lines are different colors. Free subway maps are available in the *Official NYC Guide*, at NYC’s *Official Visitor Information Center*, and at any subway station booth.

### **Program Booklet and Abstracts**

All those registering for the annual meeting will receive a program booklet and an abstract CD. The program will be mailed to those registering before January 6, 2006. Extra copies of the abstracts may be purchased at the meeting, or from WSSA Business Office (810 East 10<sup>th</sup> Street, Lawrence, KS 66044–8897). The number in parentheses after each title in the program booklet is the abstract number on the CD. 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**

### **SUNDAY, February 12**

7:30 a.m. – 3:00 p.m.

Board of Directors ..... Odets

8:00 a.m. – 5:00 p.m.  
Statistical Assessment Workshop ..... O’Neil

**MONDAY, February 13**

8:00 a.m. – 3:00 p.m.  
Board of Directors ..... Odets

8:00 a.m. – 10:00 a.m.  
Sustainable Ag Committee (W20) ..... Juilliard

8:00 a.m. – 10:00 a.m.  
Weed Alert Committee (W13)..... Lyceum

10:00 a.m. – 12:00 noon.  
*Weed Science* Editorial Committee (P2) ..... Broadhurst

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

10:00 a.m.—12:00 noon  
Federal Noxious and Invasive  
Weeds Committee (E4) ..... Belasco

10:00 a.m. – 12:00 noon  
Computer Applications/Website  
Committee (P23) ..... Imperial

10:00 a.m. – 12:00 noon  
Endowment Fund Committee (F3) ..... Booth

10:00 a.m. – 12:00 noon  
History and 50<sup>th</sup> Anniversay  
Committee (W8 & S54) ..... Edison

12:00 noon – 4:00 p.m.  
Photo Contest Judging (W3j) ..... Lyceum

1:00 p.m. – 2:30 p.m.  
Awards Committee (W3) ..... Ziegfeld

1:00 p.m. – 3:00 p.m.  
Herbicide Handbook Committee (P6) ..... Broadhurst

1:00 p.m. – 3:00 p.m.  
Research Committee (E6) ..... Alvin

1:00 p.m. – 3:00 p.m.  
Standardized Plant Names  
Subcommittee (P22b) ..... Booth

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



1:00 p.m. – 3:00 p.m.  
Membership & Affiliations Committee (F4) ..... Carnegie

1:30 p.m. – 3:00 p.m.  
Weed ID CD Committee ..... Edison

1:30 p.m. – 3:30 p.m.  
BioControl of Weeds Committee (W16) ..... Imperial

2:00 p.m. – 4:00 p.m.  
Biology of Weeds Committee (W4) ..... Belasco

2:00 p.m. – 4:15 p.m.  
NE 1000 Committee ..... Hart

**TUESDAY, February 14**

6:30 a.m. – 8:00 a.m.  
Graduate Student Breakfast ..... Empire Complex

7:00 a.m. – 8:00 a.m.  
Sustaining Member Committee (F5) ..... Belasco

7:00 a.m. – 8:00 a.m.  
2006 Program Committee (W1a) ..... Carnegie

7:00 a.m. – 8:00 a.m.  
2007 Program Committee (W1b) ..... Edison

7:00 a.m. – 8:00 a.m.  
Extension Committee (W11) ..... Imperial

7:00 a.m. – 8:00 a.m.  
Fellows and Honorary Member  
Subcommittee (W3a) ..... Edison

7:00 a.m. – 8:00 a.m.  
Constitution & Operating Procedure  
Committee (W10) ..... Broadhurst

7:00 a.m. – 8:30 a.m.  
Education Committee (W5) ..... Ziegfeld

7:00 a.m. – 9:00 a.m.  
International Affairs Committee (F8) ..... Alvin

7:00 a.m. – 9:00 a.m.  
Formulation, Adjuvant and Application  
Technology Committee (W15) and Formulation,  
Adjuvant and Application Terminology  
Subcommittee (P22a) ..... Odets

7:00 a.m. – 9:00 a.m.  
Herbicides for Minor Uses ..... Booth

8:00 a.m. – 10:00 a.m.  
Washington Liaison Committee (E2) ..... Duffy/Columbia

6:00 p.m. – 9:00 p.m.  
Global HRAC ..... Odets

### **WEDNESDAY, February 15**

6:30 a.m. – 8:00 a.m.  
Christian Fellowship Breakfast ..... Wilder

6:30 a.m. – 9:30 a.m.  
President’s Breakfast with Regional Presidents ..... Ziegfeld

8:00 a.m. – 10:00 a.m.  
Finance Committee ..... Duffy/Columbia

### **THURSDAY, February 16**

7:00 a.m. – 8:30 a.m.  
Board of Directors and Committee Chairs  
    External Activities ..... Wilder  
    Publications Activities ..... Hart  
    Internal Activities ..... Ziegfeld  
    Finance Activities ..... Brecht

### **FRIDAY, February 11**

7:30 a.m. – 4:00 p.m.  
Board of Directors ..... Odets

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 Rhonda Green of Allen Marketing and Management (1-800-627-0629, Ext. 220) to arrange space for committee meetings or room assignments not scheduled in this program.

## **SUMMARY OF 2006 PROGRAM**

### **SUNDAY MORNING, February 12**

7:30 a.m. – 3:00 p.m.  
Board of Directors ..... Odets

8:00 a.m. – 5:00 p.m.  
Statistical Assessment Workshop ..... O’Neil

**MONDAY MORNING, February 13**

8:00 a.m. – 3:00 p.m.  
Board of Directors ..... Odets

10:00 a.m. – 4:00 p.m.  
Registration ..... 45<sup>th</sup> St Registration Booth

10:00 a.m. – 6:00 p.m.  
Local Arrangements ..... Gilbert

12:00 noon – 4:00 p.m.  
Exhibit & Poster Set-Up ..... Westside Ballroom, 5<sup>th</sup> Floor

**MONDAY AFTERNOON, February 13**

12:00 noon – 4:00 p.m.  
Photo Contest Judging ..... Lyceum

3:00 p.m. – 4:00 p.m.  
CD review for Tuesday’s oral papers ..... Juilliard

4:15 p.m. – 6:00 p.m.  
General Session and Awards  
Presentations ..... Astor Ballroom, 7<sup>th</sup> Floor

6:30 p.m. – 9:30 p.m.  
WSSA Awardees & 50<sup>th</sup> Anniversary  
Celebration ..... Broadway Lounge

**TUESDAY MORNING, February 14**

7:30 a.m. – 5:00 p.m.  
Registration ..... 45<sup>th</sup> St Registration Booth

8:15 a.m. – 8:30 a.m.  
Poster Session Business Meeting ..... Westside Ballroom, 5<sup>th</sup>  
Floor

8:30 a.m. – 10:00 a.m.  
Poster Session ..... Westside Ballroom, 5<sup>th</sup> Floor

**AUTHORS OF ODD NUMBER POSTERS WILL BE  
PRESENT**

8:30 a.m. – 5:00 p.m.  
Sustaining Members Exhibits .. Westside Ballroom, 5<sup>th</sup> Floor

8:00 a.m. – 5:00 p.m.  
Local Arrangements ..... Gilbert

8:00 a.m. – 5:00 p.m.  
Placement Service Information and  
Interviews ..... Imperial

8:00 a.m. – 5:00 p.m.  
Press and Public Relations ..... Imperial

8:00 a.m. – 9:00 a.m.  
CD review for Wednesday's  
oral papers ..... Juilliard

10:00 a.m. – 11:30 a.m.  
**Symposium: Obtaining Grant Funds: Experiences  
and Advice** ..... Astor Ballroom, 7<sup>th</sup> Floor

10:00 a.m. – 11:15 a.m.  
13. Integrated Weed Management .....  
..... Belasco/Broadhurst, 5<sup>th</sup> Floor

10:00 a.m. – 12:00 noon  
1. Agronomic Crops ..... Lyceum Complex, 5<sup>th</sup> Floor  
11. Physiology Poster Discussion .....  
..... Booth/Edison 5<sup>th</sup> Floor

11:15 a.m. – 12:15 p.m.  
10. Biocontrol of Weeds ..... Belasco/Broadhurst, 5<sup>th</sup> Floor

10:00 a.m. – 5:00 p.m.  
Posters on display without  
authors ..... Westside Ballroom, 5<sup>th</sup> Floor

**TUESDAY AFTERNOON, February 14**

1:00 p.m. – 5:00 p.m.  
**Symposium: Advances and Regulatory Implications of  
Modeling Approaches to Environmental Fate and Expo-  
sure Assessment of Pesticides** .... Astor Ballroom, 7<sup>th</sup> Floor  
1. Agronomic Crops ..... Lyceum Complex, 5<sup>th</sup> Floor  
2. Horticultural Crops ..... Belasco/Broadhurst, 5<sup>th</sup> Floor

1:00 p.m. – 4:30 p.m.  
7. Education and Extension ..... Booth/Edison, 5<sup>th</sup> Floor

5:15 p.m. – 6:30  
WSSA Business Meeting ..... Booth/Edison, 5<sup>th</sup> Floor

**WEDNESDAY MORNING, February 15**

6:30 a.m. – 8:00 a.m.  
Christian Fellowship Breakfast ..... Wilder

6:30 a.m. – 9:30 a.m.  
Presidents Breakfast ..... Ziegfeld

7:30 a.m. – 12:00 noon  
Registration ..... 45<sup>th</sup> St Registration Booth

8:30 a.m. – 10:00 a.m.

Poster Session ..... Westside Ballroom, 5<sup>th</sup> Floor  
**AUTHORS OF EVEN NUMBER POSTERS WILL BE PRESENT**

8:30 a.m. – 12:00 noon

Sustaining Members Exhibits .. Westside Ballroom, 5<sup>th</sup> Floor

8:00 a.m. – 5:00 p.m.

Press and Public Relations ..... Imperial

8:00 a.m. – 5:00 p.m.

Local Arrangements ..... Gilbert

8:00 a.m. – 5:00 p.m.

Placement Service Information and Interviews ..... Imperial

8:00 a.m. – 9:00 a.m.

CD review for Thursday's oral papers ..... Juilliard

10:00 a.m. – 12:00 noon

Posters on display without authors ..... Westside Ballroom 5<sup>th</sup> Floor

10:00 a.m. – 12:00 noon

4. Pastures, Rangelands, and Rights-of-Way .....  
..... Booth/Edison, 5<sup>th</sup> Floor

10:00 a.m. – 11:30 a.m.

6. Regulatory Aspects ..... Astor Ballroom, 7<sup>th</sup> Floor

10:00 a.m. – 12:00 noon

9. Weed Biology and Ecology .....  
..... Lyceum Complex, 5<sup>th</sup> Floor

11. Physiology ..... Belasco/Broadhurst, 5<sup>th</sup> Floor

### **WEDNESDAY AFTERNOON, February 15**

1:00 p.m. – 5:00 p.m.

**Symposium: Challenge of minor crop weed control and future direction** ..... Astor Ballroom, 7<sup>th</sup> Floor

1:00 p.m. – 5:00 p.m.

5. Wildland and Aquatic Invasive Plants .....  
..... Booth/Edison, 5<sup>th</sup> Floor

9. Weed Biology and Ecology .....  
..... Lyceum Complex, 5<sup>th</sup> Floor

1:00 p.m. – 4:30 p.m.

11. Physiology ..... Belasco/Broadhurst, 5<sup>th</sup> Floor

**THURSDAY MORNING, February 16**

7:30 a.m. – 4:00 p.m.

Registration ..... 45<sup>th</sup> St Registration Booth

8:00 a.m. – 12:00 noon

Posters on display without  
authors ..... Westside Ballroom, 5<sup>th</sup> Floor

8:00 a.m. – 5:00 p.m.

Local Arrangements ..... Gilbert

8:00 a.m. – 5:00 p.m.

Placement Service Information and Interviews ..... Imperial

8:00 a.m. – 5:00 p.m.

Press and Public Relations ..... Imperial

8:00 a.m. – 3:00 p.m.

Sustaining Members Exhibits .. Westside Ballroom, 5<sup>th</sup> Floor

8:30 a.m. – 12:00 noon

**Symposium: Natural Products in Weed Management and  
Biology** ..... Astor Ballroom, 7<sup>th</sup> Floor

8:30 a.m. – 12:15 p.m.

9. Weed Biology and Ecology .....  
..... Lyceum Complex, 5<sup>th</sup> Floor

8:30 a.m. – 12:00 noon

12. Soil and Environment ... Belasco/Broadhurst, 5<sup>th</sup> Floor

**THURSDAY AFTERNOON, February 16**

1:00 p.m. – 5:00 p.m.

**Symposium: Grass Weed Resistance: Fighting Back** .....  
..... Astor Ballroom, 7<sup>th</sup> Floor

3. Turf and Ornamental Crops .....  
..... Belasco/Broadhurst 5<sup>th</sup> Floor

1:00 p.m. – 2:45 p.m.

8. Formulation, Adjuvant and Application .....  
..... Booth/Edison, 5<sup>th</sup> Floor

3:00 p.m. – 4:00 p.m.

**Dismantle posters and exhibits**

**FRIDAY MORNING, February 11**

7:30 a.m. – 4:00 p.m.

Board of Directors ..... Odets

## COMPLETE PROGRAM

### MONDAY PM, February 13 GENERAL SESSION

Location: Astor Ballroom, 7<sup>th</sup> Floor

4:15 p.m.

**Introduction and Announcements**, Dale Shaner, President-Elect, WSSA.

4:20 p.m.

**President's Remarks**, Carol Mallory-Smith, President, WSSA

4:35 p.m.

**Presentation of Awards**, Neil Harker, Chair, Awards Committee, WSSA

5:30 p.m.

**Presentation of Fellow and Honorary Member Awards**, Tim Murphy, Chair, Fellows and Honorary Member Subcommittee, WSSA

6:00 p.m. to 6:20 p.m.

**50<sup>th</sup> Anniversary Acknowledgements**, Dale Shaner, President-Elect, WSSA

6:30 p.m. to 9:30 p.m.

**WSSA Awardee Reception and Member Social**

Location: Broadway Lounge

### TUESDAY to THURSDAY February 8 to 10

#### WSSA SUSTAINING MEMBERS EXHIBITS SESSION

**Location:**

**Chair:** James Steffel, Lehigh Agricultural and Biological Services

7:45 a.m. Tuesday

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

Setup 10:00 a.m. to 4:00 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 2:00 p.m. Thursday

Please remove exhibits by 4:00 p.m. on Thursday

## Exhibitor and Representative

Acres Research ..... Bert Schou  
Adjuvants Plus, Inc ..... William Brown  
AgroTechnology Research ..... Patrick McMullan  
Bayer CropScience ..... Mark Parrish  
E.I. Dupont ..... Wynn John  
Herbiseed ..... Martin Parham  
Lehigh Agric & Biological Services ..... James Steffel  
Syngenta Crop Protection ..... Mike Johnson  
Weed Systems ..... Wayne Curry

## TUESDAY AM, February 14 POSTER SESSION

**Location:** Westside Ballroom - 5th Floor

**Chair:** Brien Henry, USDA-ARS, Central Great Plains Research Station, Akron, CO

Posters may be set up Monday from 12:00 noon until 4:00 p.m. prior to the General Session and Monday evening from 6:30 to 8:30 p.m. Authors should remove posters before 4:00 p.m. on Thursday afternoon.

8:15 a.m.

**Business meeting to elect Chair-Elect**

8:30 a.m. to 10:00 a.m.

**Odd numbered posters presented by authors**

10:00 a.m. to 5:00 p.m.

Posters open for viewing without authors

## History of WSSA

**History of the Western Society of Weed Science.** Stahlman, P.W.<sup>1,\*</sup> <sup>1</sup>KSU Agricultural Research Center, Hays, KS. (1)

**History of the Northeastern Weed Science Society (1947-2006).** Dutt, T.E.<sup>1,\*</sup>, Sweet, R.D.<sup>2</sup> and Derr, J.F.<sup>3</sup> <sup>1</sup>Consultant, Fogelsville, PA, <sup>2</sup>Cornell University (retired), Ithaca, NY, <sup>3</sup>Virginia Tech, Virginia Beach, VA. (2)

**A Historical Review of the Southern Weed Science Society.** Mueller, T.C.<sup>1,\*</sup> <sup>1</sup>Department of Plant Sciences, University of Tennessee, Knoxville, TN. (3)

**History of the North Central Weed Science Society.** Doll, J.D.<sup>1,\*</sup> <sup>1</sup>University of Wisconsin, Department of Agronomy, Madison, WI. (4)



**History of the U.S. Herbicide Companies.** Appleby, A.P.<sup>1</sup>  
<sup>1</sup>Crop Science, Oregon State University, Corvallis, OR. (5)

**First Lady of Weed Science.** Dawson, J.H.<sup>1</sup> and Appleby, A.P.<sup>2</sup> <sup>1</sup>9103 S. Moore Rd., Prosser, WA, <sup>2</sup>Crop Science, Oregon State University, Corvallis, OR. (6)

**The Evolution of the Canadian Weed Science Society-Société canadienne de malherbiologie.** Hamill, A.S.<sup>1</sup>  
<sup>1</sup>Agric & Agri Food Canada, Harrow, ON, Canada. (7)

**WSSA Presidents 1956 - 2006.** (8)

**WSSA Fellows.** (9)

**WSSA Honorary Members.** (10)

## Section 1. Agronomic Crops

**Potential new uses of old herbicides for postemergence grass control in grain sorghum.** Weirich, J.W.<sup>1,\*</sup>, Medlin, C.R.<sup>1</sup> and Kochenower, R.D.<sup>2</sup> <sup>1</sup>Oklahoma State Univ, Stillwater, OK, <sup>2</sup>RT 1 Box 86M, Goodwell, OK. (11)

**Control of Sorghum Species in Field Corn with KIH-485.** King, S.R.<sup>1,\*</sup>, Hagood, E.S.<sup>2</sup>, Ritter, R.L.<sup>3</sup> and Menbere, H.<sup>3</sup> <sup>1</sup>Montana State University SARC, Huntley, MT, <sup>2</sup>Virginia Polytechnic Institute and State University, Old Glade Road Research Center, Blacksburg, VA, <sup>3</sup>University of Maryland, College Park, MD. (12)

**Residual Control with KIH-485.** Watanabe, O.<sup>1,\*</sup>, Porpiglia, P.J.<sup>1</sup>, Yamaji, Y.<sup>2</sup> and Honda, H.<sup>2</sup> <sup>1</sup>Kumiai America, White Plains, NY, <sup>2</sup>Kumiai Chemical Industry Co., Ltd., Tokyo, Japan. (13)

**Assessment of preemergence and postemergence *Echinochloa crus-galli* control options for management of *Echinochloa polystachya* in Louisiana rice (*Oryza sativa*).** Griffin, M.<sup>1,\*</sup>, Webster, E.P.<sup>1</sup>, Zhang, W.<sup>1</sup>, Leon, C.T.<sup>2</sup>, Bottoms, S.L.<sup>1</sup> and Hensley, J.B.<sup>1</sup> <sup>1</sup>Louisiana State University AgCenter, Department of Agronomy, Baton Rouge, LA, <sup>2</sup>AGRO-USA, Madison, MS. (14)

**Vegetative emergence and seed viability of *Echinochloa polystachya*.** Bottoms, S.L.<sup>1,\*</sup>, Webster, E.P.<sup>1</sup>, Zhang, W.<sup>1</sup>, Griffin, M.<sup>1</sup> and Hensley, J.B.<sup>1</sup> <sup>1</sup>Louisiana State University AgCenter, Baton Rouge, LA. (15)

**Effects of winter flooding of rice fields on weeds, rice straw degradation, soybean yield, and microbial activity.** Koger, C.H.<sup>1,\*</sup>, Zabltowicz, R.M.<sup>2</sup>, Walker, T.W.<sup>3</sup> and Patterson, M.R.<sup>2</sup> <sup>1</sup>USDA-ARS, Crop Genetics and Production Research Unit, Stoneville, MS, <sup>2</sup>USDA-ARS, Southern Weed Sci-

ence Research Unit, Stoneville, MS, <sup>3</sup>DREC, Mississippi State University, Stoneville, MS. (16)

**Effect of temperature on Italian ryegrass (*Lolium multiflorum*) control with mesosulfuron-methyl under controlled conditions.** Cole, C.M.<sup>1,\*</sup>, Mallory-Smith, C.A.<sup>1</sup> and Colquhoun, J.B.<sup>2</sup> <sup>1</sup>Department of Crop and Soil Science, Oregon State University, Corvallis, OR, <sup>2</sup>University of Wisconsin, Madison, WI. (17)

**Effects of simulated herbicide drift on rice.** Hensley, J.B.<sup>1,\*</sup>, Webster, E.P.<sup>1</sup>, Zhang, W.<sup>1</sup>, Bottoms, S.L.<sup>1</sup> and Griffin, R.M.<sup>1</sup> <sup>1</sup>Louisiana State University AgCenter, Baton Rouge, LA. (18)

**Differential Morphology of Pitted Morningglory Populations from Southern U.S.** Bryson, C.T.<sup>1,\*</sup>, Reddy, K.N.<sup>1</sup> and Burke, I.C.<sup>1</sup> <sup>1</sup>USDA-ARS, SWSRU, Stoneville, MS. (19)

**Effect of glyphosate application timing and rate on fruit retention in Roundup Ready Flex cotton.** Dodds, D.M.<sup>1,\*</sup>, Reynolds, D.B.<sup>1</sup>, Huff, J.A.<sup>1</sup>, Irby, J.T.<sup>1</sup>, Kirkpatrick, M.T.<sup>1</sup> and Mills, J.A.<sup>2</sup> <sup>1</sup>Mississippi State University, Mississippi State, MS, <sup>2</sup>Monsanto, Collierville, TN. (20)

**Stale seedbed management for Roundup Ready corn.** Williams, B.J.<sup>1,\*</sup> and Burns, A.B.<sup>1</sup> <sup>1</sup>Northeast Research Station, Saint Joseph, LA. (21)

**Weed management and competition in Roundup Ready Flex cotton.** Keeling, J. Wayne<sup>1,\*</sup>, Joy, B.L.<sup>1</sup>, Everitt, J.D.<sup>1</sup> and Dotray, P.A.<sup>1</sup> <sup>1</sup>Texas Agricultural Experiment Station, Lubbock, TX. (22)

**Decision Support System outcomes in conventional and herbicide-resistant corn.** Légère, A.<sup>1,\*</sup>, Lemieux, C.<sup>2</sup> and Panneton, B.<sup>3</sup> <sup>1</sup>Agriculture and Agri-Food Canada (AAFC), Saskatoon, SK, <sup>2</sup>AAFC, Sainte-Foy, QC, <sup>3</sup>AAFC, Saint-Jean-sur-Richelieu, QC. (23)

**Zea mays-weeds response to crop plant spacing and herbicide use.** Acciaresi, H.A.<sup>1,2,\*</sup>, Zuluaga, M.S.<sup>1</sup> and Asbornio, M.<sup>1</sup> <sup>1</sup>Fac. Cs. Agrarias y Ftiles, (UNLP), La Plata, BA, Argentina, <sup>2</sup>CIC, 526 y 10, La Plata, BA, Argentina. (24)

**Pollen-mediated gene flow from glyphosate-resistant corn to conventional corn in New York State.** Kumar, V.<sup>1,\*</sup>, Bellinder, R.R.<sup>1</sup> and Hahn, R.R.<sup>1</sup> <sup>1</sup>Cornell University, Ithaca, NY. (25)

**Effect of simulated irrigation contamination on tobacco.** Richardson, R.J.<sup>1,\*</sup>, Burke, I.C.<sup>2</sup>, Thomas, W.E.<sup>1</sup> and Wilcut, J.W.<sup>1</sup> <sup>1</sup>North Carolina State Univ, Raleigh, NC, <sup>2</sup>USDA-ARS SWSRU, Stoneville, MS. (26)

**Adzuki Bean Sensitivity to Preemergence and Post-**

**emergence Herbicides.** Soltani, N.<sup>1,\*</sup>, Robinson, D.<sup>1</sup>, Shropshire, C.<sup>1</sup> and Sikkema, P.<sup>1</sup> <sup>1</sup>Ridgetown College, University of Guelph, Ridgetown, Ontario, Canada. (27)

**Tolerance of Otebo Bean to Preplant Incorporated and Postemergence Herbicides in Ontario.** Soltani, N.<sup>1,\*</sup>, Robinson, D.<sup>1</sup>, Shropshire, C.<sup>1</sup> and Sikkema, P.<sup>1</sup> <sup>1</sup>Ridgetown College, University of Guelph, Ridgetown, Ontario, Canada. (28)

**Biotechnology-Derived Herbicide-Resistant Crops Planted in 2004 - Producer and Production Impacts.** Sankula, S.<sup>1,\*</sup> and Marmon, G.<sup>1</sup> <sup>1</sup>National Center for Food and Agricultural Policy, Washington, DC. (29)

**Attitudes toward the Roundup Ready<sup>®</sup> system in cotton: A 2002 survey.** Farno, L.A.<sup>1,\*</sup>, Shaw, D.R.<sup>1</sup> and Smith, M.C.<sup>1</sup> <sup>1</sup>Mississippi State University, Department of Plant and Soil Science, Mississippi State, MS. (30)

**Resistance to metamitron in *Chenopodium album* from sugar beet. A tale of the (un)expected?** Mechant, E.<sup>1</sup>, Maeghe, L.<sup>1</sup> and Bulcke, R.A.<sup>1,\*</sup> <sup>1</sup>Ghent Univ., Ghent, Flanders, Belgium. (31)

**Glyphosate-resistant horseweed (*Conyza canadensis*) interference in cotton.** Brawley, P.A.<sup>1,\*</sup> and Steckel, L.E.<sup>1</sup> <sup>1</sup>Univ. of Tennessee, Jackson, TN. (32)

**Evolution of resistance in grass weeds to diclofop-methyl and clodinafop-propargyl in wheat fields in Iraq.** Al-Mashhdany, S.A.<sup>1,\*</sup> <sup>1</sup>Department of Field Crops Research, The State Board for Agricultural Research, Ministry of Agriculture, Abu-Ghraib, Baghdad, Iraq. (33)

**Persistence of plant recombinant DNA in the soil environment under corn/soybean rotations.** Gulden, R.H.<sup>1,\*</sup>, Lerat, S.<sup>2</sup>, Hart, M.M.<sup>2</sup>, Powell, J.R.<sup>3</sup>, Pauls, P.K.<sup>1</sup>, Klironomos, J.N.<sup>3</sup>, Trevors, J.T.<sup>2</sup> and Swanton, C.J.<sup>1</sup> <sup>1</sup>Department of Plant Agriculture, Univ of Guelph, Guelph, ON, Canada, <sup>2</sup>Department of Environmental Biology, Univ of Guelph, Guelph, ON, Canada, <sup>3</sup>Department of Integrative Biology, Univ of Guelph, Guelph, ON, Canada. (34)

**Allelopathic effects of Johnsongrass on wheat seedlings growth and above-ground and below-ground biomass.** Acciaresi, H.A.<sup>1,2,\*</sup> <sup>1</sup>Fac. Cs. Agr. y Ftiles (UNLP), CC 31, La Plata, BA, Argentina, <sup>2</sup>CIC, 526 y 10, La Plata, BA, Argentina. (35)

**Cross- and Multiple-Resistant Common Ragweed Biotype to ALS- and PPO-Inhibiting Herbicides.** Moreira, M.S.<sup>1</sup>, Johnson, Q.R.<sup>2,\*</sup>, Scott, B.A.<sup>2</sup> and VanGessel, M.J.<sup>2</sup> <sup>1</sup>University of Sao Paulo, Sao Paulo, Sao Paulo, Brazil, <sup>2</sup>University of Delaware, Research and Education Center, Georgetown, DE. (36)

**Evaluation of insecticide interaction with AE 0172747.**

Hora, J.<sup>1,\*</sup> and Allen, J.<sup>1</sup> <sup>1</sup>Bayer CropScience, RTP, NC. (37)

**Influence of Foliar Fertilizers and Pesticides on Efficacy of Selected Postemergence Herbicides.**

Jordan, D.L.<sup>1,\*</sup>, Johnson, P.D.<sup>1</sup> and York, A.C.<sup>1</sup> <sup>1</sup>North Carolina State University, Raleigh, NC. (38)

**Establishment of alfalfa/grass forage mixtures using glyphosate-resistant alfalfa.**

Dillehay, B.L.<sup>1,\*</sup>, Curran, W.S.<sup>1</sup>, Hall, M.H.<sup>1</sup> and Mortensen, D.A.<sup>1</sup> <sup>1</sup>Dept of Crop and Soil Sciences, The Pennsylvania State Univ, University Park, PA. (39)

**Evaluation of Clearfield® and Conventional Herbicide Systems for Weed Control in Texas Wheat.**

Baughman, T.A.<sup>1,\*</sup>, Morgan, G.D.<sup>2</sup>, Reed, J.C.<sup>1</sup> and Carter, W.G.<sup>1,2</sup> <sup>1</sup>Texas A&M University Agricultural Research & Extension Center, Vernon, TX, <sup>2</sup>Texas Cooperative Extension, Texas A&M Univ, College Station, TX. (40)

**Fall applications of glyphosate prove useful in managing redvine (*Brunnichia ovata*).**

Burns, A.B.<sup>1,\*</sup> and Williams, B.J.<sup>1</sup> <sup>1</sup>Northeast Research Station, Saint Joseph, LA. (41)

**Weed control in peanut with reduced herbicide rates.**

Dotray, P.A.<sup>1,2,3,\*</sup>, Grichar, W. James<sup>4</sup> and Baughman, T.A.<sup>5</sup> <sup>1</sup>Texas Tech University, Lubbock, TX, <sup>2</sup>Texas Agricultural Experiment Station, Lubbock, TX, <sup>3</sup>Texas Cooperative Extension, Lubbock, TX, <sup>4</sup>Texas Agricultural Experiment Station, Beeville, TX, <sup>5</sup>Texas Cooperative Extension, Vernon, TX. (42)

***Orobanche ramosa* management in potato with sub-lethal doses of glyphosate.**

Haidar, M.<sup>1,\*</sup>, Sidahmed, M.<sup>1</sup> and Darwish, R.<sup>1</sup> <sup>1</sup>American University of Beirut (AUB), Beirut, Lebanon. (43)

**The effect of nitrogen fertilizer on field pea yield with and without oat competition.**

Shirliffe, S.J.<sup>1,\*</sup> and Johnson, E.N.<sup>2</sup> <sup>1</sup>Department of Plant Sciences, Univ of Saskatchewan, Saskatoon, SK, Canada, <sup>2</sup>Agriculture and Agri-food Canada, Scott Research Farm, Scott, SK, Canada. (44)

## Section 2. Horticultural Crops

**Control of proso millet in fresh market sweet corn with new herbicide combinations.**

O'Sullivan, J.<sup>1,\*</sup>, Grohs, R.<sup>1</sup> and Riddle, R.<sup>1</sup> <sup>1</sup>Department of Plant Agriculture, University of Guelph, Horticultural Research Station, Simcoe, Ontario, Canada. (45)

**Crop Tolerance with AE 0172747 on sweet corn and**

**popcorn.** Edenfield, M.<sup>1,\*</sup> and Allen, J.<sup>1</sup> <sup>1</sup>Bayer CropScience, RTP, NC. (46)

**Natural products as herbicides in sweet corn and onion.** Evans, G.J.<sup>1,\*</sup> and Bellinder, R.R.<sup>1</sup> <sup>1</sup>Cornell University, Ithaca, NY. (47)

**Comparisons of flumioxazin and rimsulfuron in pre-emergence two- and three-way tank mixtures for weed control in potatoes.** Hancock, D.M.<sup>1,\*</sup> and Hutchinson, P.J.S.<sup>1</sup> <sup>1</sup>University of Idaho, Aberdeen, ID. (48)

**Comparison of S-metolachlor to other acetamide herbicides for preemergence weed control.** Sanders, J.C.<sup>1,\*</sup>, Wilson, H.P.<sup>2</sup> and Hines, T.E.<sup>2</sup> <sup>1</sup>Syngenta Crop Protection, Greensboro, NC, <sup>2</sup>Eastern Shore AREC, Painter, VA. (49)

**Evaluating Herbicides for Cruciferous Greens.** Bellinder, R.R.<sup>1</sup> and Benedict, C.A.<sup>1,\*</sup> <sup>1</sup>Cornell University, Department of Horticulture, Ithaca, NY. (50)

**The mechanisms of rye cover cropping's effects on processing tomato and nightshade (*Solanum ptycanthum*) growth.** Bicksler, A.J.<sup>1,\*</sup> and Masiunas, J.B.<sup>1</sup> <sup>1</sup>University of Illinois, Urbana, IL. (51)

**Identifying weeds and mint based on spectral reflectance characteristics.** Gumz, M.S.<sup>1,\*</sup> and Weller, S.C.<sup>1</sup> <sup>1</sup>Purdue University, Department of Horticulture and Landscape Architecture, West Lafayette, IN. (52)

**The economic value of adopting automatic spot spray technology in Arizona tree crops.** Rector, R.J.<sup>1,\*</sup>, McCloskey, W.B.<sup>1,\*</sup> and Teegerstrom, T.<sup>1</sup> <sup>1</sup>Univ. of Arizona, Plant Sciences, Tucson, AZ, <sup>2</sup>Univ. of Arizona, Agriculture & Resource Economics, Tucson, AZ. (53)

**Screening Preemergence Herbicides for Use in Spinach.** Brandenberger, L.<sup>1,\*</sup>, Wells, L.K.<sup>1</sup>, Havener, R.<sup>1</sup> and Brothers, A.<sup>1</sup> <sup>1</sup>Oklahoma State University, Stillwater, OK. (54)

### Section 3. Turf and Ornamental Crops

**Efficacy of flazasulfuron for dallisgrass (*Paspalum dilatatum*) in bermudagrass (*Cynodon spp.*).** Murphy, T.R.<sup>1,\*</sup> and Walker, R.H.<sup>2</sup> <sup>1</sup>The University of Georgia, Griffin, GA, <sup>2</sup>Auburn University, Auburn, AL. (55)

**Response of Fraser Fir (*Abies fraseri*) to various formulations and application timings of glyphosate.** Marshall, M.W.<sup>1,\*</sup>, Zandstra, B.H.<sup>1</sup>, Uhlig, R.H.<sup>1</sup>, Little, D.A.<sup>1</sup> and Richardson, R.J.<sup>2</sup> <sup>1</sup>Department of Horticulture, Michigan State University, East Lansing, MI, <sup>2</sup>Crop Science Department, North Carolina State University, Raleigh, NC. (56)

**Improved White Clover Control with Mesotrione by Tank-mixing Bromoxynil, Carfentrazone, and Simazine.** Willis, J.B.<sup>1,\*</sup>, Askew, S.D.<sup>1</sup> and McElroy, S.J.<sup>2</sup> <sup>1</sup>Virginia Tech, Blacksburg, VA, <sup>2</sup>University of Tennessee, Knoxville, TN. (57)

**GIS analysis of temporal and spatial trends of weeds in western Oregon grass seed crops.** Mueller-Warrant, G.W.<sup>1,\*</sup>, Schweitzer, L.R.<sup>2</sup> and Cook, R.L.<sup>2</sup> <sup>1</sup>USDA-ARS, National Forage Seed Production Research Center, Corvallis, OR, <sup>2</sup>Crop & Soil Science Dept., Crop Science Bldg., Corvallis, OR. (58)

**Creeping Bentgrass Injury from Tracked Flazasulfuron, Foramsulfuron, and Metsulfuron.** Willis, J.B.<sup>1,\*</sup>, Ricker, D.B.<sup>1</sup>, Askew, S.D.<sup>1</sup> and Grove, M.D.<sup>2</sup> <sup>1</sup>Virginia Tech, Blacksburg, VA, <sup>2</sup>ISK Biosciences Corporation, Houston, TX. (59)

#### **Section 4. Pasture, Rangeland, Forest, and Rights-of-Way**

**Developing Web Portal Data for the Montana Weeds to Web Demonstration Project.** Lass, L.<sup>1,\*</sup>, Eubank, C.<sup>1</sup> and Philp, A.<sup>2</sup> <sup>1</sup>AquilaVision Inc, Missoula, MT, <sup>2</sup>GCS Research LLC, Missoula, MT. (60)

**Developing a spatially explicit model for the local dispersal of diffuse knapweed: A project overview.** Baker, D.V.<sup>1,\*</sup> and Beck, K.G.<sup>1</sup> <sup>1</sup>Bioagricultural Sciences and Pest Management, Colorado State University, Fort Collins, CO. (61)

**Metsulfuron Methyl and Nicosulfuron for Grass Weed Control in Bermudagrass Pastures.** Thompson, A.<sup>1,\*</sup>, McElroy, J.S.<sup>2</sup>, Breeden, G.K.<sup>2</sup> and Rhodes, G.N.<sup>2</sup> <sup>1</sup>University of Tennessee, West TN Research & Education Center, Jackson, TN, <sup>2</sup>University of Tennessee, Knoxville, TN. (62)

**Improvement of equine pastures by selectively removing tall fescue from Kentucky bluegrass.** Witt, W.W.<sup>1,\*</sup> <sup>1</sup>University of Kentucky, Lexington, KY. (63)

**Competition of giant smutgrass (*Sporobolus indicus* var. *pyramidalis*) in a bahiagrass (*Paspalum notatum*) pasture.** Ferrell, J.<sup>1,\*</sup>, Mullahey, J.J.<sup>2</sup>, Dusky, J.<sup>1</sup> and Roka, F.<sup>3</sup> <sup>1</sup>University of Florida, Gainesville, FL, <sup>2</sup>West Florida REC, University of Florida, Milton, FL, <sup>3</sup>Southwest Florida REC, University of Florida, Immokalee, FL. (64)

**Biology, ecology and management of medusahead in California.** DiTomaso, J.M.<sup>1,\*</sup>, Kyser, G.B.<sup>1</sup> and Doran, M.P.<sup>1</sup> <sup>1</sup>University of California, Dept. of Plant Sciences, Davis, CA. (65)

**Influence of herbicides on musk thistle control, seed-head production, and thistle-head weevil infestation in pastures.** Li, J.<sup>1,\*</sup> and Bradley, K.W.<sup>1</sup> <sup>1</sup>University of Missouri, Columbia, MO. (66)

**Broom snakeweed propagation following fire and herbicide treatments.** McDaniel, K.C.<sup>1</sup>, Ebell, C.A.<sup>1</sup> and Torell, A.L.<sup>1</sup> <sup>1</sup>New Mexico State University, Las Cruces, NM. (67)

**Long-term control of cogongrass [*Imperata cylindrica* (L.) Beauv.] along roadsides.** Wright, R.S.<sup>1,\*</sup>, Byrd, J.D.<sup>1</sup> and Taylor, J.M.<sup>1</sup> <sup>1</sup>Mississippi State Univ, Mississippi State, MS. (68)

## Section 5. Wildland and Aquatic Invasive Plants

**Inventory of invasive weeds in twelve National Parks of the Colorado Plateau.** Andersen, K.A.<sup>1</sup> and Dewey, S.A.<sup>1</sup> <sup>1</sup>Utah State University, Logan, UT. (69)

**Validating a ranking model for potential invasiveness of global weeds.** Caton, B.P.<sup>1,\*</sup>, Parker, C.<sup>1</sup> and Fowler, L.<sup>1</sup> <sup>1</sup>CPHST, USDA-APHIS-PPQ, Raleigh, NC. (70)

**Management of Oriental bittersweet (*Celastrus orbiculatus*) and pale swallowwort (*Cynanchum rossicum*) at a Connecticut coastal reserve.** Mervosh, T.L.<sup>1,\*</sup> and Gumbart, D.<sup>2</sup> <sup>1</sup>Connecticut Agricultural Experiment Station, Windsor, CT, <sup>2</sup>The Nature Conservancy - Connecticut Chapter, Middletown, CT. (71)

**Invasion of Limpograss in the Kissimee River Floodplain.** Sellers, B.A.<sup>1,\*</sup> and Ferrell, J.A.<sup>1,2</sup> <sup>1</sup>University of Florida-IFAS, Range Cattle REC and Agronomy Department, Ona, FL, <sup>2</sup>University of Florida-IFAS Agronomy Department, Gainesville, FL. (72)

**Phenology of invasive annual weeds found in downy brome communities.** Young, J.A.<sup>1,\*</sup>, Clements, C.D.<sup>1</sup> and Harmon, D.<sup>1</sup> <sup>1</sup>USDA, Agricultural Research Service, Reno, NV. (73)

**Impact of *Microstegium vimineum* on Growth of Northeastern Hardwood Tree Species.** Kozak, J.M.<sup>1,\*</sup>, Hulting, A.G.<sup>1</sup> and Mortensen, D.A.<sup>1</sup> <sup>1</sup>The Pennsylvania State Univ, University Park, PA. (74)

**Effects of partridge pea and switchgrass planted in herbicide-treated cogongrass (*Imperata cylindrica*).** Yager, L.Y.<sup>1,\*</sup> and Byrd, J.D.<sup>2,\*</sup> <sup>1</sup>The Nature Conservancy, Camp Shelby Field Office, Camp Shelby, MS, <sup>2</sup>Mississippi State University, Mississippi State, MS. (75)

**Impact of herbicides and burning on restoration of a**

**Phragmites-dominated wetland.** Nelson, L.S.<sup>1,\*</sup>, Glomski, L.A.M.<sup>2</sup> and Getsinger, K.D.<sup>1</sup> <sup>1</sup>US Army Engineer Research & Development Center, Environmental Lab, EP-P, Vicksburg, MS, <sup>2</sup>SpecPro, Lewisville Aquatic Ecosystem Research Facility, Lewisville, TX. (76)

**Effects of herbicide, tillage, and grass seeding on wild chervil (*Anthriscus sylvestris*).** Miller, T.W.<sup>1</sup> and D'Auria, D.E.<sup>2,\*</sup> <sup>1</sup>Washington State University, Mount Vernon, WA, <sup>2</sup>U.S. Fish and Wildlife Service, Nisqually National Wildlife Refuge, Olympia, WA. (77)

## Section 6. Regulatory Aspects

No posters were submitted in this section.

## Section 7. Education and Extension

**The USDA-ARS Southern Weed Science Research Unit-An Icon of the Study of Weed Science.** Hoagland, R.E.<sup>1,\*</sup>, Bryson, C.T.<sup>1</sup>, Vaughn, K.C.<sup>1</sup>, Libous-Bailey, L.<sup>1</sup> and Zablotowicz, R.M.<sup>1</sup> <sup>1</sup>USDA-ARS, SWSRU, Stoneville, MS. (78)

**Weed Watch: Youth help scientist survey urban weeds.** Alegre, M.E.<sup>1,\*</sup>, Babcock, L.<sup>2,\*</sup>, DiTommaso, A.<sup>3,\*</sup> and Krasny, M.<sup>3,\*</sup> <sup>1</sup>Abraham House, NYC, NY, <sup>2</sup>Cornell Cooperative Extension-NYC, NYC, NY, <sup>3</sup>Cornell University, Ithaca, NY. (79)

**Dynamic versus static approaches in retrieving weed management information.** Zhang, W.<sup>1,\*</sup>, Webster, E.P.<sup>1</sup> and Kelly, S.T.<sup>2</sup> <sup>1</sup>Louisiana State University AgCenter, Department of Agronomy and Environmental Management, Baton Rouge, LA, <sup>2</sup>Louisiana State University AgCenter, Northeast Research Station, Winnsboro, LA. (80)

**SIMCE: A knowledge-based system for identification of weed seedlings in cereals.** Gonzalez-Andujar, J.L.<sup>1,\*</sup>, Fernandez-Quintanilla, C.<sup>2</sup>, Izquierdo, J.<sup>3</sup> and Urbano, J.M.<sup>4</sup> <sup>1</sup>Instituto de Agricultura Sostenible (CSIC), Cordoba, Andalucia, Spain, <sup>2</sup>ICA-CSIC, Madrid, Madrid, Spain, <sup>3</sup>EUET Agrícola, Universidad Politécnic de Catalunya, Barcelona, Cataluna, Spain, <sup>4</sup>EUTI Agrícola, Universidad de Sevilla, Sevilla, Andalucia, Spain. (81)

**NSF-ADVANCE: Institutional transformation to increase faculty diversity.** Sterling, T.M.<sup>1,\*</sup>, Frehill, L.M.<sup>1</sup> and Jeser-Cannavale, C.<sup>1</sup> <sup>1</sup>New Mexico State University, Las Cruces, NM. (82)

**CTC (Canada Thistle Control): A Function within WeedIT for Mining and Aiding Canada Thistle Control.** Zhou, J.<sup>1,\*</sup>, Messersmith, C.<sup>1</sup> and Davidson-Harrington,



J.<sup>1</sup> <sup>1</sup>Department of Plant Sciences, North Dakota State University, Fargo, ND. (83)

## **Section 8. Formulation, Adjuvant and Application Technology**

**Control of *Conyza albida* using binary combinations of preemergence herbicides.** Menéndez, J.<sup>1,\*</sup>, Carretero, C.<sup>1</sup>, De Prado, R.<sup>2</sup> and Bastida, F.<sup>1</sup> <sup>1</sup>Dept. Ciencias Agroforestales. E.P.S. Campus Universitario de La Rábida, Palos de la Frontera, Huelva, Spain, <sup>2</sup>Departamento de Química Agrícola y Edafología. Campus de Rabanales. Universidad de Córdoba, Córdoba, Córdoba, Spain. (84)

**The enhancement of herbicide effectiveness on three grass weeds using newly discovered adjuvants.** Menéndez, J.<sup>1,\*</sup>, Carretero, C.<sup>1</sup>, De Prado, R.<sup>2</sup> and Bastida, F.<sup>1</sup> <sup>1</sup>Dept. Ciencias Agroforestales. E.P.S. Campus Universitario de La Rábida, Palos de la Frontera, Huelva, Spain, <sup>2</sup>Departamento de Química Agrícola y Edafología. Campus de Rabanales. Universidad de Córdoba, Córdoba, Córdoba, Spain. (85)

**The effect of four experimental adjuvants on the adherence of five comercial herbicides on *Chenopodium album*.** Menéndez, J.<sup>1,\*</sup>, Carretero, C.<sup>1</sup>, De Prado, R.<sup>2</sup> and Bastida, F.<sup>1</sup> <sup>1</sup>Dept. Ciencias Agroforestales. E.P.S. Campus Universitario de La Rábida, Palos de la Frontera, Huelva, Spain, <sup>2</sup>Departamento de Química Agrícola y Edafología. Campus de Rabanales. Universidad de Córdoba, Córdoba, Córdoba, Spain. (86)

## **Section 9. Weed Biology and Ecology**

**Influence of Rye Cover Crop on Horseweed Emergence and Development.** Scott, B.A.<sup>1,\*</sup> and VanGessel, M.J.<sup>1</sup> <sup>1</sup>University of Delaware, Research & Education Ctr, Georgetown, DE. (87)

**Factors affecting germination of horseweed.** Eubank, T.W.<sup>1,\*</sup>, Nandula, V.K.<sup>1</sup>, Poston, D.H.<sup>1</sup>, Koger, C.H.<sup>2</sup> and Reddy, K.N.<sup>3</sup> <sup>1</sup>Mississippi State University, Delta Research and Extension Center, Stoneville, MS, <sup>2</sup>USDA-ARS Crop Genetics and Production Research Unit, Stoneville, MS, <sup>3</sup>USDA-ARS Southern Weed Science Research Unit, Stoneville, MS. (88)

**Spatial patterns of seed dispersal in the wind-dispersed weed *Conyza bonariensis*.** Bastida, F.<sup>1</sup>, Carretero, C.L.<sup>1</sup>, Menendez, J.<sup>1</sup> and Gonzalez-Andujar, J.L.<sup>2,\*</sup> <sup>1</sup>Dept Agroforestal, Universidad de Huelva, Huelva, Andalucía, Spain, <sup>2</sup>Instituto de Agricultura Sostenible, Cordoba, Andalucía, Spain. (89)

**Effect of Crop Residue on Horseweed Density and Growth.** VanGessel, M.J.<sup>1,\*</sup>, Scott, B.A.<sup>1</sup> and Johnson, Q.R.<sup>1</sup>  
<sup>1</sup>University of Delaware, Research and Education Center, Georgetown, DE. (90)

**Growth comparison of glyphosate-resistant and susceptible horseweed biotypes from Mississippi.** Nandula, V.K.<sup>1,\*</sup>, Poston, D.H.<sup>1</sup>, Koger, C.H.<sup>2</sup> and Reddy, K.N.<sup>3</sup>  
<sup>1</sup>Mississippi State University, Delta Research and Extension Center, Stoneville, MS, <sup>2</sup>USDA-ARS, Crop Genetics and Production Research Unit, Stoneville, MS, <sup>3</sup>USDA-ARS, Southern Weed Science Research Unit, Stoneville, MS. (91)

**Glyphosate resistant and susceptible creeping bentgrass seed longevity and dormancy.** Park, K.W.<sup>1,\*</sup>, Hancock, D.<sup>2</sup> and Mallory-Smith, C.<sup>1</sup>  
<sup>1</sup>Department of Crop and Soil Science, Oregon State University, Corvallis, OR, <sup>2</sup>University of Idaho, Aberdeen Research and Extension Center, Aberdeen, ID. (92)

**Jointed goatgrass (*Aegilops cylindrica* Host) seed predation in wheat/fallow systems.** Sbatella, G.M.<sup>1,\*</sup> and Miller, S.D.<sup>1</sup>  
<sup>1</sup>University of Wyoming, Dept. of Plant Sciences, Laramie, Wyoming. (93)

**Effect of wheat seeding rate on volunteer barley interference in imidazolinone-tolerant wheat.** O'Donovan, J.T.<sup>1,\*</sup>, Harker, K.Neil.<sup>2</sup>, Clayton, G.W.<sup>2</sup>, Hall, L.M.<sup>3</sup>, Cathcart, J.<sup>4</sup>, Sapsford, K.<sup>5</sup> and Holm, F.A.<sup>5</sup>  
<sup>1</sup>Agriculture and Agr-Food Canada, Beaverlodge, Alberta, Canada, <sup>2</sup>Agriculture and Agr-Food Canada, Lacombe, Alberta, Canada, <sup>3</sup>Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, Alberta, Canada, <sup>4</sup>Alberta Agriculture, Food and Rural Development, Edmonton, Alberta, <sup>5</sup>Crop Development Centre, University of Saskatchewan, Saskatoon, Saskatchewan, Canada. (94)

**Estimate of weed community diversity in no-till and plough-based soyabean-wheat systems changes upon use of different relative abundance parameters.** Bàrberi, P.<sup>1,\*</sup>, Piccioni, E.<sup>1</sup> and Bonari, E.<sup>1</sup>  
<sup>1</sup>Land Lab, Scuola Superiore Sant'Anna, Piazza Martiri della Libertà 33, Pisa, Italy. (95)

**Italian ryegrass seedling emergence and soil seedbank in a no-till and conventional wheat field.** Ichihara, M.<sup>1,\*</sup>, Yamashita, M.<sup>1</sup>, Sawada, H.<sup>1</sup>, Kida, Y.<sup>2</sup> and Asai, M.<sup>3</sup>  
<sup>1</sup>Shizuoka University, Shizuoka, Shizuoka, Japan, <sup>2</sup>Shizuoka Agricultural Experiment Station, Iwata, Shizuoka, Japan, <sup>3</sup>National Agricultural Research Center, Tsukuba, Ibaraki, Japan. (96)

**Corn-weeds discrimination using fluorescence.** Longchamps, L.<sup>1,\*</sup>, Panneton, B.<sup>2</sup>, Leroux, G.D.<sup>3</sup> and Thériault, R.<sup>4</sup>  
<sup>1</sup>Department of Phytology, Laval University, Quebec City, Quebec, Canada, <sup>2</sup>Agriculture and Agri-food Canada, St-Jean-sur-Richelieu, Quebec, Canada, <sup>3</sup>Department of Phytology, La-

val University, Quebec City, Quebec, Canada, <sup>4</sup>Department of Soils and Agrifood Engineering, Laval University, Quebec City, Quebec, Canada. (97)

**Biomass allocation patterns of field-grown common lambsquarters and giant foxtail as affected by early-season variation in light quality.** Gramig, G.G.<sup>1,\*</sup> and Stoltenberg, D.E.<sup>1</sup> <sup>1</sup>Department of Agronomy, Madison, WI. (98)

**UV-B radiation alters morphology and biomass partitioning of broccoli and lambsquarters grown in association.** Furness, N.H.<sup>1</sup>, Jolliffe, P.A.<sup>1</sup> and Upadhyaya, M.K.<sup>1,\*</sup> <sup>1</sup>Faculty of Land and Food Systems, University of British Columbia, Vancouver, BC, Canada. (99)

**Effect of maternal light and nitrogen environment on common lambsquarters fitness.** Mahoney, K.J.<sup>1,\*</sup> and Swanton, C.J.<sup>1</sup> <sup>1</sup>University of Guelph, Guelph, ON, Canada. (100)

**Difference of ultraweak photon emission between sulfonyleurea-resistant and -susceptible biotypes in *Scirpus juncoides*.** Inagaki, H.<sup>1,\*</sup>, Ishida, Y.<sup>1</sup>, Kato, K.<sup>1</sup>, Kageyama, C.<sup>1</sup> and Iyozumi, H.<sup>1</sup> <sup>1</sup>Shizuoka Agricultural Experiment Station, Iwata, Shizuoka, Japan. (101)

**Molecular basis of acetolactate synthase (ALS) inhibitor resistance in two rye grass (*Lolium rigidum*) populations.** Kaundun, S.<sup>1</sup>, Dale, R.<sup>1</sup> and Lycett, A.<sup>1</sup> <sup>1</sup>Syngenta, Jealott's Hill International Research Centre, Bracknell, Berkshire, UK. (102)

**Subtractive cDNA libraries identify differentially-expressed genes in dormant and growing buds of leafy spurge (*Euphorbia esula*).** Jia, Y.<sup>1</sup>, Anderson, J.V.<sup>2</sup>, Horvath, D.P.<sup>2</sup>, Gu, Y.<sup>3</sup>, Lym, R.G.<sup>1</sup> and Chao, W.S.<sup>2,\*</sup> <sup>1</sup>North Dakota State University, Dept. of Plant Sciences, Fargo, ND, <sup>2</sup>USDA-ARS, Biosciences Research Laboratory, Fargo, ND, <sup>3</sup>USDA-ARS, Western Regional Research Center, Albany, CA. (103)

**Estimating Genetic Diversity of Canada Thistle within North Dakota.** Bodo Slotta, T.<sup>1,\*</sup>, Rothhouse, J.<sup>1</sup>, Horvath, D.<sup>1</sup> and Foley, M.<sup>1</sup> <sup>1</sup>USDA-ARS, Fargo, ND. (104)

**Why weed patches: seed bank vs herbicide activity.** Wiles, L.J.<sup>1,\*</sup>, Shaner, D.<sup>1</sup> and Brodahl, M.<sup>1</sup> <sup>1</sup>USDA-ARS-WMR, Fort Collins, CO. (105)

**Spatial variability of weed populations in a sugarcane field of the western Venezuela land plains.** Pérez de Fernández, T.M.<sup>1,\*</sup> and Fernández, O.R.<sup>1</sup> <sup>1</sup>Univ. de Los Andes, Venezuela., Trujillo., Trujillo., Venezuela. (106)

**Germination response of three grass species to simulated salt and drought conditions.** Tarasoff, C.S.<sup>1,\*</sup>, Ball,

D.<sup>2</sup> and Mallory-Smith, C.<sup>1</sup> <sup>1</sup>Oregon State University, Corvallis, OR, <sup>2</sup>Columbia Basin Agriculture Research Center, Oregon State University, Pendleton, OR. (107)

**Characterization of wild oat (*Avena fatua*) polyphenol oxidase and its potential role in seed longevity.** Anderson, J.V.<sup>1,\*</sup>, Foley, M.P.<sup>1</sup>, Kennedy, A.C.<sup>2</sup> and Fuerst, E.P.<sup>3</sup> <sup>1</sup>USDA-ARS, Fargo, ND, <sup>2</sup>USDA-ARS, Pullman, WA, <sup>3</sup>Washington State Univ., Pullman, WA. (108)

**Temperature and hormonal regulation of seed dormancy alleviation in *Amaranthus tuberculatus*.** Leon, R.G.<sup>1</sup>, Bassham, D.<sup>2</sup> and Owen, M.D.K.<sup>3,\*</sup> <sup>1</sup>Horticulture and Crop Science Department, California Polytechnic State University, San Luis Obispo, CA, <sup>2</sup>Department of Genetics, Development and Cell Biology and Plant Sciences Institute, Iowa State University, Ames, IA, <sup>3</sup>Department of Agronomy, Iowa State University, Ames, IA. (109)

**Wild carrot (*Daucus carota*) applied ecology in grass seed production.** Colquhoun, J.B.<sup>1,\*</sup>, Al-thahabi, S.<sup>1</sup>, Cole, C.M.<sup>1</sup> and Mallory-Smith, C.A.<sup>1</sup> <sup>1</sup>Oregon State University, Corvallis, OR. (110)

**Gelatinous fibers cause redvine tendrils to coil.** Meloche, C.G.<sup>1</sup>, Knox, P.<sup>2</sup> and Vaughn, K.C.<sup>1,\*</sup> <sup>1</sup>USDA-ARS-SWSRU, Stoneville, MS, <sup>2</sup>Leeds University, Leeds, United Kingdom. (111)

**Do mycorrhizal fungi influence competition between the invasive; pale swallow-wort (*Vincetoxicum rossicum*) and native; common milkweed (*Asclepias syriaca*)?** Smith, L.L.<sup>1,\*</sup>, DiTommaso, A.<sup>1,\*</sup>, Lehmann, J.<sup>1</sup> and Greipsson, S.<sup>2</sup> <sup>1</sup>Cornell University, Ithaca, NY, <sup>2</sup>Troy State University, Troy, Alabama. (112)

**Role of microorganisms on seed mortality in wild oat.** Khan, Q.A.<sup>1,\*</sup> and Mickelson, J.A.<sup>2</sup> <sup>1</sup>Montana State University, Southern Agricultural Research Center, Huntley, MT, <sup>2</sup>Pioneer Hi-Bred International, Inc., Johnston, IA. (113)

**Relationships of weedy and native thistles (*Cirsium*) in the Northern Great Plains.** Bodo Slotta, T.<sup>1,\*</sup>, Horvath, D.<sup>1</sup> and Foley, M.<sup>1</sup> <sup>1</sup>USDA-ARS, Fargo, ND. (114)

**Comparison of growth and seed characteristics of one triazine-resistant and 20 susceptible Powell amaranth populations.** Brainard, D.C.<sup>1,\*</sup> and DiTommaso, A.<sup>2</sup> <sup>1</sup>Department of Horticulture, Cornell University, Ithaca, NY, <sup>2</sup>Department of Crop and Soil Sciences, Cornell University, Ithaca, NY. (115)

**Changes in the Alaska Agricultural Weed Flora Over a 20-Year Time Period.** Conn, J.S.<sup>1,\*</sup> and Beattie, K.<sup>1</sup> <sup>1</sup>USDA-ARS, University of Alaska, Fairbanks, AK. (116)

**Weed community composition over eight years of continuous glyphosate use in a corn-soybean annual rotation.** Jeschke, M.R.<sup>1,\*</sup> and Stoltenberg, D.E.<sup>1</sup> <sup>1</sup>Univ. of Wisconsin-Madison, Dept. of Agronomy, Madison, WI. (117)

**Maternal plants as sources of emergence variation within giant ragweed (*Ambrosia trifida* L.) populations.** Schutte, B.<sup>1,\*</sup>, Regnier, E.<sup>1,\*</sup> and Harrison, K.<sup>1,\*</sup> <sup>1</sup>Department of Horticulture and Crop Science, The Ohio State University, Columbus, OH. (118)

**Stategy of clonal growth in horsenettle (*Solanum carolinense* L.).** Miyazaki, K.<sup>1,\*</sup> <sup>1</sup>National Institute of livestock and grassland science, Nasushiobara, Tochigi, Japan. (119)

**A unique stem structure in bedstraw or cleavers (*Galium aparine*).** Vaughn, K.C.<sup>1,\*</sup>, Maxwell, B.H.<sup>1</sup> and Meloche, C.G.<sup>1</sup> <sup>1</sup>USDA-ARS-SWSRU, Stoneville, MS. (120)

**Effect of surface litter on seedling emergence and establishment of European buckthorn (*Rhamnus cathartica*).** Bisikwa, J.<sup>1</sup>, Becker, R.L.<sup>1</sup>, Jordan, N.R.<sup>1</sup>, Biesboer, D.D.<sup>2</sup>, Katovich, S.A.<sup>2</sup> and Forcella, F.<sup>3</sup> <sup>1</sup>Department of Agronomy and Plant Genetics, University of Minnesota, St. Paul, MN, <sup>2</sup>University of Minnesota, St. Paul, MN, <sup>3</sup>USDA-ARS, Morris, MN. (121)

**Germinability, emergence response and seed depletion of wild oat under various soil conditions.** Asai, M.<sup>1,\*</sup> <sup>1</sup>National Agricultural Research Center, Tsukuba, Ibaraki, Japan. (122)

**Do high-density weed infestations contribute to the severity of drought stress in maize?** Berger, A.G.<sup>1,\*</sup>, McDonald, A.J.<sup>1,\*</sup> and Riha, S.J.<sup>1,\*</sup> <sup>1</sup>Department of Earth and Atmospheric Sciences, Cornell University, Ithaca, NY. (123)

**Vegetative Reproduction of Creeping Bentgrass (*Agrostis stolonifera* L.).** Dysart, P.L.<sup>1,\*</sup> and Mallory-Smith, C.A.<sup>1</sup> <sup>1</sup>Oregon State University, Dept. of Crop and Soil Science, Corvallis, OR. (124)

## Section 10. Biocontrol of Weeds

**Matrix models to inform *A. petiolata* biocontrol agent selection.** Davis, A.S.<sup>1,\*</sup>, Landis, D.A.<sup>2</sup>, Schemske, D.W.<sup>2</sup> and Evans, J.A.<sup>2</sup> <sup>1</sup>USDA-ARS Invasive Weed Management Unit, Urbana, IL, <sup>2</sup>Michigan State University, East Lansing, MI. (125)

**Swallow-worts (*Vincetoxicum* spp.): A new weed target for biological control.** Milbrath, L.R.<sup>1,\*</sup> <sup>1</sup>USDA-ARS, U.S. Plant, Soil and Nutrition Lab, Ithaca, NY. (126)

**Soilborne fungi associated with root galls of *Lepidium***

**draba caused by *Ceutorhynchus* spp.** Caesar, A.J.<sup>1,\*</sup>  
<sup>1</sup>USDA/ARS Pest Management Research Unit, Sidney, MT.  
(127)

**Bioherbicide effects of *Myrothecium verrucaria* on morningglory (*Ipomoea*) species.** Hoagland, R.E.<sup>1,\*</sup>, Boyette, C.D.<sup>1</sup>, Weaver, M.A.<sup>1</sup> and McCallister, T.<sup>1</sup> <sup>1</sup>USDA-ARS, SWSRU, Stoneville, MS. (128)

**Biological control of saltcedar by grazing compared to herbicide treatments.** Richards, R.<sup>1,\*</sup> and Whitesides, R.E.<sup>1</sup>  
<sup>1</sup>Utah State University, Logan, Ut. (129)

**Redvine and trumpetcreeper controlled by interaction of the bioherbicide *Myrothecium verrucaria* and glyphosate.** Boyette, C.D.<sup>1,\*</sup>, Reddy, K.N.<sup>1</sup>, Hoagland, R.E.<sup>1</sup> and Weaver, M.A.<sup>1</sup> <sup>1</sup>USDA-ARS, Southern Weed Science Research Unit, Stoneville, MS. (130)

**Tolerance in redvine and trumpetcreeper to post-emergent herbicides.** Weaver, M.A.<sup>1,\*</sup>, Stetina, K.C.<sup>1</sup>, Bryson, C.T.<sup>1</sup>, Hoagland, R.E.<sup>1</sup> and Boyette, C.D.<sup>1</sup> <sup>1</sup>USDA ARS SWSRU, Stoneville, MS. (131)

## Section 11. Physiology

**Molecular genetics of resistance to ALS inhibitors in eastern black nightshade (*Solanum ptycanthum*) from Ontario.** Ashigh, J.<sup>1,\*</sup> and Tardif, F.J.<sup>1</sup> <sup>1</sup>Department of Plant Agriculture, University of Guelph, Guelph, ON, Canada. (132)

**Genetic variability between *Bidens pilosa* susceptible and ALS inhibitors-resistant biotypes in Brazil.** Vidal, R.A.<sup>1,\*</sup>, Lamego, F.P.<sup>1</sup> and Federizzi, L.C.<sup>1</sup> <sup>1</sup>UFRGS-Federal University, Porto Alegre, RS-Brazil, Brazil. (133)

**Absorption and translocation of <sup>14</sup>C-clethodim in wheat, bermudagrass, and glyphosate-resistant corn.** Nandula, V.K.<sup>1,\*</sup>, Poston, D.H.<sup>1,\*</sup>, Reddy, K.N.<sup>2,\*</sup> and Koger, C.H.<sup>3,\*</sup> <sup>1</sup>Mississippi State University, Delta Research and Extension Center, Stoneville, MS, <sup>2</sup>USDA-ARS Southern Weed Science Research Unit, Stoneville, MS, <sup>3</sup>USDA-ARS Crop Genetics and Production Research Unit, Stoneville, MS. (134)

**Influence of physicochemical properties of tallow amine ethoxylate and nonylphenol ethoxylate surfactant series on the distribution of <sup>14</sup>C glyphosate.** Sharma, S.D.<sup>1,\*</sup> and Singh, M.<sup>1</sup> <sup>1</sup>IFAS University of Florida, Citrus Research and Education Center, Lake Alfred, FL. (135)

**MSMA antagonizes glyphosate by reducing its translocation in Palmer amaranth.** Burke, I.C.<sup>1,\*</sup>, Koger, C.H.<sup>2</sup>, Reddy, K.N.<sup>1</sup> and Wilcut, J.W.<sup>3</sup> <sup>1</sup>USDA-ARS, Southern Weed Science Research Unit, Stoneville, MS, <sup>2</sup>USDA-ARS, Crop

Genetics and Production Research Unit, Stoneville, MS, <sup>3</sup>North Carolina State University, Raleigh, NC. (136)

**Determining Weed Development Using Photothermal Days.** Alford, J.L.<sup>1,\*</sup> and Oliver, L.R.<sup>1,\*</sup> <sup>1</sup>Department of Crop, Soil, and Environmental Sciences, University of Arkansas, Fayetteville, AR. (137)

**Developmental regulation of DIBOA biosynthesis in rye.** LaHovary, C.<sup>1,\*</sup>, Burton, J.D.<sup>1</sup>, Ma, G.<sup>1</sup>, Danehower, D.A.<sup>2</sup>, Williamson, J.D.<sup>1</sup> and Baerson, S.<sup>3</sup> <sup>1</sup>Department of Horticultural Science, North Carolina State University, Raleigh, NC, <sup>2</sup>Department of Crop Science, North Carolina State University, Raleigh, NC, <sup>3</sup>USDA-ARS, Natural Products Utilization Research Unit, University, MS. (138)

**The timing of small broomrape germination stimulant production by red clover and wheat.** Al-thahabi, S.A.<sup>1,\*</sup>, Colquhoun, J.B.<sup>1</sup> and Mallory-Smith, C.A.<sup>1</sup> <sup>1</sup>Oregon State University, Corvallis, OR. (139)

**Foliar and root absorption and translocation of bispyribac-sodium in four cool-season turfgrass species.** Lycan, D.W.<sup>1</sup> and Hart, S.E.<sup>1,\*</sup> <sup>1</sup>Department of Plant Biology and Pathology, Rutgers, The State University of New Jersey, New Brunswick, NJ. (140)

**2-Aminobutyric Acid as a Marker for Acetolactate Synthase-Inhibiting Herbicide Drift Effects to Potatoes.** Olszyk, D.M.<sup>1,\*</sup> and Anderson, K.A.<sup>2</sup> <sup>1</sup>US EPA/NHEERL/Western Ecology Division, Corvallis, OR, <sup>2</sup>Department of Environmental and Molecular Toxicology, Oregon State University, Corvallis, OR. (141)

**Physiology and herbicidal control of Benghal dayflower (*Commelina benghalensis*).** Steptoe, P.J.<sup>1</sup> and Vencill, W.K.<sup>1,\*</sup> <sup>1</sup>Department of Crop & Soil Sciences, University of Georgia, Athens, GA. (142)

**Characterizing the interaction between mesotrione and atrazine in *Amaranthus* spp.** Hugie, J.A.<sup>1,\*</sup>, Riechers, D.E.<sup>1</sup> and Tranel, P.J.<sup>1</sup> <sup>1</sup>University of Illinois, Urbana, IL. (143)

**Evidence for anabolic and catabolic forms of ALS in dodder.** Nadler-Hassar, T.<sup>1,\*</sup>, Shaner, D.L.<sup>2</sup>, Nissen, S.<sup>1</sup>, Westra, P.<sup>1</sup> and Rubin, B.<sup>3</sup> <sup>1</sup>Colorado State University, Fort Collins, CO, <sup>2</sup>USDA-ARS, Fort Collins, CO, <sup>3</sup>The Hebrew University of Jerusalem, Rehovot, Israel, Israel. (144)

**Physiological Basis of Decreased Weed Sensitivity to Glyphosate Under Low Nitrogen Conditions.** Mithila, J.<sup>1,\*</sup>, Swanton, C.J.<sup>1</sup> and Hall, J. Christopher.<sup>1</sup> <sup>1</sup>University of Guelph, Guelph, Ontario, Canada. (145)

**Shikimate accumulation in sunflower (*Helianthus annuus*, L.), wheat (*Triticum aestivum*, L.), and proso millet**

**(*Panicum miliaceum*, L.) following glyphosate application.** Henry, W.B.<sup>1,\*</sup> and Shaner, D.L.<sup>2</sup> <sup>1</sup>USDA-ARS, Central Great Plains Research Station, Akron, CO, <sup>2</sup>USDA-ARS, Water Management Unit, Ft. Collins, CO. (146)

## Section 12. Soil and Environment

**The relationship between field history and dissipation of atrazine and metolachlor in eastern Colorado.** Shaner, D.L.<sup>1,\*</sup> and Henry, B.<sup>2</sup> <sup>1</sup>USDA-ARS, Fort Collins, CO, <sup>2</sup>USDA-ARS, Akron, CO. (147)

**Rapid development of enhanced atrazine degradation in the Mississippi Delta.** Krutz, L.J.<sup>1,\*</sup>, Zablotowicz, R.M.<sup>1</sup>, Reddy, K.N.<sup>1</sup>, Koger, C.H.<sup>1</sup> and Weaver, M.A.<sup>1</sup> <sup>1</sup>SWSRU-USDA-ARS, Stoneville, MS. (148)

**Pesticide Extraction Efficiency of Two Solid Phase Disk Types after Shipping.** Mersie, W.<sup>1,\*</sup>, Riley, M.B.<sup>2</sup>, Dumas, J.A.<sup>3</sup>, Gbur, E.E.<sup>4</sup>, Massey, J.H.<sup>5</sup>, Mattice, J.D.<sup>6</sup>, Mueller, T.C.<sup>7</sup>, Potter, T.<sup>8</sup>, Senseman, S.A.<sup>9</sup> and Watson, E.<sup>10</sup> <sup>1</sup>Agricultural Research Station, Virginia State University, Petersburg, VA, <sup>2</sup>Entomology, Soils, and Plant Sciences Department, Clemson Univ, Clemson, SC, <sup>3</sup>University of Puerto Rico, San Juan, Puerto Rico, <sup>4</sup>Agricultural Statistics Laboratory, University of Arkansas, Fayetteville, AR, <sup>5</sup>Plant and Soil Sciences Department, Mississippi State Univ, Mississippi State, MS, <sup>6</sup>Department of Crop, Soil, and Environmental Sciences, University of Arkansas, Fayetteville, AR, <sup>7</sup>Department of Plant Sciences, University of Tennessee, Knoxville, TN, <sup>8</sup>Southeast Watershed Research Laboratory, Agricultural Research Service, USDA, Tifton, GA, <sup>9</sup>Department of Soil and Crop Sciences, Texas A & M University, College Station, TX, <sup>10</sup>Department of Biochemistry, Virginia Tech, Blacksburg, VA. (149)

## Section 13. Integrated Weed Management

**The pre-emergent activity of organic herbicides on field bindweed and barnyard grass.** Steenwerth, K.L.<sup>1</sup>, Hunt, J.M.<sup>1</sup>, Eve, E.<sup>1</sup> and Shrestha, A.<sup>2</sup> <sup>1</sup>USDA/ARS, Crops Pathology and Genetics Research Unit, Davis, CA, <sup>2</sup>University of California, Kearney Agricultural Research Center, Parlier, CA. (150)

**Canada thistle (*Cirsium arvense* [L.] Scop) management in organic field crops.** Harbur, M.M.<sup>1,\*</sup>, Wyse, D.L.<sup>2</sup>, Sheaffer, C.C.<sup>2</sup> and Allen, D.L.<sup>2</sup> <sup>1</sup>University of Minnesota Southwest Research and Outreach Center, Lamberton, MN, <sup>2</sup>University of Minnesota, St. Paul, MN. (151)

**Red clover establishment with winter wheat for small broomrape management.** Lins, R.D.<sup>1</sup>, Affeldt, R.P.<sup>1,\*</sup>, Co-



lquhoun, J.B.<sup>1</sup> and Mallory-Smith, C.A.<sup>1</sup> <sup>1</sup>Oregon State University, Dept of Crop & Soil Science, Corvallis, OR. (152)

**Effect of tillage system on seed predation, dormancy, and recruitment of wild proso millet.** Peachey, E.<sup>1,\*</sup>, Umble, J.<sup>2</sup>, Mallory-Smith, C.<sup>2</sup> and Fisher, G.<sup>2</sup> <sup>1</sup>Horticulture Department, Oregon State University, Corvallis, OR, <sup>2</sup>Crop and Soil Science Department, Oregon State University, Corvallis, OR. (153)

**IWM - Have your cake and eat it too.** Blackshaw, R.E.<sup>1,\*</sup>, Molnar, L.J.<sup>1</sup>, Smith, E.G.<sup>1</sup>, Moyer, J.R.<sup>1</sup>, Beckie, H.J.<sup>2</sup>, Harker, N.<sup>3</sup> and Clayton, G.W.<sup>3</sup> <sup>1</sup>Agriculture and Agri-Food Canada, Lethbridge, AB, Canada, <sup>2</sup>Agriculture and Agri-Food Canada, Saskatoon, SK, Canada, <sup>3</sup>Agriculture and Agri-Food Canada, Lacombe, AB, Canada. (154)

**WeedSOFT®: Regional IPM Implementation Using a Multifunctional, Computer-based Toolkit.** Martin, A.R.<sup>1,\*</sup>, Bills, L.B.<sup>1,\*</sup>, Boerboom, C.M.<sup>2</sup> and Johnson, W.G.<sup>3</sup> <sup>1</sup>University of Nebraska, Lincoln, NE, <sup>2</sup>University of Wisconsin-Madison, Madison, WI, <sup>3</sup>Purdue University, West Lafayette, IN. (155)

**Weed community dynamics in the system of rice intensification (SRI) and the efficacy of between-row cultivation and weed suppressive cultivars for weed control in Indonesia.** Haden, V.R.<sup>1,\*</sup>, Duxbury, J.M.<sup>1</sup>, DiTommaso, A.<sup>1</sup> and Losey, J.E.<sup>1</sup> <sup>1</sup>Department of Crop and Soil Sciences, Cornell University, Ithaca, NY. (156)

**Weed control following variable rate preemergence herbicide application based on weed maps.** Lanini, T.<sup>1,\*</sup> and Koller, M.<sup>1</sup> <sup>1</sup>University of California, Department of Plant Sciences, Davis, CA. (157)

**Glyphosate Efficacy on Velvetleaf Is Affected by Environmental Stress.** Zhou, J.<sup>1</sup>, Tao, B.<sup>2</sup>, Messersmith, C.<sup>1,\*</sup> and Nalewaja, J.<sup>1</sup> <sup>1</sup>Department of Plant Sciences, North Dakota State University, Fargo, ND, <sup>2</sup>Department of Plant Protection, Northeast Agricultural University, Harbin, Heilongjiang, China. (158)

**Mechanisms of tolerance to glyphosate in some legume species and in a biotype of *Amaranthus hybridus*.** Cruz-Hipólito, H.E.<sup>1</sup>, Ruiz-Santaella, J.P.<sup>1</sup>, Domínguez, J.A.<sup>2</sup> and De Prado, R.<sup>1,\*</sup> <sup>1</sup>Departamento de Química Agrícola y Edafológica, Córdoba, Spain, <sup>2</sup>Universidad Autónoma, Texcoco, Mexico. (159)

**Managing herbicide resistance using alternative rice stand establishment techniques.** Moechnig, M.<sup>1</sup>, Fischer, A.J.<sup>1,\*</sup>, Hill, J.<sup>1</sup>, Mutters, R.<sup>2</sup> and Eckert, J.<sup>1</sup> <sup>1</sup>University of California-Davis, Department of Plant Sciences, Davis, CA,

<sup>2</sup>University of California-Davis, Cooperative Extension, Oroville, CA. (160)

**Conventional and glyphosate-resistant cotton-corn rotation under reduced tillage: impact on soil properties, weed control, and yield.** Reddy, K.N.<sup>1,\*</sup>, Locke, M.A.<sup>2</sup>, Koger, C.H.<sup>3</sup>, Zablotowicz, R.M.<sup>1</sup> and Krutz, L.J.<sup>1</sup> <sup>1</sup>USDA-ARS, Southern Weed Science Research Unit, Stoneville, MS, <sup>2</sup>USDA-ARS, National Sedimentation Laboratory, Water Quality and Ecology Research Unit, Oxford, MS, <sup>3</sup>USDA-ARS, Crop Genetics and Production Research Unit, Stoneville, MS. (161)

**The critical period of weed control in corn with emphasis on corn morphology.** Ruyet, F.<sup>1,\*</sup>, Leroux, G.D.<sup>1,\*</sup> and Buhler, S.<sup>1</sup> <sup>1</sup>Departement of Phytology, Laval University, Québec, Québec. (162)

**Mechanical Weed Management in Conservation Tillage Systems.** Kopan, S.<sup>1,\*</sup> and Gallagher, R.<sup>1</sup> <sup>1</sup>Department of Crop and Soil Sciences, Washington State University, Pullman, WA. (163)

**Leafy field pea (*Pisum sativum* L.) types augment integrated weed management.** Harker, K.N.<sup>1,\*</sup>, Clayton, G.<sup>1</sup> and Blackshaw, R.<sup>2</sup> <sup>1</sup>Agriculture & Agri-Food Canada, Lacombe Research Centre, Lacombe, Alberta, Canada, <sup>2</sup>Agriculture & Agri-Food Canada, Lethbridge Research Centre, Lethbridge, Alberta, Canada. (164)

**Weed density and biomass can be reduced by sub-surface drip irrigation in conventional and conservation tillage tomatoes.** Shrestha, A.<sup>1</sup>, Mitchell, J.P.<sup>2</sup> and Lanini, W.T.<sup>3</sup> <sup>1</sup>University of California, Statewide IPM Program, Kearney Agricultural Center, Parlier, CA, <sup>2</sup>University of California, Davis, Dept. of Plant Sciences/Kearney Agricultural Center, Parlier, CA, <sup>3</sup>University of California, Dept. of Plant Sciences, Davis, CA. (165)

## **TUESDAY AM, February 14 Obtaining Grant Funds: Experiences and Advice**

**Location:** Astor Ballroom - 7th Floor

**Chair:** Whitnee Askew, NCSU Crop Science Dept, Raleigh, NC

10:00 AM

**Funding a "young" project: a balancing act with a goal.** Hutchinson, P.J.S.<sup>1,\*</sup> <sup>1</sup>University of Idaho, Aberdeen Research and Extension Center, Aberdeen, ID. (166)

10:15 AM

**Choosing the right grant or how following bunny trails can get you eaten by the big bad wolf.** Mallory-Smith, C.<sup>1,\*</sup> <sup>1</sup>Oregon State University, Corvallis, OR. (167)

10:30 AM

**Behind the scenes:how panel really decide where the money goes.** Weller, S.C.<sup>1,\*</sup> <sup>1</sup>Purdue University, West Lafayette, IN. (168)

10:45 AM

**Selection and service - experience and advice on competitive grants.** Foley, M.E.<sup>1,\*</sup> <sup>1</sup>USDA-ARS, Bioscience Research Lab, Fargo, ND. (169)

11:00 AM

**The five fatal flaws of research proposals.** Bowers, M.A.<sup>1,\*</sup> <sup>1</sup>Cooperative State Research, Education & Extension Service-USDA, Washington, DC. (170)

11:15 AM

**Panel Discussion.**

## **TUESDAY AM, February 14 Section 1. Agronomic Crops**

**Location:** Lyceum Complex -5th Floor

**Chair:** John Harden, BASF, Research Triangle Park, NC

**Moderator:** Katie Jennings, North Carolina State University, Raleigh, NC

10:00 AM

**History of Agronomic Crops Section.** Oliver, Lawrence"Dick"R.<sup>1,\*</sup> <sup>1</sup>University of Arkansas, Fayetteville, AR. (171)

10:15 AM

**Biological properties of KIH-485.** Yamaji, Y.<sup>1,\*</sup>, Kataoka, S.<sup>1</sup>, Honda, H.<sup>1</sup>, Kobayashi, M.<sup>1</sup>, Shimizu, T.<sup>1</sup>, Inoue, J.<sup>2</sup> and Porpiglia, P.J.<sup>3</sup> <sup>1</sup>Kumiai Chemical Industry Co., Ltd., Tokyo, Japan, <sup>2</sup>K-I Chemical Research Institute Co., Ltd., Fukude, Japan, <sup>3</sup>Kumiai America, White Plains, NY. (172)

10:30 AM

**Field investigations with KIH-485 in Maryland.** Ritter, R.L.<sup>1,\*</sup>, Menbere, H.<sup>1</sup> and Porpiglia, P.J.<sup>2</sup> <sup>1</sup>University of Maryland, College Park, MD, <sup>2</sup>Kumiai America, K-I Chemical U.S.A., Inc., White Plains, NY. (173)

10:45 AM

**Weed control with AE 0172747 in corn.** Allen, J.R.<sup>1,\*</sup>, Parrish, M.<sup>1</sup> and Hinz, J.<sup>1</sup> <sup>1</sup>Bayer CropScience, RTP, NC. (174)

11:00 AM

**Topramezone: A New Active for Postemergence Weed Control in Corn.** Porter, R.M.<sup>1,\*</sup>, Vaculin, P.D.<sup>1</sup>, Orr, J.E.<sup>1</sup> and Immaraju, J.A.<sup>1</sup> <sup>1</sup>AMVAC Chemical Corporation, Newport Beach, CA. (175)

11:15 AM

**Dry Beans Responses to Preemergence Application of Sulfentrazone.** Sikkema, P.<sup>1,\*</sup>, Shropshire, C.<sup>1</sup> and Soltani, N.<sup>1</sup> <sup>1</sup>Ridgetown College, University of Guelph, Ridgetown, Ontario, Canada. (176)

11:30 AM

**Preliminary Report: Weed Management in Organic Peanut Production.** Johnson, W.C.<sup>1,\*</sup> <sup>1</sup>USDA-ARS, Coastal Plain Experiment Station, Tifton, GA. (177)

11:45 AM

**Alternative control practices for *Amaranthus palmeri* resistant to acetolactate synthase inhibiting herbicides in Oklahoma peanut fields.** Weirich, J.W.<sup>1,\*</sup>, Medlin, C.R.<sup>1</sup>, Nickels, J.K.<sup>1</sup> and Webb, J.C.<sup>1</sup> <sup>1</sup>Oklahoma State University, Stillwater, OK. (178)

## **TUESDAY AM, February 14**

### **Section 13. Integrated Weed Management**

**Location:** Belasco/Broadhurst - 5th Floor

**Chair:** Larry Steckel, West TN Experiment Station, Jackson, TN

**Moderator:** Trey Koger, USDA-ARS, Stoneville, MS

10:00 AM

**Synergism between hairy vetch residue and low rates of metolachlor.** Teasdale, J.R.<sup>1,\*</sup>, Pillai, P.<sup>1</sup> and Collins, R.T.<sup>1</sup> <sup>1</sup>USDA-ARS, Beltsville, MD. (179)

10:15 AM

**Update on major weeds of tropical and sub-tropical areas.** Labrada, R.E.<sup>1</sup> <sup>1</sup>viale delle Terme di Caracalla, Rome, Italy. (180)

10:30 AM

**Effect of method and time of buckthorn management on seedling establishment and resprouting ability of established buckthorn saplings.** Bisikwa, J.<sup>1</sup>, Becker, R.L.<sup>1</sup>, Jordan, N.R.<sup>1</sup>, Biesboer, D.D.<sup>1</sup>, Katovich, S.A.<sup>1</sup> and Forcella, F.<sup>2</sup> <sup>1</sup>Department of Agronomy and Plant Genetics, University of Minnesota, St. Paul, MN, <sup>2</sup>USDA-ARS, Morris, MN. (181)

10:45 AM

**Emerging technologies for physical weed control in row crops in Europe.** Melander, B.<sup>1,\*</sup> and v.d. Weide, R.<sup>2</sup> <sup>1</sup>Danish

Institute of Agricultural Sciences, Research Center Flakkebjerg, Slagelse, Denmark, <sup>2</sup>Applied Plant Research Wageningen University and Research Center, Lelystad, The Netherlands. (182)

11:00 AM

**Managing weed seed bank pools during the transition to an organic feed grain rotation in Pennsylvania.** Hulting, A.G.<sup>1,\*</sup>, Mortensen, D.<sup>1</sup> and Barbercheck, M.<sup>2</sup> <sup>1</sup>Department of Crop and Soil Sciences, The Pennsylvania State Univ, University Park, PA, <sup>2</sup>Department of Entomology, The Pennsylvania State Univ, University Park, PA. (183)

## **TUESDAY AM, February 14 Section 10. Biocontrol of Weeds**

**Location:** Belasco/Broadhurst - 5th Floor

**Chair:** Sharon Anderson, USDA-ARS, Ft. Detrick, MD

11:15 AM

**Volatile oil from *Eucalyptus citriodora* as a tool for weed management.** Batish, D.R.<sup>1</sup>, Singh, H.P.<sup>2</sup>, Kohli, R.K.<sup>1,2,\*</sup> and Setia, N.<sup>1</sup> <sup>1</sup>Department of Botany, Panjab University, Chandigarh, UT, India, <sup>2</sup>Centre for Environment and Vocational Studies, Department of Botany, Chandigarh, UT, India. (184)

11:30 AM

**Genetic variation in Eurasian and North American yellow starthistle (*Centaurea solstitialis* L.) populations.** Anderson, S.J.<sup>1,\*</sup> and Luster, D.G.<sup>1</sup> <sup>1</sup>USDA ARS, Fort Detrick, MD. (185)

11:45 AM

**Importance of generating biological data for development of a biological control program against the non-native invasive vines, pale swallow-wort (*Vincetoxicum rossicum*) and black swallow-wort (*V. nigrum*).** DiTommaso, A.<sup>1,\*</sup> and Milbrath, L.R.<sup>2</sup> <sup>1</sup>Cornell University, Ithaca, NY, <sup>2</sup>USDA-ARS-PPRU, Ithaca, NY. (186)

12:00 PM

**Business Meeting-Integrated Weed Management & Biocontrol.**

## **TUESDAY AM, February 14 Section 11. Physiology Poster Discussion**

**Location:** Booth/Edison - 5th Floor

**Chair:** Franck Dayan, USDA-ARS, University, MS

**TUESDAY PM, February 14**  
**Advances and Regulatory Implications of**  
**Modeling Approaches to Environmental Fate**  
**and Exposure Assessment of Pesticides**

**Location:** Astor Ballroom - 7th Floor

**Chair:** Martin Locke, USDA-ARS National Sedimentation Lab, Oxford, MS

1:00 PM

**Introduction to symposium on modeling environmental fate and exposure assessment of pesticides.** Locke, M.A.<sup>1,\*</sup> and Nandihalli, U.<sup>2</sup> <sup>1</sup>Water Quality & Ecology Research Unit, USDA-ARS, Oxford, MS, <sup>2</sup>Bayer CropScience, Environmental Research, Stilwell, KS. (187)

1:15 PM

**Surface Water Modeling for Exposure Assessments in the EPA's Office of Pesticide Programs.** Jones, R.D.<sup>1,\*</sup> <sup>1</sup>U. S. Environmental Protection Agency, Washington, DC. (188)

1:45 PM

**Deriving quantitative estimates of herbicide degradation and mobility in soils from field studies through modeling.** Streck, H.J.<sup>1,\*</sup>, Huber, A.<sup>2</sup>, Barefoot, A.C.<sup>1</sup>, Sharma, A.K.<sup>1</sup> and Warren, R.L.<sup>1</sup> <sup>1</sup>DuPont Crop Protection, Stine-Haskell Research Center, Newark, DE, <sup>2</sup>DuPont de Nemours (Deutschland) GmbH, Bad Homburg v.d.H., Germany. (189)

2:15 PM

**Effectiveness of Several Fate and Transport Models at Various Scales.** Jackson, S.<sup>1,\*</sup> <sup>1</sup>BASF Corporation, Research Triangle Park, NC. (190)

2:45 PM

**Coffee Break.**

3:00 PM

**Model Estimated Residues in Drinking Water versus Actual Measurements.** Jones, R.L.<sup>1,\*</sup> <sup>1</sup>Bayer CropScience, Stilwell, KS. (191)

3:30 PM

**An Assessment of Modelled and Measured Drinking Water Levels in Association with the Introduction of Mitigation Measures and Best Management Practices.** Hendley, P.<sup>1,\*</sup>, Chen, W.<sup>1</sup>, Tierney, D.<sup>1</sup> and Hertl, P.<sup>1</sup> <sup>1</sup>Syngenta Crop Protection, Inc., Greensboro, NC. (192)

4:00 PM

**Farm-specific pesticide risk management: The USDA-Natural Resource Conservation Service (NRCS) approach.** Wauchope, D.<sup>1,\*</sup> <sup>1</sup>USDA-Agricultural Research Service, Southeast Watershed Research Laboratory, Tifton, GA. (193)

4:30 PM

**Proposed Tier 2 Models and Scenarios for Pesticide Groundwater Exposure Assessments.** Young, D.<sup>1,\*</sup> and Thurman, N.<sup>1</sup> <sup>1</sup>U. S. Environmental Protection Agency, Washington, DC. (194)

5:00 PM

**Discussion.**

## **TUESDAY PM, February 14 Section 1. Agronomic Crops**

**Location:** Lyceum Complex -5th Floor

**Chair:** John Harden, BASF, Research Triangle Park, NC

**Moderator:** Dan Westberg, BASF, Research Triangle Park, NC

1:00 PM

**Influence of fall and spring herbicide applications on insect populations and soil conditions in no-till soybean.** Monnig, N.H.<sup>1,\*</sup>, Bradley, K.W.<sup>1</sup>, Bailey, W.C.<sup>1</sup> and Clark, T.L.<sup>1</sup> <sup>1</sup>University of Missouri, Columbia, MO. (195)

1:15 PM

**The role of weed science in facilitating genetically engineered (GE) trait confinement in field crops.** Van Acker, R.C.<sup>1,\*</sup>, Friesen, L.F.<sup>1</sup>, Knispel, A.<sup>2</sup> and McLachlan, S.<sup>2</sup> <sup>1</sup>Department of Plant Science, University of Manitoba, Winnipeg, Manitoba, Canada, <sup>2</sup>Department of Environment and Geography, University of Manitoba, Winnipeg, Manitoba, Canada. (196)

1:30 PM

**A decade of herbicide-resistant crops in Canada.** Beckie *et al.*, H.J.<sup>1,\*</sup> <sup>1</sup>Agric & Agri-Food Canada, Saskatoon, SK. (197)

1:45 PM

**Landscape-Level Clearfield Winter Wheat Gene Flow to Conventional Wheats in Commercial Fields.** Westra, P.<sup>1,\*</sup>, Byrne, P.<sup>1</sup>, Gaines, T.<sup>1</sup>, Nissen, S.<sup>1</sup>, Preston, C.<sup>1</sup>, Shaner, D.<sup>2</sup> and Henry, B.<sup>2</sup> <sup>1</sup>Colorado State University, Ft. Collins, CO, <sup>2</sup>USDA/ARS, Ft. Collins, CO. (198)

2:00 PM

**Italian ryegrass control in wheat.** Menbere, H.<sup>1,\*</sup> and Ritter, R.L.<sup>1</sup> <sup>1</sup>University of Maryland, NRS�, College Park, MD. (199)

2:15 PM

**Italian ryegrass (*Lolium multiflorum* Lam.) control in winter wheat/winter canola rotations.** Webb, J.C.<sup>1,\*</sup>, Medlin, C.R.<sup>1</sup>, Peeper, T.F.<sup>1</sup>, Boyles, M.C.<sup>1</sup> and Weirich, J.W.<sup>1</sup> <sup>1</sup>Plant

and Soil Sciences, Oklahoma State University, Stillwater, OK. (200)

2:30 PM

**Imazamox-tolerant short-stature sunflower weed management.** Helm, A.L.<sup>1,\*</sup> and Henry, B.<sup>2</sup> <sup>1</sup>Colorado State University Cooperative Extension, Holyoke, CO, <sup>2</sup>USDA ARS Central Great Plains Research Station, Akron, CO. (201)

2:45 PM

**Weed suppressive activity of indica rice, selected crosses, and hybrid rice in drill-seeded systems.** Gealy, D.R.<sup>1,\*</sup>, Moldenhauer, K.<sup>2</sup> and Yan, W.<sup>1</sup> <sup>1</sup>USDA-ARS, Dale Bumpers National Rice Research Center, Stuttgart, AR, <sup>2</sup>University of Arkansas, Rice Research and Extension Center, Stuttgart, AR. (202)

3:00 PM

**Coffee Break.**

3:15 PM

**Weed Resistance Management: Evaluating Approaches to Product Stewardship.** Starke, M.R.<sup>1,\*</sup>, Glick, H.L.<sup>1</sup> and Elmore, G.A.<sup>1</sup> <sup>1</sup>Monsanto Company, St. Louis, MO. (203)

3:30 PM

**Weed management in conventional and Roundup Ready corn.** Williams, B.J.<sup>1,\*</sup> and Burns, A.B.<sup>1</sup> <sup>1</sup>Northeast Research Station, Saint Joseph, LA. (204)

3:45 PM

**Differential response of giant ragweed (*Ambrosia trifida*) to glyphosate.** Stachler, J.M.<sup>1,\*</sup> and Loux, M.M.<sup>1</sup> <sup>1</sup>The Ohio State Univ., Columbus, OH. (205)

4:00 PM

**Greenhouse investigations of suspected glyphosate-resistant common waterhemp populations from Missouri.** Bradley, K.W.<sup>1,\*</sup>, Li, J.<sup>1</sup> and Monnig, N.H.<sup>1</sup> <sup>1</sup>University of Missouri, Columbia, MO. (206)

4:15 PM

**Managing glyphosate-resistant Palmer amaranth (*Amaranthus Palmeri*) in Georgia cotton (*Gossypium hirsutum*).** Culpepper, S.<sup>1,\*</sup>, Kichler, J.<sup>1</sup>, York, A.<sup>2</sup>, Grey, T.<sup>1</sup> and Webster, T.<sup>3</sup> <sup>1</sup>Univ. of Georgia, Tifton, GA, <sup>2</sup>N. C. State University, Raleigh, NC, <sup>3</sup>USDA-ARS, Tifton, GA. (207)

4:30 PM

**Precipitation variability and elevated atmospheric carbon dioxide: associated changes in weed populations and glyphosate efficacy in soybean.** Ziska, L.H.<sup>1,\*</sup> <sup>1</sup>USDA-ARS, Crop Systems and Global Change Laboratory, Beltsville, MD. (208)



4:45 PM

**Sustainability of Glyphosate Resistant Cropping Systems.** Wilson, R.G.<sup>1,\*</sup>, Miller, S.<sup>2</sup>, Westra, P.<sup>3</sup> and Stahlman, P.<sup>4</sup> <sup>1</sup>University of Nebraska, Scottsbluff, NE, <sup>2</sup>University of Wyoming, Laramie, WY, <sup>3</sup>Colorado State University, Fort Collins, CO, <sup>4</sup>Kansas State University, Hays, KS. (209)

5:00 PM

**Business Meeting.**

## **TUESDAY PM, February 14 Section 2. Horticultural Crops**

**Location:** Belasco/Broadhurst - 5th Floor

**Chair:** Russell Wallace, Texas A&M University, Lubbock, TX

1:00 PM

**The tolerance of *Juniperus conferta*, *J. squamata*, and *J. davurica* to glyphosate.** Czarnota, M.A.<sup>1,\*</sup> <sup>1</sup>University of Georgia, Department of Horticulture, Griffin, GA. (210)

1:15 PM

**Reducing herbicide use in Arizona tree crops with automatic spot spray technology.** Rector, R.J.<sup>1,\*</sup>, McCloskey, W.B.<sup>1</sup> and Wright, G.C.<sup>2</sup> <sup>1</sup>Univ. of Arizona, Dept. Plant Sciences, Tucson, AZ, <sup>2</sup>Univ. of Arizona, Yuma Mesa Agricultural Center, Yuma, AZ. (211)

1:30 PM

**The impact of weed control on cranberry establishment and yield.** Majek, B.A.<sup>1,\*</sup> <sup>1</sup>Rutgers Agr. Res. & Ext. Center, Bridgeton, NJ. (212)

1:45 PM

**Comparison of four programs for control of perennial weeds in blueberry.** Miller, T.W.<sup>1,\*</sup>, Maupin, B.G.<sup>1</sup>, Peterson, R.K.<sup>1</sup> and Libbey, C.R.<sup>1</sup> <sup>1</sup>Washington State University, Mount Vernon, WA. (213)

2:00 PM

**The IR-4 Project: Update on Weed Control Projects.** Salzman, F.P.<sup>1,\*</sup>, Arsenovic, M.<sup>1</sup> and Kunkel, D.L.<sup>1</sup> <sup>1</sup>IR-4 Project, North Brunswick, NJ. (214)

2:15 PM

**Evaluation of essential-oil based herbicides for weed control.** Maynard, E.T.<sup>1,\*</sup> <sup>1</sup>Purdue University, Dept. of Horticulture and LA, NW Commercial Horticulture Program, Westville, IN. (215)

2:30 PM

**Tomato (*Lycopersicon esculentum*) response to thifensulfuron-methyl application.** Felix, J.<sup>1,\*</sup>, Doohan, D.J.<sup>1</sup>,

Hillger, D.<sup>2</sup> and Weller, S.C.<sup>2</sup> <sup>1</sup>The Ohio State University/OARDC, Department of Horticulture and Crop Science, Wooster, OH, <sup>2</sup>Purdue University, West Lafayette, IN. (216)

2:45 PM

**The effects of rye cover cropping and staking on nightshade (*Solanum ptycanthum*) competition with processing tomatoes.** Bicksler, A.J.<sup>1,\*</sup> and Masiunas, J.B.<sup>1</sup> <sup>1</sup>University of Illinois, Urbana, IL. (217)

3:00 PM

**Coffee Break.**

3:15 PM

**Halosulfuron applied postemergence alone and in combination with rimsulfuron for weed control in potato.** Boydston, R.A.<sup>1,\*</sup> <sup>1</sup>USDA-ARS, Prosser, WA. (218)

3:30 PM

**Planting date influences critical period for weed control in sweet corn.** Williams, M.M.<sup>1,\*</sup> and Frihauf, J.C.<sup>1</sup> <sup>1</sup>Invasive Weed Management Research, USDA-ARS, Urbana, IL. (219)

3:45 PM

**Results of Herbicides Evaluated for Fall-Planted Processing Spinach.** Wallace, R.W.<sup>1,\*</sup> and Hodges, J.C.<sup>1</sup> <sup>1</sup>Texas A & M University Agricultural Research & Extension Center, Lubbock, TX. (220)

4:00 PM

**Halosulfuron and soil-applied insecticides effect on yield and grade of Irish potatoes (*Solanum tuberosum*).** Batts, R.B.<sup>1,\*</sup> and MacRae, A.W.<sup>2</sup> <sup>1</sup>North Carolina State University, Raleigh, NC, <sup>2</sup>University of Georgia, Tifton, GA. (221)

4:15 PM

**Horticultural Crop Poster Discussion.**

4:30 PM

**Business Meeting.**

## **TUESDAY PM, February 14**

### **Section 7. Education and Extension**

**Location:** Booth/Edison - 5th Floor

**Chair:** Timothy Grey, University of Georgia, Tifton, GA

**Moderator:** Theodore Webster, USDA-ARS, Tifton, GA

1:00 PM

**History of WSSA Education and Extension Section.** Brecke, B.J.<sup>1,\*</sup> <sup>1</sup>University of Florida, West Florida Research and Education Center, Milton, FL. (222)

1:15 PM

**Framework for a site-specific herbicide application decision support system.** Givens, W.A.<sup>1,\*</sup>, Shaw, D.R.<sup>1</sup>, Farno, L.A.<sup>1</sup> and Wilkerson, G.G.<sup>2</sup> <sup>1</sup>Mississippi State University, Mississippi State, MS, <sup>2</sup>North Carolina State University, Raleigh, NC. (223)

1:30 PM

**In-field sprayer calibration survey.** Morishita, D.W.<sup>1,\*</sup>, Gortsema, S.<sup>2</sup> and Neufeld, J.<sup>3</sup> <sup>1</sup>University of Idaho, Twin Falls R&E Center, Twin Falls, ID, <sup>2</sup>University of Idaho, Power County Extension, American Falls, ID, <sup>3</sup>University of Idaho, Canyon County Extension, Caldwell, ID. (224)

1:45 PM

**A review of weed management with tillage.** Byrd, J.D.<sup>1,\*</sup> and Willcutt, M.H.<sup>2</sup> <sup>1</sup>Department of Plant & Soil Sciences, Mississippi State, MS, <sup>2</sup>Department of Agricultural & Biological Engineering, Mississippi State, MS. (225)

2:00 PM

**An experiential approach to understanding germination periodicity.** Mortensen, D.A.<sup>1,\*</sup>, Martin, A.R.<sup>2</sup>, Ryan, M.R.<sup>1</sup>, Hulting, A.G.<sup>1</sup> and Hartman, B.<sup>1</sup> <sup>1</sup>Department of Crop and Soil Sciences, Penn State University, University Park, PA, <sup>2</sup>Department of Agronomy and Horticulture, University of Nebraska, Lincoln, NE. (226)

2:15 PM

**Monumental weeds II; Copan, Machu Picchu, and the southern hemisphere.** Norris, R.F.<sup>1,\*</sup> <sup>1</sup>Department of Plant Science, Davis, CA. (227)

2:30 PM

**Coffee Break.**

2:45 PM

**Extension and research programs addressing the threat of tropical spiderwort (*Commelina benghalensis*) in Georgia.** Prostko, E.P.<sup>1,\*</sup>, Flanders, J.T.<sup>2</sup>, Culpepper, A.S.<sup>1</sup>, Webster, T.M.<sup>3</sup>, Grey, T.L.<sup>1</sup>, Vencill, W.K.<sup>4</sup> and Carter, J.R.<sup>5</sup> <sup>1</sup>University of Georgia, Tifton, GA, <sup>2</sup>Grady County Extension Service, Cairo, GA, <sup>3</sup>USDA/ARS, Tifton, GA, <sup>4</sup>University of Georgia, Athens, GA, <sup>5</sup>Valdosta State University, Valdosta, GA. (228)

3:00 PM

**Glyphosate-resistant horseweed (*Conyza canadiensis*): an emerging problem in non-crop areas and perennial cropping systems of California.** Shrestha, A.<sup>1,\*</sup> and Hembre, K.J.<sup>2</sup> <sup>1</sup>University of California, Statewide IPM Program, Kearney Agricultural Center, Parlier, CA, <sup>2</sup>University of California Cooperative Extension, Fresno, CA. (229)

3:15 PM

**A risk analysis approach to educating farmers about invasive and recalcitrant weeds.** Doohan, D.<sup>1,\*</sup>, Hooker, N., LeJeune, J. and Tucker, M. <sup>1</sup>Ohio Agricultural Research and Development Center, The Ohio State University, Wooster, OH. (230)

3:30 PM

**Education and Extension Poster Discussion.**

3:45 PM

**Business Meeting.**

### **WEDNESDAY AM, February 15**

#### **Section 4. Pasture, Rangeland, Forest, and Rights-of-Way**

**Location:** Booth/Edison - 5th Floor

**Chair:** Jimmie Yeiser, Stephen F. Austin State University, Nacogdoches, TX

10:00 AM

**Vegetation Management: Past, Present and Future.** Walls, C.<sup>1,\*</sup> <sup>1</sup>UAP Timberland, Monticello, AR. (231)

10:15 AM

**Control of natural pine seedlings with carfentrazone in forestry regeneration areas.** Ezell, A.W.<sup>1,\*</sup>, Yeiser, J.L.<sup>2</sup> and Nelson, L.R.<sup>3</sup> <sup>1</sup>Mississippi State University, Department of Forestry, Mississippi State, MS, <sup>2</sup>Stephen F. Austin State University, Arthur Temple College of Forestry and Agriculture, Nacogdoches, TX, <sup>3</sup>Clemson University, Department of Forest Resources, Clemson, SC. (232)

10:30 AM

**Some aspects of vegetation (weed) management in Canadian forestry.** Prasad, R.<sup>1,\*</sup> <sup>1</sup>Canadian Forestry Service, Natural Resources Canada, Victoria, BC, Canada. (233)

10:45 AM

**Oust Extra Herbaceous Weed Control and Resultant Loblolly Pine Seedling Performance-Year Two.** Yeiser, J.L.<sup>1,\*</sup> and Ezell, A.W.<sup>2,\*</sup> <sup>1</sup>Arthur Temple College of Forestry & Agriculture, Stephen F. Austin State University, Nacogdoches, TX, <sup>2</sup>Department of Forest Resources, Mississippi State University, Mississippi State, MS. (234)

11:00 AM

**Use of clear plastic sheeting for controlling kudzu.** Nelson, L.R.<sup>1,\*</sup> and Newton, C.H.<sup>1</sup> <sup>1</sup>Department of Forestry and Natural Resources, Clemson, SC. (235)

11:15 AM

**Milestone™ Herbicide for the control of key noxious**

**knapweeds: yellow starthistle, spotted and Russian knapweeds.** Carrithers, V.F.<sup>1,\*</sup>, Belles, W.S.<sup>2</sup>, Dewey, S.A.<sup>3</sup>, DiTomaso, J.M.<sup>4</sup>, Duncan, C.A.<sup>5</sup>, Gehrett, J.A.<sup>6</sup>, Whitson, T.<sup>7</sup> and Halstvedt, M.B.<sup>8</sup> <sup>1</sup>Dow AgroSciences, LLC, Mulino, OR, <sup>2</sup>Belles Agronomic, Moscow, ID, <sup>3</sup>Utah State University, Dept. of Plants, Soils, and Biometeology, Logan, UT, <sup>4</sup>University of California, Davis, CA, <sup>5</sup>Weed Managment Services, Helena, MT, <sup>6</sup>SprayTech, Walla Walla, WA, <sup>7</sup>University of Wyoming, retired, Powell, WY, <sup>8</sup>Dow AgroSciences, LLC, Billings, MT. (236)

11:30 AM

**Multiflora rose - 25 years of experiences.** Doll, J.<sup>1,\*</sup> <sup>1</sup>Univ. Wisconsin, Dept. Agronomy, Madison, WI. (237)

11:45 AM

**Cogongrass [*Imperata cylindrica* (L.) Beauv.] Research in Mississippi.** Burnell, K.D.<sup>1,\*</sup>, Byrd, J.D.<sup>1</sup>, Burns, B.K.<sup>1</sup>, Ivy, D.N.<sup>1</sup>, Meyers, M.T.<sup>1</sup> and Chesser, Z.B.<sup>1</sup> <sup>1</sup>Mississippi State University, Mississippi State, MS. (238)

12:00 PM

**Business Meeting.**

## **WEDNESDAY AM, February 15**

### **Section 6. Regulatory Aspects**

**Location:** Astor Ballroom, 7th Floor

**Chair:** Donald Givens, USDA-APHIS, Fort Collins, CO

10:00 AM

**Overview and History of Federal Weed Regulations in the United States.** Eplee, R.E.<sup>1,\*</sup> and Westbrook, R.G.<sup>2</sup> <sup>1</sup>USDA APHIS, Retired, Whiteville, NC, <sup>2</sup>USGS BRD, Whiteville, NC. (239)

10:15 AM

**USDA-APHIS: integration of technology to assist the weed risk assessment process.** Fowler, L.<sup>1,\*</sup>, Koop, A.<sup>1</sup>, Catton, B.<sup>1</sup>, Spears, B.<sup>1</sup>, Borchert, D.<sup>1</sup> and Thayer, C.<sup>1</sup> <sup>1</sup>USDA, APHIS, PPQ, Center for Plant Health Science and Technology, Raleigh, NC. (240)

10:30 AM

**Role of Weed Scientists in Development of a National EDRR System for Invasive Plants in the U.S.** Westbrook, R.G.<sup>1,\*</sup> <sup>1</sup>U.S. Geological Survey, Whiteville, NC. (241)

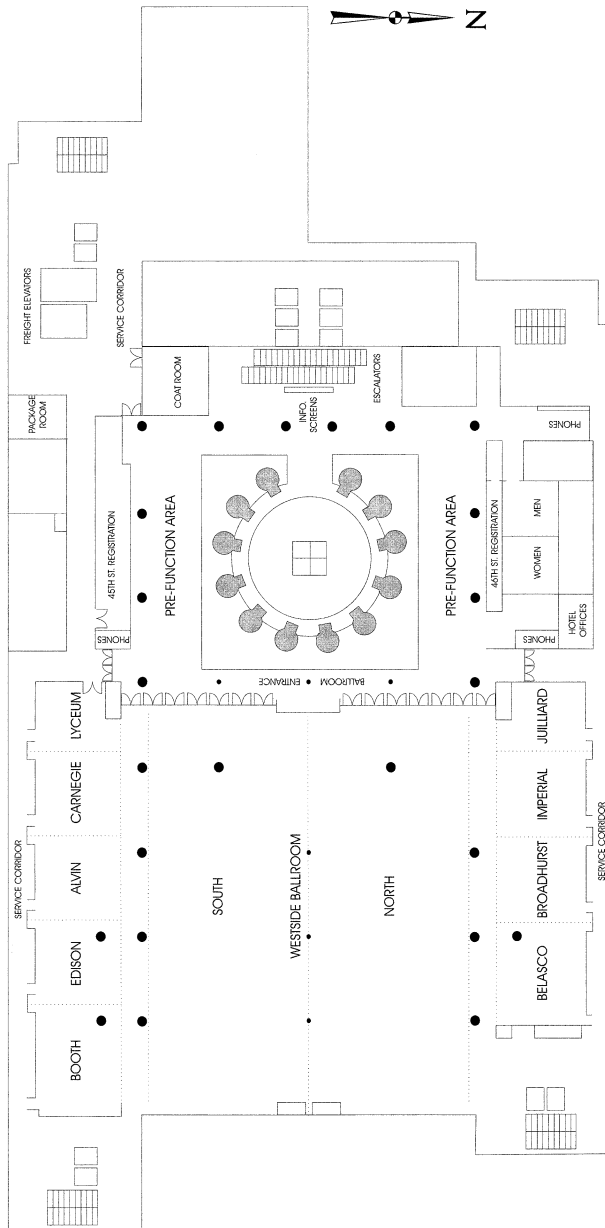
11:00 AM

**Benghal Dayflower: Invasive, regulated, and Roundup resistant.** Tasker, A.V.<sup>1,\*</sup> <sup>1</sup>USDA APHIS, PPQ PDMP ISPM, Riverdale, MD. (242)

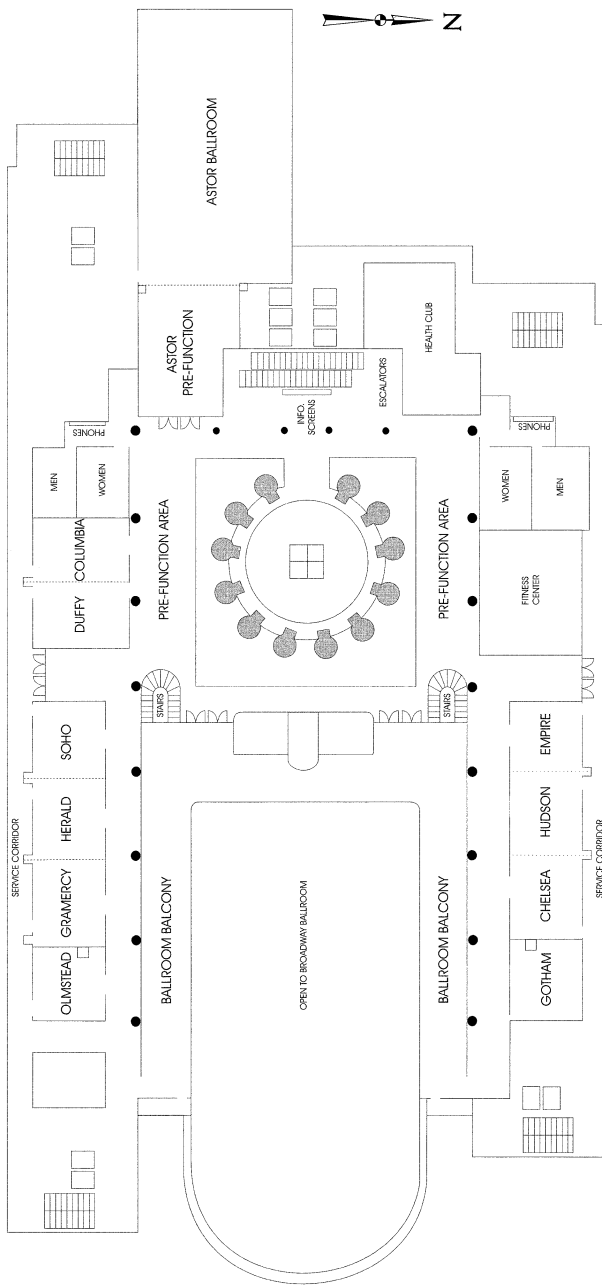
11:15 AM

**Business Meeting.**

# Fifth Floor



# Seventh Floor



**WEDNESDAY AM, February 15**  
**Section 9. Weed Biology and Ecology**

**Location:** Lyceum Complex -5th Floor

**Chair:** Jeffery Conn, USDA-ARS, Fairbanks, AK

**Moderator:** Pamela Hutchinson, University of Idaho, Aberdeen, ID

10:00 AM

**Measuring Seed Movement at Multiple Atmospheric Levels.** Dauer, J.T.<sup>1,\*</sup>, Shields, E.<sup>2</sup>, Mortensen, D.A.<sup>1</sup>, Isard, S.<sup>1</sup> and VanGessel, M.<sup>3</sup> <sup>1</sup>Pennsylvania State University, University Park, PA, <sup>2</sup>Cornell University, Ithaca, NY, <sup>3</sup>University of Delaware, Georgetown, DE. (243)

10:15 AM

**Promotion of weed species diversity and reduction of weed seedbanks with conservation tillage and crop rotation.** Swanton, C.<sup>1,\*</sup>, Murphy, S.<sup>2</sup>, Clements, D.<sup>3</sup>, Melaousoff, S.<sup>4</sup> and Kevan, P.<sup>5</sup> <sup>1</sup>Dept. Plant Agriculture, University of Guelph, Guelph, Ontario, Canada, <sup>2</sup>Dept. Environment and Resource Studies, University of Waterloo, Waterloo, Ontario, Canada, <sup>3</sup>Dept. Biology, Trinity Western University, Langley, B.C., Canada, <sup>4</sup>Dept. Rural Sociology, University of Guelph, Guelph, Ontario, Canada, <sup>5</sup>Dept. Environmental Biology, University of Guelph, Guelph, Ontario, Canada. (244)

10:30 AM

**Quantifying factors associated with wild oat seed bank decline.** Khan, Q.A.<sup>1,\*</sup> and Mickelson, J.A.<sup>2</sup> <sup>1</sup>Montana State University, Southern Agricultural Research Center, Huntley, MT, <sup>2</sup>Pioneer Hi-Bred International, Inc, Johnston, IA. (245)

10:45 AM

**Implications of managing weed seed banks at increasing weed seed densities.** Mirsky, S.B.<sup>1,\*</sup>, Mortensen, D.A.<sup>1</sup> and Curran, W.S.<sup>1</sup> <sup>1</sup>Penn State University, University Park, PA. (246)

11:00 AM

**Impact of seed caching by the earthworm, *Lumbricus terrestris*, on giant ragweed (*Ambrosia trifida*) establishment.** Regnier, E.<sup>1,\*</sup>, Harrison, K.<sup>1</sup> and Schmoll, J.<sup>1,2</sup> <sup>1</sup>Department of Horticulture and Crop Science, Ohio State University, Columbus, OH, <sup>2</sup>Pioneer Hi-Bred International, Galloway, OH. (247)

11:15 AM

**Seed Dormancy Heteroblasty as Blueprint for *Setaria faberii* Seedling Emergence.** Dekker, J.<sup>1,\*</sup>, Jovaag, K.<sup>1</sup> and Atchison, B.<sup>1</sup> <sup>1</sup>Weed Biology Laboratory, Agronomy Department, Ames, Iowa. (248)



11:30 AM

**Dissection of divergent emergence patterns in agricultural and successional populations of giant ragweed (*Ambrosia trifida* L.).** Schutte, B.<sup>1,\*</sup>, Regnier, E.<sup>1,\*</sup> and Harrison, K.<sup>1,\*</sup> <sup>1</sup>Department of Horticulture and Crop Science, The Ohio State University, Columbus, OH. (249)

11:45 AM

**The effect of hairy nightshade (*Solanum sarrachoides*) competition on two potato (*Solanum tuberosum*) varieties.** Hutchinson, P.J.S.<sup>1,\*</sup>, Hancock, D.M.<sup>1</sup> and Beutler, B.R.<sup>2</sup> <sup>1</sup>University of Idaho, Aberdeen Research and Extension Center, Aberdeen, ID, <sup>2</sup>AgraServ Inc., American Falls, ID. (250)

## WEDNESDAY AM, February 15 Section 11. Physiology

**Location:** Belasco/Broadhurst - 5th Floor

**Chair:** Franck Dayan, USDA-ARS, University, MS

10:00 AM

**Herbicide action and the demise of plants.** Streibig, J.C.<sup>1,\*</sup> and Teicher, H.B.<sup>2</sup> <sup>1</sup>Department of Agricultural Sciences, KVL, Taastrup, Denmark, <sup>2</sup>Cheminova A/S, Lemvig, Denmark. (251)

10:15 AM

**Investigating safener regulation of a herbicide detoxification pathway at the protein level.** Zhang, Q.<sup>1</sup> and Riechers, D.E.<sup>1,\*</sup> <sup>1</sup>University of Illinois, Department of Crop Sciences, Urbana, IL. (252)

10:30 AM

**Identification of Markers Linked to Auxinic Herbicide Resistance in Wild Mustard (*Sinapis arvensis*).** Mithila, J.<sup>1,\*</sup>, McLean, M.D.<sup>1</sup>, Brandle, J.E.<sup>2</sup> and Hall, J. Christopher.<sup>1</sup> <sup>1</sup>Department of Environmental Biology, University of Guelph, Guelph, Ontario, Canada, <sup>2</sup>Agriculture and Agri-Food Canada, London, Ontario, Canada. (253)

10:45 AM

**Response of Selected Hard Red Winter Wheat Lines to Imazamox as Affected by Number and Location of Resistance Genes and Growth Habit.** Hanson, B.D.<sup>1,\*</sup>, Shaner, D.L.<sup>2</sup>, Westra, P.<sup>3</sup> and Nissen, S.J.<sup>3</sup> <sup>1</sup>USDA-ARS, Water Management Unit, Parlier, CA, <sup>2</sup>USDA-ARS, Water Management Unit, Fort Collins, CO, <sup>3</sup>Colorado State University, BSPM Department, Fort Collins, CO. (254)

11:00 AM

**Characterization of resistance to acetolactate synthase inhibitors in green foxtail: molecular genetics and bio-**

**chemical basis.** Laplante, J.<sup>1</sup> <sup>1</sup>University of Guelph, Department of Plant Agriculture, Guelph, Ontario, Canada. (255)

11:15 AM

**An altered target site confers resistance to PPO-inhibiting herbicides in a waterhemp biotype.** Tranel, P.J.<sup>1,\*</sup>, Patzoldt, W.L.<sup>1</sup> and Hager, A.G.<sup>1</sup> <sup>1</sup>Department of Crop Science, University of Illinois, Urbana, IL. (256)

11:30 AM

**Eleusine indica resistance to some ACCase inhibitors in Mato Grosso, Brazil.** Vidal, R.A.<sup>1,\*</sup> and Portes, E.S.<sup>1</sup> <sup>1</sup>Federal University, Porto Alegre, RS, Brazil. (257)

11:45 AM

**Different patterns of ACCase-inhibiting herbicide resistance in Italian ryegrass (*Lolium multiflorum*).** Perez-Jones, A.<sup>1,\*</sup> and Mallory-Smith, C.<sup>1</sup> <sup>1</sup>Oregon State University, Corvallis, OR. (258)

### **WEDNESDAY PM, February 15 Challenge of minor crop weed control and future direction**

**Location:** Astor Ballroom - 7th Floor

**Chair:** Steve Fennimore, University of California, Davis, Salinas, CA

1:00 PM

**The challenges of minor crop weed control, future directions.** Fennimore, S.A.<sup>1,\*</sup> and Doohan, D.<sup>2</sup> <sup>1</sup>University of California, Davis, Salinas, CA, <sup>2</sup>The Ohio State University, Wooster, OH. (259)

1:15 PM

**A typical minor crop weed control program.** Monks, D.W.<sup>1,\*</sup> <sup>1</sup>NC State University, Raleigh, NC. (260)

1:30 PM

**Industry view of minor crop weed control.** Gast, R.E.<sup>1,\*</sup> <sup>1</sup>Dow AgroSciences, Indianapolis, IN. (261)

2:00 PM

**The Role of IR-4 in the Herbicide Registration Process for Specialty Crops.** Kunkel, D.L.<sup>1,\*</sup>, Arsenovic, M.<sup>1</sup>, Baron, J.J.<sup>1</sup>, Braverman, M.P.<sup>1</sup>, Holm, R.E.<sup>1</sup> and Salzman, F.P.<sup>1</sup> <sup>1</sup>IR-4 Program, Rutgers University, North Brunswick, NJ. (262)

2:30 PM

**Machine Vision and Robotic Technologies for Weed Control in High Value Minor Crops.** Slaughter, D.C.<sup>1,\*</sup>, Giles, K.<sup>1</sup> and Downey, D.<sup>1</sup> <sup>1</sup>Biological and Agricultural En-

gineering Department, University of California, Davis, Davis, CA. (263)

3:00 PM

**Coffee Break.**

3:15 PM

**New ideas for minor crop weed control programs.** Weller, S.C.<sup>1,\*</sup> <sup>1</sup>Purdue University, West Lafayette, IN. (264)

3:45 PM

**USDA-CSREES funding opportunities for minor crop weed control programs.** Bowers, M.A.<sup>1,\*</sup> <sup>1</sup>Cooperative State Research, Education & Extension Service-USDA, Washington, DC. (265)

4:15 PM

**Action Items.**

4:30 PM

**Panel Discussion.**

### **WEDNESDAY PM, February 15 Section 5. Wildland and Aquatic Invasive Plants**

**Location:** Booth/Edison - 5th Floor

**Chair:** John Madsen, Mississippi State University, Mississippi State, MS

1:00 PM

**A history of aquatic weed research in the U.S.** Haller, W.T.<sup>1,\*</sup> <sup>1</sup>Center for Aquatic and Invasive Plants, Gainesville, FL. (266)

1:15 PM

**The IR-4 Project: New Opportunity - Aquatic Herbicide Registration.** Arsenovic, M.<sup>1,\*</sup>, Holm, R.E.<sup>1</sup>, Baron, J.J.<sup>1</sup>, Kunkel, D.L.<sup>1</sup>, Getsinger, K.G.<sup>2</sup>, Haller, W.T.<sup>3</sup>, Anderson, L.W.J.<sup>4</sup> and Stubbs, D.R.<sup>4</sup> <sup>1</sup>IR-4 Project, Rutgers University, North Brunswick, NJ, <sup>2</sup>U.S. Army Engineer Research and Development Center, Environmental Laboratory, Vicksburg, MS, <sup>3</sup>University of Florida, IFAS, Gainesville, FL, <sup>4</sup>USDA ARS, Exotic and Invasive Weed Research, Davis, CA. (267)

1:30 PM

**Exploration for new natural enemies of the aquatic weed hydrilla in East Africa: Preliminary results.** Cuda, J.P.<sup>1,\*</sup>, Overholt, W.A.<sup>2</sup>, Copeland, R.S.<sup>3</sup>, Nzigidahera, B.<sup>4</sup> and Ogwang, J.A.<sup>5</sup> <sup>1</sup>Entomology & Nematology Dept., University of Florida, Gainesville, FL, <sup>2</sup>Biological Control Research & Containment Lab., University of Florida, Ft. Pierce, FL, <sup>3</sup>Mbita Point Research Station, International Centre for Insect Physiology & Ecology, Mbita, Nyanza, Kenya, <sup>4</sup>Institut National

pour l'Environnement et de la Conservation de la Nature, Bujumbura, Bujumbura, Burundi, <sup>5</sup>National Agriculture Research Organization, Coffee Research Institute, Kizuza, Mukono, Uganda. (268)

1:45 PM

**Molecular and biochemical differences among herbicide resistant and susceptible hydrilla populations in Florida.** Puri, A.<sup>1,\*</sup>, MacDonald, G.E.<sup>1</sup>, Altpeter, F.<sup>1</sup>, Haller, W.T.<sup>1</sup>, Bowes, G.<sup>1</sup>, Singh, M.<sup>1</sup> and Shilling, D.G.<sup>2</sup> <sup>1</sup>University of Florida, Gainesville, FL, <sup>2</sup>University of Georgia, Athens, GA. (269)

2:00 PM

**Are bioherbicides a viable option for management of submersed aquatic weeds?** Shearer, J.F.<sup>1,\*</sup> <sup>1</sup>US Army Engineer Research & Development Center, Environmental Laboratory EE-A, Vicksburg, MS. (270)

2:15 PM

**Giant salvinia (*Salvinia molesta* Mitchell) growth is limited by nutrients and not by pH.** Madsen, J.D.<sup>1,\*</sup> and Wersal, R.M.<sup>1</sup> <sup>1</sup>Mississippi State University, GeoResources Institute, Mississippi State, MS. (271)

2:30 PM

**Enhancement of diquat activity by copper on a biotype of diquat resistant duckweed.** Koschnick, T.J.<sup>1,\*</sup>, Haller, W.T.<sup>1</sup> and Glasgow, L.<sup>2</sup> <sup>1</sup>University of Florida, Center for Aquatic and Invasive Plants, Gainesville, FL, <sup>2</sup>Syngenta Crop Protection, Vero Beach Research Center, Vero Beach, FL. (272)

2:45 PM

**Integrated Management and the Role of Biological Control.** Grodowitz, M.J.<sup>1,\*</sup> <sup>1</sup>U.S. Army Engineer Research and Development Center, Vicksburg, MS. (273)

3:00 PM

**Coffee Break.**

3:15 PM

**Canada thistle management with Milestone™ herbicide.** Burch, P.L.<sup>1,\*</sup>, Wilson, R.G.<sup>2</sup>, Hagood, E.S.<sup>3</sup>, Masters, R.A.<sup>4</sup> and Carrithers, V.F.<sup>5</sup> <sup>1</sup>Dow AgroSciences, LLC, Christiansburg, VA, <sup>2</sup>University of Nebraska, Panhandle Resch & Ext Cent, Scottsbluff, NE, <sup>3</sup>Virginia Tech, Blacksburg, VA, <sup>4</sup>Dow AgroSciences, LLC, Lincoln, NE, <sup>5</sup>Dow AgroSciences, LLC, Mulino, OR. (274)

3:30 PM

**Phenology of invasive mustards: Why does Sahara mustard (*Brassica tournefortii*) invade southwestern US deserts?** Holt, J.S.<sup>1,\*</sup>, Marushia, R.A.<sup>1</sup>, Lee, V.<sup>1</sup>, Tayyar, R.<sup>1</sup>, Trader, M.R.<sup>2</sup> and Brooks, M.L.<sup>2</sup> <sup>1</sup>Department of Botany and Plant Sciences, University of California, Riverside, CA, <sup>2</sup>US Geological Survey Western Ecological Research Center, Las Vegas Field Station, Henderson, NV. (275)

3:45 PM

**Root drench effects on loblolly pine survival after planting in herbicide treated cogongrass.** Ramsey, C.L.<sup>1,\*</sup>, Jose, S.<sup>2</sup> and Zamora, D.<sup>2</sup> <sup>1</sup>2301 Research Blvd, Fort Collins, CO, <sup>2</sup>University of Florida, Milton, FL. (276)

4:00 PM

**Source-sink dynamics and multiple introductions drive range expansion of invasive populations of ornamental pampas grass (*Cortaderia selloana*).** Okada, M.<sup>1</sup>, Ahmad, R.<sup>1</sup> and Jasieniuk, M.<sup>1,\*</sup> <sup>1</sup>Department of Plant Sciences, University of California, Davis, CA. (277)

4:15 PM

**The role of environment and disturbance in yellow toadflax population invasion.** Rew, L.J.<sup>1,\*</sup>, Lehnhoff, E.<sup>1</sup> and Maxwell, B.D.<sup>1</sup> <sup>1</sup>Montana State University, Bozeman, MT. (278)

4:30 PM

**Business Meeting.**

## **WEDNESDAY PM, February 15 Section 9. Weed Biology and Ecology**

**Location:** Lyceum Complex -5th Floor

**Chair:** Jeffery Conn, USDA-ARS, Fairbanks, AK

**Moderator:** Frank Forcella, USDA-ARS, Morris, MN

1:00 PM

**Critical period of tropical spiderwort (*Commelina benghalensis*) control in cotton.** Webster, T.M.<sup>1,\*</sup>, Grey, T.L.<sup>2</sup>, Flanders, J.T.<sup>3</sup> and Culpepper, A.S.<sup>2</sup> <sup>1</sup>USDA-ARS, Tifton, GA, <sup>2</sup>University of Georgia, Tifton, GA, <sup>3</sup>University of Georgia, Cairo, GA. (279)

1:15 PM

**Assessing variation in weed competitive interactions with an individual plant based population model.** Maxwell, B.D.<sup>1,\*</sup>, Smith, R.G.<sup>1</sup> and Menalled, F.D.<sup>1</sup> <sup>1</sup>Land Resources & Environmental Science Department, Montana State University, Bozeman, MT. (280)

1:30 PM

**How many velvet leaf seeds are needed to found a population?** Mohler, C.L.<sup>1,\*</sup> and Kester, D.<sup>1</sup> <sup>1</sup>Dept. of Crop and Soil Sciences, Cornell University, Ithaca, NY. (281)

1:45 PM

**Does habitat heterogeneity regulate invasion rate?** Peskin, N.<sup>1</sup>, Mortensen, D.A.<sup>1,\*</sup> and Nord, A.<sup>1</sup> <sup>1</sup>Department of Crop and Soil Sciences, Penn State University, University Park, PA. (282)

2:00 PM

**A multi-disciplinary approach to the control of Japanese Knotweed (*Polygonum cuspidatum* syn. *Fallopia japonica*).** Skibo, A.Z.<sup>1,\*</sup> and Isaacs, M.A.<sup>1</sup> <sup>1</sup>University of Delaware, Lasher Laboratory, Georgetown, DE. (283)

2:15 PM

**Impact of Invasive weed *Ageratum conyzoides* on native communities in Shivalik Himalayas: Role of Allelopathy.** Kohli, R.K.<sup>1,2,\*</sup>, Batish, D.R.<sup>2</sup>, Singh, H.P.<sup>1</sup>, Dogra, K.S.<sup>2</sup> and Kaur, S.<sup>2</sup> <sup>1</sup>Centre for Environment and Vocational Studies, Botany Department, Panjab University, Chandigarh, UT, India, <sup>2</sup>Department of Botany, Panjab University, Chandigarh, UT, India. (284)

2:30 PM

**Soil preferential sorption in allelopathy- a physical joint action paradigm.** Tharayil, N.<sup>1,\*</sup>, Bhowmik, P.C.<sup>1</sup> and Xing, B.<sup>1</sup> <sup>1</sup>Plant, Soil, & Insect Sciences, University of Massachusetts, Amherst, MA. (285)

2:45 PM

**Phytotoxicity of foliar extracts and residues of leguminous summer cover crops.** Chase, C.A.<sup>1,\*</sup> and Adler, M.<sup>1</sup> <sup>1</sup>University of Florida, Horticultural Sciences Department, Gainesville, FL. (286)

3:00 PM

**Coffee Break.**

3:15 PM

**Tolerance of common lambsquarters selections to glyphosate.** Kniss, A.R.<sup>1,\*</sup>, Miller, S.D.<sup>1</sup> and Wilson, R.G.<sup>2</sup> <sup>1</sup>University of Wyoming, Department of Plant Sciences, Laramie, WY, <sup>2</sup>Panhandle Research and Extension Center, Scottsbluff, NE. (287)

3:30 PM

**Effect of leaf characteristics of green foxtail and barnyardgrass on primisulfuron droplet spread.** Sanyal, D.<sup>1,\*</sup>, Bhowmik, P.C.<sup>1</sup> and Reddy, K.N.<sup>2</sup> <sup>1</sup>University of Massachusetts, Amherst, MA, <sup>2</sup>USDA-ARS, Southern Weed Science Research Unit, Stoneville, MS. (288)

3:45 PM

**The impact of sown buffer strips on the flora of arable field edges in England.** Marshall, J.<sup>1,\*</sup> and West, T.<sup>1</sup> <sup>1</sup>Marshall Agroecology Limited, Winscombe, Somerset, UK. (289)

4:00 PM

**The Influence of Management System on Weed Tolerance.** Ryan, M.R.<sup>1,2,\*</sup>, Mortensen, D.A.<sup>1</sup>, Hulting, A.G.<sup>1</sup>, Grube, K.M.<sup>2</sup>, Wilson, D.O.<sup>2</sup> and Hepperly, P.R.<sup>2</sup> <sup>1</sup>The Pennsylvania State University, University Park, PA, <sup>2</sup>The Rodale Institute, Kutztown, PA. (290)

4:15 PM

**Weed diversity in field margins is a function of distance, landscape-level factors, and local perturbations.** Sosnoskie, L.M.<sup>1,\*</sup> and Luschei, E.C.<sup>1</sup> <sup>1</sup>Department of Agronomy, University of Wisconsin-Madison, Madison, WI. (291)

4:30 PM

**Weed dynamics as affected by soil reaction and fertility: a case study in rice fields of Kerala State, India.** Appukkuttan-Suseela, V.<sup>1,2,\*</sup>, Chirathadam, A.T.<sup>1</sup> and S., K.<sup>1</sup> <sup>1</sup>Department of Agronomy, College of Horticulture, Kerala Agricultural University, Thrissur, Kerala, India, <sup>2</sup>Biology Department, University of Massachusetts, Boston, MA. (292)

4:45 PM

**Continental-scale dynamics of an invasive perennial in North America: history's lessons.** Barney, J.N.<sup>1,\*</sup> <sup>1</sup>Cornell University, Ithaca, NY. (293)

## WEDNESDAY PM, February 15

### Section 11. Physiology

**Location:** Belasco/Broadhurst - 5th Floor

**Chair:** Franck Dayan, USDA-ARS-NPURU, University, MS

**Moderator:** Jim Burton, North Carolina State University, Raleigh, NC

1:00 PM

**Investigating the physiological basis of the interaction between mesotrione and atrazine in site-of-action based atrazine-resistant *Amaranthus* spp.** Hugie, J.A.<sup>1,\*</sup>, Riechers, D.E.<sup>1</sup>, Tranel, P.J.<sup>1</sup> and Holt, J.F.<sup>1</sup> <sup>1</sup>University of Illinois, Urbana, IL. (294)

1:15 PM

**Herbicidal activity of Manuka oil is associated with inhibition of p-hydroxyphenylpyruvate dioxygenase by its triketone components.** Dayan, F.E.<sup>1,\*</sup>, Sauldubois, A.<sup>2</sup>, Cantrell, C.L.<sup>1</sup> and Duke, S.O.<sup>1</sup> <sup>1</sup>USDA-ARS NPURU, University, MS, <sup>2</sup>UFR des Sciences, Universite d'Angers, Angers, France. (295)

1:30 PM

**Embryo, Seed Coat and Pericarp Dormancy in Domesticated and Wild Sunflower.** Brunick, R.L.<sup>1,\*</sup>, Knapp, S.J.<sup>2</sup> and Mallory-Smith, C.<sup>1</sup> <sup>1</sup>Department of Crop and Soil Science, Oregon State University, Corvallis, OR, <sup>2</sup>Center for Applied Genetic Technologies, The University of Georgia, Athens, GA. (296)

1:45 PM

**Photosynthesis and antioxidant responses in cotton and spurred anoda under nitrogen deficiency.** Sterling, T.M.<sup>1,\*</sup>, Bettmann, G.T.<sup>1</sup>, Ratnayaka, H.H.<sup>2</sup> and Molin, W.T.<sup>3</sup> <sup>1</sup>New Mexico State University, Las Cruces, NM, <sup>2</sup>Xavier University of Louisiana, New Orleans, LA, <sup>3</sup>USDA-ARS, Southern Weed Science Research Unit, Stoneville, MS. (297)

2:00 PM

**Effect of time and surfactant on absorption and translocation of bispyribac-sodium in barnyardgrass (*Echinochloa crus-galli*).** Dodds, D.M.<sup>1,\*</sup>, Reynolds, D.B.<sup>1</sup>, Smith, M.C.<sup>1</sup> and Massey, J.H.<sup>1</sup> <sup>1</sup>Mississippi State University, Mississippi State, MS. (298)

2:15 PM

**Cross-species movement of RNA: translocation of messenger RNA from pumpkin to dodder.** Flagg, J.K.<sup>1,\*</sup> and Westwood, J.H.<sup>1</sup> <sup>1</sup>Virginia Tech, Department of Plant Pathology, Physiology, and Weed Science, Blacksburg, VA. (299)

2:30 PM

**Effect of light intensity on growth of some citrus weeds and efficacy of glyphosate.** Singh, S.<sup>1,\*</sup> and Futch, S.H.<sup>1</sup> <sup>1</sup>Agronomy Department, CCS Haryana Agricultural University, Hisar, Haryana, India. (300)

2:45 PM

**Physiological characterization of glyphosate-resistant Palmer amaranth (*Amaranthus palmeri*).** Haider, J.<sup>1</sup>, Vencill, W.K.<sup>1,\*</sup>, Grey, T.L.<sup>2</sup> and Culpepper, S.<sup>2</sup> <sup>1</sup>Department of Crop & Soil Sciences, University of Georgia, Athens, GA, <sup>2</sup>Department of Crop & Soil Sciences, University of Georgia, Tifton, GA. (301)

3:00 PM

**Coffee Break.**

3:15 PM

**Possible involvement of auxin in glyphosate-induced male sterility in transgenic cotton.** Yasuor, H.<sup>1,\*</sup>, Rivov, J.<sup>1</sup> and Rubin, B.<sup>1</sup> <sup>1</sup>R. H. Smith Institute of Plant Sciences and Genetics in Agriculture, Faculty of Agricultural, Food, and Environmental Sciences, Rehovot, Israel. (302)

3:30 PM

**Some glyphosate resistant biotypes are really over-compensation mutants.** Thomas, W.E.<sup>1,\*</sup>, Vaughn, K.C.<sup>2</sup> and



Wilcut, J.W.<sup>1</sup> <sup>1</sup>Crop Science Department, North Carolina State University, Raleigh, NC, <sup>2</sup>Southern Weed Science Research Unit, USDA-ARS, Stoneville, MS. (303)

3:45 PM

**Examining the possibility of a two-gene system conferring glyphosate resistance.** Lee, R.M.<sup>1,\*</sup> <sup>1</sup>Lilly Hall of Life Sciences, West Lafayette, IN. (304)

4:00 PM

**Business Meeting.**

## **THURSDAY AM, February 16 Natural Products in Weed Management and Biology**

**Location:** Astor Ballroom - 7th Floor

**Chair:** Stephen Duke, USDA-ARS Natural Products Center, University, MS

8:30 AM

**Natural Products in Weed Management and Biology: Recent Progress and Current Status.** Duke, S.O.<sup>1,\*</sup> <sup>1</sup>USDA, ARS, NPURU, University, MS. (305)

9:00 AM

**Natural products as herbicide leads.** Gerwick, B.C.<sup>1,\*</sup> <sup>1</sup>Dow AgroSciences LLC, Indianapolis, IN. (306)

9:30 AM

**Natural product involvement in biocontrol of weeds.** Vurro, M.<sup>1</sup> and Boari, A.<sup>1</sup> <sup>1</sup>Institute of Sciences of Food Production, National Council of Research, Bari, Puglia, Italy. (307)

10:15 AM

**Allelopathy in crop/weed interactions - an update.** Belz, R.G.<sup>1,\*</sup> <sup>1</sup>University of Hohenheim, Institute of Phytomedicine, Department of Weed Science, Stuttgart, Germany. (308)

10:45 AM

**Chemical ecology of weeds: allelopathy.** Singh, I.<sup>1,\*</sup> <sup>1</sup>Centre for Environmental Management of Degraded Ecosystems (CEMDE), School of Environmental Studies, University of Delhi, Delhi, India. (309)

11:15 AM

**Engineering natural products into crops for improved weed management.** Dayan, F.E.<sup>1,\*</sup>, Rimando, A.M.<sup>1</sup>, Cook, D.<sup>1</sup>, Pan, Z.<sup>1</sup>, Baerson, S.R.<sup>1</sup> and Duke, S.O.<sup>1</sup> <sup>1</sup>USDA-ARS NPURU, University, MS. (310)

**THURSDAY AM, February 16**  
**Section 9. Weed Biology and Ecology**

**Location:** Lyceum Complex -5th Floor

**Chair:** Jeffery Conn, USDA-ARS, Fairbanks, AK

8:30 AM

**Honeybees as novel herbicide delivery systems.** Forcella, E.<sup>1,\*</sup> <sup>1</sup>USDA-ARS, Morris, MN. (311)

8:45 AM

**Interspecific hybridization in Asteraceae: case studies in Ambrosia, Conyza and Helianthus.** Zelaya, I.A.<sup>1</sup> and Owen, M.D.<sup>1,\*</sup> <sup>1</sup>Iowa State University, Ames, IA. (312)

9:00 AM

**Pollen dispersal and hybridization between giant ragweed and common ragweed.** Volenberg, D.S.<sup>1,\*</sup>, Rayburn, L.A.<sup>1</sup> and Tranel, P.J.<sup>1</sup> <sup>1</sup>Department of Crop Sciences, Urbana, IL. (313)

9:15 AM

**When gene flow occurs between Clearfield rice and red rice.** Burgos, N.R.<sup>1,\*</sup>, Shivrain, V.K.<sup>1</sup>, Moldenhauer, K.K.A.<sup>2</sup> and Moore, J.W.<sup>3</sup> <sup>1</sup>Dept. of Crop, Soil, and Environmental Sciences, University of Arkansas, Fayetteville, AR, <sup>2</sup>Rice Research and Extension Center, Stuttgart, AR, <sup>3</sup>Dept. of Plant Pathology, University of Arkansas, Fayetteville, AR. (314)

9:30 AM

**Vernalization Requirements of Wheat (*Triticum aestivum* L.) and Wheat by Jointed Goatgrass (*Aegilops cylindrica* Host) Hybrid Plants.** Fandrich, L.<sup>1,\*</sup>, Mallory-Smith, C.A.<sup>1</sup>, Zemetra, R.S.<sup>2</sup> and Hansen, J.<sup>2</sup> <sup>1</sup>Department of Crop and Soil Science, Oregon State University, Corvallis, OR, <sup>2</sup>Department of Plant Soil and Entomological Sciences, University of Idaho, Moscow, ID. (315)

9:45 AM

**A chaperon to prevent promiscuous transgene flow from wheat to its wild/weedy relatives.** Weissmann, S.<sup>1</sup>, Feldman, M.<sup>1</sup> and Gressel, J.<sup>1,\*</sup> <sup>1</sup>Plant Sciences, Weizmann Institute of Science, Rehovot, Israel. (316)

10:00 AM

**Coffee Break.**

10:15 AM

**Gene flow from glyphosate-resistant creeping bentgrass (*Agrostis stolonifera* L.): gene on the move.** Zapiola, M.L.<sup>1,\*</sup>, Mallory-Smith, C.A.<sup>1</sup>, Campbell, C.<sup>2</sup> and Butler, M.<sup>2</sup> <sup>1</sup>Dept. of Crop and Soil Science, Oregon State University, Corvallis, Oregon, <sup>2</sup>Central Oregon Agricultural Research Center, Oregon State University, Madras, Oregon. (317)

10:30 AM

**Persistence and weediness potential of transgenic and non-transgenic bentgrasses in managed and unmanaged ecosystems.** Hart, S.E.<sup>1</sup>, Belanger, F.C.<sup>1</sup> and McCullough, P.E.<sup>1</sup> <sup>1</sup>Department of Plant Biology and Pathology, Rutgers, The State University of New Jersey, New Brunswick, NJ. (318)

10:45 AM

**Microarray analysis identifies genes involved in crown bud dormancy in leafy spurge (*Euphorbia esula* L.).** Horvath, D.<sup>1,\*</sup>, Anderson, J.V.<sup>1</sup> and Chao, W.<sup>1</sup> <sup>1</sup>USDA-ARS-RRVARC Bioscience Research Lab, Plant Science Unit, Fargo, ND. (319)

11:00 AM

**An innovative strategy for early detection of herbicide resistant weeds in the farm helps to quarantine and to contain the problem.** Vidal, R.A.<sup>1,\*</sup>, Lamego, F.P.<sup>1</sup> and Trezzi, M.M.<sup>2</sup> <sup>1</sup>UFRGS-Federal University, Porto Alegre, Brazil, <sup>2</sup>CEFET-Faculdade de Agronomia, Pato Branco, PR, Brazil. (320)

11:15 AM

**Detection of a new mutation of glycine to serine in the ACCase of a resistant biotype of *Phalaris paradoxa*.** Ruiz-Santaella, J.P.<sup>1,\*</sup>, Wagner, J.<sup>2</sup>, Gerhards, R.<sup>2</sup> and De Prado, R.<sup>1</sup> <sup>1</sup>University of Córdoba, Agricultural Chemistry and Edaphology Department, Córdoba, Spain, <sup>2</sup>University of Hohenheim, Institute of Phytomedicine, Weed Science Department, Stuttgart, Germany.. (321)

11:30 AM

**Effect of light intensity on growth of some citrus weeds and efficacy of glyphosate.** Singh, S.<sup>1,\*</sup> and Futch, S.H.<sup>2</sup> <sup>1</sup>Agronomy Department, CCS Haryana Agricultural University, Hisar, Haryana, India, <sup>2</sup>Citrus Research and Education Center, University of Florida, Lake Alfred, FL. (322)

11:45 AM

**Minirhizotron- a novel technology for *in-situ* monitoring of the root parasite *Orobanche* spp.** Eizenberg, H.<sup>1,\*</sup>, Hershenhorn, J.<sup>1</sup>, Silberbush, M.<sup>2</sup> and Ephrath, J.<sup>2</sup> <sup>1</sup>Department of Phytopathology and Weed Research, Neve Ya'ar Research Center, ARO, Ramat Yishay, Israel, <sup>2</sup>Wyler Department of Dryland Agriculture, Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Sde Boqer, Israel. (323)

12:00 PM

**Business Meeting.**

**THURSDAY AM, February 16**  
**Section 12. Soil and Environment**

**Location:** Belasco/Broadhurst - 5th Floor

**Chair:** Cade Smith, Mississippi State University, Mississippi State, MS

8:30 AM

**Dissipation of <sup>14</sup>C-herbicides from polyethylene mulch.**

Vencill, W.K.<sup>1,\*</sup>, Grey, T.L.<sup>2</sup> and Culpepper, S.<sup>2</sup> <sup>1</sup>Department of Crop & Soil Sciences, Athens, GA, <sup>2</sup>Department of Crop & Soil Sciences, Tifton, GA. (324)

8:45 AM

**Dissipation of field applied herbicides from low density polyethylene mulch.**

Grey, T.L.<sup>1,\*</sup>, Culpepper, S.<sup>1</sup>, Webster, T.M.<sup>2</sup> and Mantri, N.<sup>3</sup> <sup>1</sup>University of Georgia, Crop and Soil Science Dept., Tifton, GA, <sup>2</sup>USDA/ARS, Crop Protection and Management Division, Tifton, GA, <sup>3</sup>University of Georgia, Crop and Soil Science Dept., Athens, GA. (325)

9:00 AM

**Squash (*Cucurbita moschata*) and tomato (*Solanum lycopersicum*) response to herbicide residue on low density polyethylene mulch.**

MacRae, A.W.<sup>1,\*</sup>, Culpepper, S.<sup>1</sup> and Grey, T.L.<sup>1</sup> <sup>1</sup>Department of Crop and Soil Sciences, University of Georgia, Tifton, GA. (326)

9:15 AM

**Phytotoxicity of 8-hydroxyquinoline in soil environment.**

Kumar, M.<sup>1,\*</sup>, Mangla, S.<sup>1</sup>, Gopal, M.<sup>2</sup> and Singh, I.<sup>1</sup> <sup>1</sup>Centre for Environmental Management of Degraded Ecosystems (CEMDE), University of Delhi, Delhi, India, <sup>2</sup>CPCRI, Kasaragod, Kerala, India. (327)

9:30 AM

**Rhizosphere ecology is altered in glyphosate-resistant soybean.**

Kremer, R.J.<sup>1,2,\*</sup> and Means, N.E.<sup>2</sup> <sup>1</sup>USDA-ARS, Cropping Systems & Water Quality Unit, Columbia, MO, <sup>2</sup>University of Missouri, Columbia, MO. (328)

9:45 AM

**Glyphosate drift reduces nitrogen fixation potential in glyphosate sensitive soybean.**

Zablotowicz, R.M.<sup>1,\*</sup>, Reddy, K.N.<sup>1</sup> and Bellaloui, N.<sup>2</sup> <sup>1</sup>USDA-ARS, Southern Weed Science Research Unit, Stoneville, MS, <sup>2</sup>USDA-ARS, CG&PRU, Stoneville, MS. (329)

10:00 AM

**Coffee break.**

10:15 AM

**Factors Affecting Pesticide Runoff from Warm-Season Turfgrasses.**

Massey, J.H.<sup>1,\*</sup>, Ampim, P.A.<sup>1</sup>, Stewart, B.R.<sup>1</sup>, Smith, M.C.<sup>1,\*</sup> and Johnson, A.B.<sup>2</sup> <sup>1</sup>Mississippi State Univer-

sity, Department of Plant and Soil Sciences, Mississippi State, MS, <sup>2</sup>Alcorn State University, Department of Agriculture, Alcorn State, MS. (330)

10:30 AM

**Multiple-inlet irrigation plus intermittent flooding as a best management practice in mid-southern U.S. rice (*Oryza sativa*) production.** Smith, M.C.<sup>1</sup>, Massey, J.H.<sup>1</sup>, Andrews, A.A.<sup>1,\*</sup>, Ampim, P.<sup>1,\*</sup> and Johnson, A.B.<sup>2,\*</sup> <sup>1</sup>Mississippi State University, Dept Plant and Soil Sciences, Miss State, MS, <sup>2</sup>Alcorn State University, Alcorn State, MS. (331)

10:45 AM

**Discussion of Soil and Environmental Aspects Posters.**

11:45 AM

**Business Meeting.**

## **THURSDAY PM, February 16 Grass Weed Resistance: Fighting Back**

**Location:** Astor Ballroom - 7th Floor

**Chair:** Hugh Beckie, Saskatoon Research Centre, Saskatoon, SK, CANADA

1:00 PM

**Managing herbicide-resistant black-grass (*Alopecurus myosuroides*): theory and practice.** Moss, S.R.<sup>1,\*</sup> <sup>1</sup>Rothamsted Research, Harpenden, Herts, United Kingdom. (332)

1:30 PM

**Role of management practices on isoproturon-resistant littleseed canarygrass (*Phalaris minor*) in India.** Singh, S.<sup>1,\*</sup> <sup>1</sup>Department of Agronomy, CCS Haryana Agricultural University, Hisar, Haryana, India. (333)

2:00 PM

**Industry perspective on managing grass weed resistance.** Polge, N.D.<sup>1,\*</sup>, Porter, D.J.<sup>2</sup> and Glasgow, J.L.<sup>2</sup> <sup>1</sup>Syngenta Crop Protection Inc, Vero Beach, FL, <sup>2</sup>Syngenta Crop Protection Inc, Greensboro, NC. (334)

2:30 PM

**Strategies to combat herbicide-resistant grass weeds in the Northern Great Plains.** Beckie, H.J.<sup>1,\*</sup> <sup>1</sup>Agric & Agri-Food Canada, Saskatoon, SK. (335)

3:00 PM

**Coffee Break.**

3:15 PM

**Grass-weed herbicide resistance management in Latin America.** Valverde, B.E.<sup>1,\*</sup> <sup>1</sup>Royal Veterinary and Agricultural Univ., Taastrup, Denmark. (336)

3:45 PM

**Alternative herbicides for managing herbicide-resistant barnyardgrass (*Echinochloa crus-galli*) in rice.** Talbert, R.E.<sup>1,\*</sup> and Burgos, N.R.<sup>1</sup> <sup>1</sup>University of Arkansas, Fayetteville, AR. (337)

4:15 PM

**Managing multiple herbicide resistant *Lolium rigidum* in southern Australian cropping systems.** Walsh, M.<sup>1,\*</sup> and Powles, S.<sup>1,\*</sup> <sup>1</sup>Western Australia Herbicide Resistance Initiative, University of Western Australia, Crawley, WA, Australia. (338)

4:45 PM

**Panel Discussion.**

### **THURSDAY PM, February 16 Section 3. Turf and Ornamental Crops**

**Location:** Belasco/Broadhurst - 5th Floor

**Chair:** Todd Mervosh, The Connecticut Agricultural Experiment Station, Windsor, CT

1:00 PM

**History of Weed Mangement in Turf.** (339)

1:15 PM

**Southern chinch bug and weed occurence in St. Augustinegrass.** Rainbolt, C.R.<sup>1,\*</sup>, Cherry, R.<sup>1</sup> and Nagata, R.<sup>1</sup> <sup>1</sup>Everglades REC - IFAS, University of Florida, Belle Glade, FL. (340)

1:30 PM

**Algae control in bermudagrass putting greens.** Hutto, K.C.<sup>1,\*</sup>, Brecke, B.J.<sup>1</sup> and Unruh, B.<sup>1</sup> <sup>1</sup>University of Florida, West Florida Research and Education Center, Jay, FL. (341)

1:45 PM

**Weed control with spring applications of trifloxysulfuron in non-overseeded bermudagrass turf.** Taylor, J.M.<sup>1,\*</sup>, Byrd, J.D.<sup>1</sup>, Wright, R.S.<sup>1</sup> and Chesser, Z.B.<sup>1</sup> <sup>1</sup>Mississippi State University, Mississippi State, MS. (342)

2:00 PM

**Synergistic Response of Fluroxypyr and 2,4-D in Controlling Broadleaf Weeds in Turf.** Mitra, S.<sup>1,\*</sup> and Smith, R.L.<sup>2</sup> <sup>1</sup>Department of Horticulture/Plant and Soil Science, California State Polytechnic University, Pomona, CA, <sup>2</sup>Product Technology Specialist, Dow AgroSciences LLC, Fresno, CA. (343)

2:15 PM

**Efficacy of Bispyribac-sodium, Primisulfuron, and Sulfosulfuron Influenced by Temperature.** McCullough,

P.E.<sup>1,\*</sup> and Hart, S.E.<sup>1</sup> <sup>1</sup>Department of Plant Biology and Pathology, Rutgers, The State University of New Jersey, New Brunswick, NJ. (344)

2:30 PM

**The Identification of bispyribac-sodium Tolerant Kentucky bluegrass (*Poa pratensis* L.) Germplasm.** Shortell, R.R.<sup>1,\*</sup>, Hart, S.E.<sup>1</sup> and Bonos, S.A.<sup>1</sup> <sup>1</sup>Department of Plant Biology and Pathology, Rutgers University, Cook College, New Brunswick, NJ. (345)

2:45 PM

**Coffee Break.**

3:00 PM

**History of Weed Control in Ornamentals.** (346)

3:15 PM

**Field evaluation of herbicide and mulch combinations for ornamental weed control.** Mathers, H.M.<sup>1,\*</sup> and Case, L.T.<sup>1,\*</sup> <sup>1</sup>Ohio State University, Columbus, OH. (347)

3:30 PM

**Evaluation of selected herbicides for weed control in containerized ornamentals.** Marshall, M.W.<sup>1,\*</sup>, Zandstra, B.H.<sup>1</sup>, Uhlig, R.H.<sup>1</sup>, Little, D.A.<sup>1</sup> and Richardson, R.J.<sup>2</sup> <sup>1</sup>Department of Horticulture, Michigan State University, East Lansing, MI, <sup>2</sup>Crop Science Department, North Carolina State University, Raleigh, NC. (348)

3:45 PM

**Application method impacts azalea (*Rhododendron obtusum*) response to pendimethalin.** Derr, J.F.<sup>1,\*</sup> and Simmons, L.D.<sup>1</sup> <sup>1</sup>Virginia Tech, Hampton Roads Ag. Res. and Ext. Center, Virginia Beach, VA. (349)

4:00 PM

**A method for estimating PRE herbicide residual longevity in container nursery substrates.** Neal, J.C.<sup>1,\*</sup> and Judge, C.A.<sup>1</sup> <sup>1</sup>Department of Horticultural Science, North Carolina State University, Raleigh, NC. (350)

4:15 PM

**Business Meeting.**

## **THURSDAY PM, February 16 Section 8. Formulation, Adjuvant and Application Technology**

**Location:** Booth/Edison - 5th Floor

**Chair:** Robert Klein, University of Nebraska, North Platte, NE

**Moderator:** Susan Sun, Witco Corp, Tarrytown, NY

1:00 PM

**The History of the Formulation, Adjuvant and Application Technology Section.** Klein, R.<sup>1,\*</sup> <sup>1</sup>West Central Research and Extension Center, North Platte, NE. (351)

1:15 PM

**A Novel Spray Deposition, Canopy Penetration, and Spray Drift Reduction Adjuvant.** Gednalske, J.V.<sup>1</sup>, Dahl, G.K.<sup>1,\*</sup> and Spandl, E.<sup>1</sup> <sup>1</sup>Agrilience, St Paul, MN. (352)

1:30 PM

**Effect of surfactant on primisulfuron activity on common purslane and velvetleaf.** Sanyal, D.<sup>1,\*</sup> and Bhowmik, P.C.<sup>1</sup> <sup>1</sup>University of Massachusetts, Amherst, MA. (353)

2:00 PM

**Bentazon-sodium confers two independent antagonistic effects on the phytotoxicity of tritosulfuron in white bean.** Weinberg, T.<sup>1,\*</sup> and Hall, J.C.<sup>1</sup> <sup>1</sup>Department of Environmental Biology, University of Guelph, Guelph, Ontario, Canada. (354)

2:15 PM

**Setting Up Spray Booms For Pesticide Application.** Klein, R.N.<sup>1</sup> <sup>1</sup>West Central Research & Extension Center, North Platte, NE. (355)

2:30 PM

**Business Meeting.**



**AUTHOR INDEX**  
By Abstract Number

**A**

Acciaresi, Horacio A.....	24, 35
Adler, Michael.....	286
Affeldt, Richard P.....	152
Ahmad, Riaz.....	277
Al-Mashhdany, Showkat A.....	33
Al-Thahabi, Salam A.....	110, 139
Alegre, Milagros E.....	79
Alford, Jason L.....	137
Allen, Deborah L.....	151
Allen, Jayla R.....	37, 46, 174
Altpeter, F.....	269
Ampim, Peter A.....	330, 331
Andersen, Kimberly A.....	69, 141
Anderson, James V.....	103, 108, 319
Anderson, Lars W.J.....	267
Anderson, Sharon J.....	185
Andrews, Ashley A.....	331
Appleby, Arnold P.....	5, 6
Appukuttan-Suseela, Vidya.....	292
Arsenovic, Marija.....	214, 262, 267
Asai, Motoaki.....	96, 122
Asborn, Marcelo.....	24
Ashigh, Jamshid.....	132
Askew, Shawn D.....	57, 59
Atchison, Brad.....	248

**B**

Babcock, Lisa.....	79
Baerson, Scott R.....	138, 310
Bailey, Wayne C.....	195
Baker, Dirk V.....	61
Ball, Daniel.....	107
Barbercheck, Mary.....	183
Bàrberi, Paolo.....	95
Barefoot, Aldos C.....	189
Barney, Jacob N.....	293
Baron, Jerry J.....	262, 267
Bassham, Diane.....	109
Bastida, Fernando.....	84, 85, 86, 89
Batish, Daizy R.....	184, 284
Batts, Roger B.....	221
Baughman, Todd A.....	40, 42
Beattie, Katherine.....	116
Beck, K. George.....	61
Becker, Roger L.....	121, 181
Beckie, Hugh J.....	154, 197, 335

Belanger, Faith C.....	318
Bellaloui, Nacer.....	329
Belles, Wayne S. ....	236
Bellinder, Robin R. ....	25, 47, 50
Belz, Regina G.....	308
Benedict, Chris A. ....	50
Berger, Andres G.....	123
Bettmann, Greg T.....	297
Beutler, Brent R.....	250
Bhowmik, Prasanta C. ....	285, 288, 353
Bicksler, Abram J. ....	51, 217
Biesboer, David D.....	121, 181
Bills, Lynn B. ....	155
Bisikwa, Jenipher.....	121, 181
Blackshaw, Robert E. ....	154, 164
Boari, Angela.....	307
Bodo Slotta, Tracey.....	104, 114
Boerboom, Chris M.....	155
Bonari, Enrico.....	95
Bonos, Stacy A. ....	345
Borchert, Dan.....	240
Bottoms, Sunny L. ....	14, 15, 18
Bowers, Michael A. ....	170, 265
Bowes, G. ....	269
Boydston, Rick A. ....	218
Boyette, Clyde D.....	128, 130, 131
Boyles, Mark C.....	200
Bradley, Kevin W. ....	66, 195, 206
Brainard, Daniel C.....	115
Brandenberger, Lynn ....	54
Brandle, J E.....	253
Braverman, Michael P.....	262
Brawley, Patricia A. ....	32
Brecke, Barry J. ....	222, 341
Breeden, Gregory K.....	62
Brodahl, Mary.....	105
Brooks, Matthew L. ....	275
Brothers, A.....	54
Brunick, Robert L.....	296
Bryson, Charles T. ....	19, 78, 131
Buhler, Susanne.....	162
Bulcke, Robert A.....	31
Burch, Patrick L. ....	274
Burgos, Nilda R. ....	314, 337
Burke, Ian C. ....	19, 26, 136
Burnell, Keith D. ....	238
Burns, Ann B.....	21, 41, 204
Burns, Brian K.....	238
Burton, James D.....	138
Butler, Marvin.....	317
Byrd, John D. ....	68, 75, 225, 238, 342
Byrne, Pat .....	198

## C

Caesar, Anthony J.....	127
Campbell, Claudia .....	317
Cantrell, Charles L.....	295
Carretero, Carlos L. ....	84, 85, 86, 89
Carrithers, Vanelle F.....	236, 274
Carter, James R. ....	228
Carter, Warren G.....	40
Case, Luke T.....	347
Cathcart, Jason .....	94
Caton, Barney P.....	70, 240
Chao, Wun S.....	103, 319
Chase, Carlene A.....	286
Chen, Wenlin .....	192
Cherry, Ron.....	340
Chesser, Zack B.....	238, 342
Chirathadam, Abraham T.....	292
Clark, Thomas L.....	195
Clayton, George W.....	94, 154, 164
Clements, Charlie D.....	73
Clements, David.....	244
Cole, Charles M.....	17, 110
Collins, Ronald T.....	179
Colquhoun, Jed B.....	17, 110, 139, 152
Conn, Jeffery S.....	116
Cook, Daniel.....	310
Cook, Ron L.....	58
Copeland, R. S.....	268
Cruz-Hipólito, Hugo Enrique.....	159
Cuda, J. P.....	268
Culpepper, Stanley .....	207, 228, 279, 301, 324, 325, 326
Curran, William S.....	39, 246
Czarnota, Mark A.....	210

## D

D'Auria, Danielle E.....	77
Dahl, Gregory K.....	352
Dale, Richard.....	102
Danehower, David A.....	138
Darwish, R.....	43
Dauer, Joseph T.....	243
Davidson-Harrington, Janet .....	83
Davis, Adam S.....	125
Dawson, Jean H.....	6
Dayan, Franck E.....	295, 310
De Prado, Rafael .....	84, 85, 86, 159, 321
Dekker, Jack .....	248
Derr, Jeffrey F.....	2, 349
Dewey, Steven A.....	69, 236
Dillehay, Bryan L.....	39
DiTomaso, Joseph M.....	65, 236

DiTommaso, Antonio .....	79, 112, 115, 156, 186
Dodds, Darrin M. ....	20, 298
Dogra, Kuldip S. ....	284
Doll, Jerry D.....	4, 237
Domínguez, José Alfredo .....	159
Doohan, Douglas J.....	216, 230, 259
Doran, Morgan P.....	65
Dotray, Peter A. ....	22, 42
Downey, Daniel.....	263
Duke, Stephen O. ....	295, 305, 310
Dumas, Jose A. ....	149
Duncan, Celestine A.....	236
Dusky, Joan .....	64
Dutt, Timothy E. ....	2
Duxbury, John M.....	156
Dysart, Patricia L.....	124

## E

Ebell, Chris A. ....	67
Eckert, Jim .....	160
Edenfield, Mike .....	46
Eizenberg, Hanan.....	323
Elmore, Greg A.....	203
Ephrath, Jhonathan.....	323
Eplee, Robert E. ....	239
Eubank, Chuck.....	60
Eubank, Thomas W.....	88
Evans, Glenn J. ....	47
Evans, Jeffrey A. ....	125
Eve, Elizabeth.....	150
Everitt, John D.....	22
Ezell, Andrew W. ....	232, 234

## F

Fandrigh, Lynn.....	315
Farno, Luke A.....	30, 223
Federizzi, Luiz C.....	133
Feldman, Moshe .....	316
Felix, Joel .....	216
Fennimore, Steven A. ....	259
Fernandez-Quintanilla, Cesar .....	81
Fernández, Oswaldo R.....	106
Ferrell, Jason A. ....	64, 72
Fischer, Albert J. ....	160
Fisher, Glenn.....	153
Flagg, Jeannine K. ....	299
Flanders, James T.....	228, 279
Foley, Michael E. ....	104, 108, 114, 169
Forcella, Frank .....	121, 181, 311
Fowler, Larry .....	70, 240
Frehill, Lisa M. ....	82

Friesen, Lyle F.....	196
Frihauf, John C. ....	219
Fuerst, E. Patrick.....	108
Furness, Nancy H. ....	99
Futch, Steve H. ....	300, 322

## G

Gaines, Todd.....	198
Gallagher, Robert.....	163
Gast, Roger E. ....	261
Gbur, Edward E.....	149
Gealy, David R.....	202
Gednalske, Joe V. ....	352
Gehrett, Jay A. ....	236
Gerhards, Roland.....	321
Gerwick, B. Clifford .....	306
Getsinger, Kurt D.....	76, 267
Giles, Ken .....	263
Givens, Wade A. ....	223
Glasgow, Les .....	272, 334
Glick, Harvey L. ....	203
Glomski, Lee Ann M. ....	76
Gonzalez-Andujar, Jose L.....	81, 89
Gopal, Murali.....	327
Gortsema, Stanley.....	224
Gramig, Greta G.....	98
Greipsson, Sigurdur.....	112
Gressel, Jonathan.....	316
Grey, Timothy L.....	207, 228, 279, 301, 324, 325, 326
Grichar, W James.....	42
Griffin, Matt .....	14, 15
Griffin, Roy M. ....	18
Grodowitz, Michael J. ....	273
Grohs, Robert .....	45
Grove, Melvin D. ....	59
Grube, Kelly M.....	290
Gu, Yong-Qiang .....	103
Gulden, Robert H. ....	34
Gumbart, David.....	71
Gumz, Mary S. ....	52

## H

Haden, Van R.....	156
Hager, Aaron G. ....	256
Hagood, Edward S. ....	12, 274
Hahn, Russell R.....	25
Haidar, M.....	43
Haider, Jay.....	301
Hall, J. Christopher .....	145, 253, 354
Hall, Linda M.....	94
Hall, Marvin H.....	39

Haller, William T. ....	266, 267, 269, 272
Halstvedt, Mary B. ....	236
Hamill, Allan S. ....	7
Hancock, Daniel M. ....	48, 92, 250
Hansen, Jennifer ....	315
Hanson, Bradley D. ....	254
Harbur, Matthew M. ....	151
Harker, K. Neil.....	94, 154, 164
Harmon, Dan ....	73
Harrison, Kent.....	118, 247, 249
Hart, Miranda M. ....	34
Hart, Stephen E. ....	140, 318, 344, 345
Hartman, Benjamin ....	226
Havener, R. ....	54
Helm, Alan L. ....	201
Hembree, Kurt J. ....	229
Hendley, Paul.....	192
Henry, Brien.....	146, 147, 198, 201
Hensley, Justin B. ....	14, 15, 18
Hepperly, Paul R. ....	290
Hershenhorn, Joseph ....	323
Hertl, Peter ....	192
Hill, Jim.....	160
Hillger, David ....	216
Hines, Thomas E. ....	49
Hinz, John.....	174
Hoagland, Robert E.....	78, 128, 130, 131
Hodges, John C. ....	220
Holm, Fredrick A ....	94
Holm, Robert E. ....	262, 267
Holt, Jodie S. ....	275
Holt, Jonathan F. ....	294
Honda, H.....	13, 172
Hooker, Neal.....	230
Hora, Jerry ....	37
Horvath, David P. ....	103, 104, 114, 319
Huber, Andreas.....	189
Huff, Jonathan A. ....	20
Hugie, Josie A.....	143, 294
Hulting, Andrew G. ....	74, 183, 226, 290
Hunt, Joshua M. ....	150
Hutchinson, Pamela J.S.....	48, 166, 250
Hutto, Kendall C. ....	341

## I

Ichihara, Minoru.....	96
Immaraju, John A. ....	175
Inagaki, Hidehiro.....	101
Inderjit.....	309, 327
Inoue, J. ....	172
Irby, J. Trent.....	20
Isaacs, Mark A. ....	283

Isard, Scott .....	243
Ishida, Yoshiki .....	101
Ivy, David N.....	238
Iyozumi, Hiroyuki.....	101
Izquierdo, Jordi .....	81

## J

Jackson, Scott .....	190
Jasieniuk, Marie .....	277
Jeschke, Mark R.....	117
Jeser-Cannavale, Cecily .....	82
Jia, Ying .....	103
Johnson, Alton B.....	330, 331
Johnson, Eric N.....	44
Johnson, Paul D. ....	38
Johnson, Quintin R. ....	36, 90
Johnson, Wiley C.....	177
Johnson, William G.....	155
Jolliffe, Peter A. ....	99
Jones, R. David.....	188
Jones, Russell L.....	191
Jordan, David L.....	38
Jordan, Nicholas R.....	121, 181
Jose, Shibu .....	276
Jovaag, Kari.....	248
Joy, Brandon L.....	22
Judge, Caren A.....	350

## K

Kageyama, Chizuko .....	101
Kataoka, S.....	172
Kato, Kimihiko .....	101
Katovich, Steven A.....	121, 181
Kaundun, Shiv .....	102
Kaur, Shalinder.....	284
Keeling, J Wayne.....	22
Kelly, Steve T. ....	80
Kennedy, Ann C.....	108
Kester, Dorothy .....	281
Kevan, Peter .....	244
Khan, Qasim A. ....	113, 245
Kichler, Jeremy .....	207
Kida, Youichi.....	96
King, Steven R.....	12
Kirkpatrick, Matthew T.....	20
Klein, Robert N.....	351, 355
Klironomos, John N.....	34
Knapp, Steven J. ....	296
Knispel, Alexis.....	196
Kniss, Andrew R. ....	287
Knox, Paul .....	111

Kobayashi, M.....	172
Kochenower, Rick D. ....	11
Koger, Clifford H.....	16, 88, 91, 134, 136, 148, 161
Kohli, Ravinder K.....	184, 284
Koller, Martina.....	157
Koop, Anthony.....	240
Kopan, Suzanne.....	163
Koschnick, Tyler J.....	272
Kozak, Justin M. ....	74
Krasny, Marianne .....	79
Kremer, Robert J.....	328
Krutz, L. Jason.....	148, 161
Kumar, Manish.....	327
Kumar, Virender.....	25
Kunkel, Daniel L.....	214, 262, 267
Kyser, Guy B. ....	65

## L

Labrada, Ricardo E. ....	180
LaHovary, Christophe.....	138
Lamego, Fabiane P.....	133, 320
Landis, Douglas A. ....	125
Lanini, Tom .....	157, 165
Laplante, Julie.....	255
Lass, Larry .....	60
Lee, Ryan M.....	304
Lee, Vanessa .....	275
Légère, Anne .....	23
Lehmann, Johannes.....	112
Lehnhoff, Erik.....	278
LeJeune, Jeff.....	230
Lemieux, Claudel.....	23
Leon, Christopher T.....	14
Leon, Ramon G.....	109
Lerat, Sylvain.....	34
Leroux, Gilles D.....	97, 162
Li, Jianmei .....	66, 206
Libbey, Carl R. ....	213
Libous-Bailey, Lynn.....	78
Lins, Ryan D. ....	152
Little, Daniel A. ....	56, 348
Locke, Martin A. ....	161, 187
Longchamps, Louis.....	97
Losey, John E. ....	156
Loux, Mark M.....	205
Luschei, Edward C.....	291
Luster, Douglas G.....	185
Lycan, Darren W.....	140
Lycett, Amy.....	102
Lym, Rodney G.....	103



## M

Ma, Guoying.....	138
MacDonald, G. E.....	269
MacRae, Andrew W. ....	221, 326
Madsen, John D. ....	271
Maeghe, Ludo.....	31
Mahoney, Kris J.....	100
Majek, Bradley A. ....	212
Mallory-Smith, Carol A. ....	17, 92, 107, 110, 124, 139, 152, 153, 167, 258, 296, 315, 317
Mangla, Seema.....	327
Mantri, Nehru .....	325
Marmon, Greg.....	29
Marshall, Jon .....	289
Marshall, Michael W.....	56, 348
Martin, Alex R.....	155, 226
Marushia, Robin A.....	275
Masiunas, John B. ....	51, 217
Massey, Joseph H. ....	149, 298, 330, 331
Masters, Robert A.....	274
Mathers, Hannah M.....	347
Mattice, John D.....	149
Maupin, Brian G.....	213
Maxwell, Brian H.....	120
Maxwell, Bruce D.....	278, 280
Maynard, Elizabeth T.....	215
McCallister, Teneshia.....	128
McCloskey, William B.....	53, 211
McCullough, Patrick E. ....	318, 344
McDaniel, Kirk C.....	67
McDonald, Andrew J. ....	123
McElroy, Joseph S.....	57, 62
McLachlan, Stephane .....	196
McLean, Michael D. ....	253
Means, Nathan E. ....	328
Mechant, Els.....	31
Medlin, Case R. ....	11, 178, 200
Melander, Bo .....	182
Melaousoff, Svenja .....	244
Meloche, Christopher G.....	111, 120
Menalled, Fabian D.....	280
Menbere, Hiwot.....	12, 173, 199
Menéndez, Julio .....	84, 85, 86, 89
Mersie, Wondi.....	149
Mervosh, Todd L.....	71
Messersmith, Calvin.....	83, 158
Meyers, Matt T.....	238
Mickelson, James A. ....	113, 245
Milbrath, Lindsey R. ....	126, 186
Miller, Stephen D.....	93, 209, 287
Miller, Timothy W.....	77, 213

Mills, J. Anthony.....	20
Mirsky, Steven B.....	246
Mitchell, Jefferey P.....	165
Mithila, J.....	145, 253
Mitra, Sowmya.....	343
Miyazaki, Katsura.....	119
Moechnig, Michael.....	160
Mohler, Charles L.....	281
Moldenhauer, Karen.....	202, 314
Molin, William T.....	297
Molnar, Louis J.....	154
Monks, David W.....	260
Monnig, Nicholas H.....	195, 206
Moore, Jerry W.....	314
Moreira, Murilo S.....	36
Morgan, Gaylon D.....	40
Morishita, Don W.....	224
Mortensen, David A... 39, 74, 183, 226, 243, 246, 282,	290
Moss, Stephen R.....	332
Moyer, James R.....	154
Mueller, Thomas C.....	3, 149
Mueller-Warrant, George W.....	58
Mullahey, J. Jeffrey.....	64
Murphy, Stephen.....	244
Murphy, Tim R.....	55
Mutters, Randall.....	160

## N

Nadler-Hassar, Talia.....	144
Nagata, Russell.....	340
Nalewaja, John.....	158
Nandihalli, Ujjana.....	187
Nandula, Vijay K.....	88, 91, 134
Neal, Joseph C.....	350
Nelson, Larry R.....	232, 235
Nelson, Linda S.....	76
Neufeld, Jerry.....	224
Newton, Casey H.....	235
Nickels, Jerald K.....	178
Nissen, Scott J.....	144, 198, 254
Nord, Andrea.....	282
Norris, Robert F.....	227
Nzigidahera, B.....	268

## O

O'Donovan, John T.....	94
O'Sullivan, John.....	45
Ogwang, J. A.....	268
Okada, Miki.....	277
Oliver, Lawrence "Dick" R.....	137, 171

Olszyk, David M. ....	141
Orr, John E. ....	175
Overholt, W. A. ....	268
Owen, Micheal D.K. ....	109, 312

## P

Pan, Zhiqiang.....	310
Panneton, Bernard.....	23, 97
Park, Kee Woong.....	92
Parker, Chris.....	70
Parrish, Mark.....	174
Patterson, Melanie R. ....	16
Patzoldt, William L. ....	256
Pauls, Peter K. ....	34
Peachey, Ed.....	153
Peeper, Thomas F.....	200
Perez-Jones, Alejandro.....	258
Peskin, Nora.....	282
Peterson, Robert K.....	213
Philp, Alex.....	60
Piccioni, Emiliano.....	95
Pillai, Parthan.....	179
Polge, Nicholas D.....	334
Porpiglia, Peter J. ....	13, 172, 173
Porter, Don J.....	334
Porter, Richard M. ....	175
Portes, Emerson S.....	257
Poston, Daniel H. ....	88, 91, 134
Potter, Thomas.....	149
Powell, Jeff R. ....	34
Powles, Stephen.....	338
Prasad, Raj.....	233
Preston, Chris.....	198
Prostko, Eric P.....	228
Puri, A.....	269
Pérez de Fernández, Trinidad M.....	106

## R

Rainbolt, Curtis R.....	340
Ramsey, Craig L.....	276
Ratnayaka, Harish H. ....	297
Rayburn, Lane A. ....	313
Rector, Ryan J.....	53, 211
Reddy, Krishna N. ....	19, 88, 91, 130, 134, 136, 148, 161, 288, 329
Reed, Jim C.....	40
Regnier, Emilie.....	118, 247, 249
Rew, Lisa J.....	278
Reynolds, Daniel B. ....	20, 298
Rhodes, Gilbert N.....	62
Richards, Ruth.....	129

Richardson, Robert J. ....	26, 56, 348
Ricker, Dan B. ....	59
Riddle, Rachel.....	45
Riechers, Dean E. ....	143, 252, 294
Riha, Susan J. ....	123
Riley, Melissa B. ....	149
Rimando, Agnes M. ....	310
Riov, Joseph ....	302
Ritter, Ronald L.....	12, 173, 199
Robinson, Darren.....	27, 28
Roka, Fritz ....	64
Rothhouse, Jennifer.....	104
Rubin, Baruch ....	144, 302
Ruiz-Santaella, Juan Pedro .....	159, 321
Ruyet, Florent .....	162
Ryan, Matthew R.....	226, 290

## S

S., Krishnan.....	292
Salzman, Frederick P. ....	214, 262
Sanders, Jason C.....	49
Sankula, Sujatha.....	29
Sanyal, Debanjan.....	288, 353
Sapsford, Kenneth.....	94
Sauldubois, Audrey.....	295
Sawada, Hitoshi.....	96
Sbatella, Gustavo M. ....	93
Schemske, Douglas W. ....	125
Schmoll, Jerron ....	247
Schutte, Brian ....	118, 249
Schweitzer, Lee R. ....	58
Scott, Barbara A. ....	36, 87, 90
Sellers, Brent A.....	72
Senseman, Scott A.....	149
Setia, Nidhi ....	184
Shaner, Dale L. ....	105, 144, 146, 147, 198, 254
Sharma, Ashok K. ....	189
Sharma, Shiv D.....	135
Shaw, David R. ....	30, 223
Sheaffer, Craig C. ....	151
Shearer, Judy F. ....	270
Shields, Elson ....	243
Shilling, D. G.....	269
Shimizu, T. ....	172
Shirtliffe, Steven J. ....	44
Shivrain, Vinod K.....	314
Shortell, Robert R. ....	345
Shrestha, Anil ....	150, 165, 229
Shropshire, Christy.....	27, 28, 176
Sidahmed, M ....	43
Sikkema, Peter ....	27, 28, 176
Silberbush, Moshe ....	323

Simmons, Lori D.....	349
Singh, Harminder P.....	184, 284
Singh, Megh.....	135, 269
Singh, Samunder.....	300, 322, 333
Skibo, Andrew Z.....	283
Slaughter, David C.....	263
Smith, Elwin G.....	154
Smith, Larissa L.....	112
Smith, M. Cade.....	30, 298, 330, 331
Smith, Randy L.....	343
Smith, Richard G.....	280
Soltani, Nader.....	27, 28, 176
Sosnoskie, Lynn M.....	291
Spandl, Eric.....	352
Spears, Brian.....	240
Stachler, Jeff M.....	205
Stahlman, Phillip W.....	1, 209
Starke, Michelle R.....	203
Steckel, Lawrence E.....	32
Steenwerth, Kerri L.....	150
Steptoe, Paula J.....	142
Sterling, Tracy M.....	82, 297
Stetina, Kenneth C.....	131
Stewart, Barry R.....	330
Stoltenberg, David E.....	98, 117
Streibig, Jens C.....	251
Strek, Harry J.....	189
Stubbs, Donald R.....	267
Swanton, Clarence J.....	34, 100, 145, 244
Sweet, Robert D.....	2

## T

Talbert, Ronald E.....	337
Tao, Bo.....	158
Tarasoff, Catherine S.....	107
Tardif, Franois J.....	132
Tasker, Alan V.....	242
Taylor, James M.....	68, 342
Tayyar, Rana.....	275
Teasdale, John R.....	179
Teegerstrom, Trent.....	53
Teicher, Harald B.....	251
Tharayil, Nishanth.....	285
Thayer, Charles.....	240
Thomas, Walter E.....	26, 303
Thompson, Angela.....	62
Thurman, Nelson.....	194
Th�riault, Roger.....	97
Tierney, Dennis.....	192
Torell, Allen L.....	67
Trader, Melissa R.....	275
Tranel, Patrick J.....	143, 256, 294, 313

Trevors, Jack T. ....	34
Trezzi, Michelangelo M. ....	320
Tucker, Mark. ....	230

## U

Uhlig, Robert H. ....	56, 348
Umble, Jon ....	153
Unruh, Bryan ....	341
Upadhyaya, Mahesh K. ....	99
Urbano, Jose M. ....	81

## V

v.d. Weide, Rommie ....	182
Vaculin, Paul D. ....	175
Valverde, Bernal E. ....	336
Van Acker, Rene C. ....	196
VanGessel, Mark J. ....	36, 87, 90, 243
Vaughn, Kevin C. ....	78, 111, 120, 303
Vencill, William K. ....	142, 228, 301, 324
Vidal, Ribas A. ....	133, 257, 320
Volenberg, Dean S. ....	313
Vurro, Maurizio. ....	307

## W

Wagner, Jean. ....	321
Walker, R. H. ....	55
Walker, Timothy W. ....	16
Wallace, Russell W. ....	220
Walls, Carroll. ....	231
Walsh, Michael. ....	338
Warren, Ralph L. ....	189
Watanabe, O. ....	13
Watson, Elizabeth ....	149
Wauchope, Don ....	193
Weaver, Mark A. ....	128, 130, 131, 148
Webb, Jerry C. ....	178, 200
Webster, Eric P. ....	14, 15, 18, 80
Webster, Theodore M. ....	207, 228, 279, 325
Weinberg, Tsafir ....	354
Weirich, Jason W. ....	11, 178, 200
Weissmann, Sarit ....	316
Weller, Stephen C. ....	52, 168, 216, 264
Wells, L K. ....	54
Wersal, Ryan M. ....	271
West, Trevor ....	289
Westbrooks, Randy G. ....	239, 241
Westra, Philip. ....	144, 198, 209, 254
Westwood, James H. ....	299
Whitesides, Ralph E. ....	129
Whitson, Tom ....	236
Wilcut, John W. ....	26, 136, 303

Wiles, Lori J. ....	105
Wilkerson, Gail G. ....	223
Willcutt, M. Herbert. ....	225
Williams, Bill J. ....	21, 41, 204
Williams, Martin M. ....	219
Williamson, John D. ....	138
Willis, John B. ....	57, 59
Wilson, David O. ....	290
Wilson, Henry P. ....	49
Wilson, Robert G. ....	209, 274, 287
Witt, William W. ....	63
Wright, Glenn C. ....	211
Wright, Ronald S. ....	68, 342
Wyse, Donald L. ....	151

## X

Xing, Boashan. ....	285
---------------------	-----

## Y

Yager, Lisa Y. ....	75
Yamaji, Y. ....	13, 172
Yamashita, Masayuki. ....	96
Yan, Wengui. ....	202
Yasuor, Hagai. ....	302
Yeiser, Jimmie L. ....	232, 234
York, Alan C. ....	38, 207
Young, Dirk. ....	194
Young, James A. ....	73

## Z

Zablotowicz, Robert M. ....	16, 78, 148, 161, 329
Zamora, Diomides. ....	276
Zandstra, Bernard H. ....	56, 348
Zapiola, Maria L. ....	317
Zelaya, Ian A. ....	312
Zemetra, Robert S. ....	315
Zhang, Qin. ....	252
Zhang, Wei. ....	14, 15, 18, 80
Zhou, Jingkai. ....	83, 158
Ziska, Lewis H. ....	208
Zuluaga, María S. ....	24

## 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.

<b>Common or Code Name*</b>	<b>Trade Name</b>	<b>Manufacturer</b>
Acetochlor	Harness	Monsanto
Acifluorfen	Blazer	BASF
Aclonifen	Challenge	Bayer CropScience
Acrolein	Magnacide	Baker
Alachlor	Lasso	Monsanto
Alloxydim	Fervin	Bayer CropScience
Ametryn	Evik	Syngenta
Amicarbazone		Bayer CropScience
Amidosulfuron	Adret, Gratil	Bayer CropScience
Amitrole	Amitrol T	Bayer CropScience
Anilofos	Aniloguard	Ghardat
Asulam	Asulox	Bayer CropScience
Atrazine	Aatrex	Syngenta
	Atrazine	Terra
Azimsulfuron	Gulliver	DuPont
Beflubutiamid	Herbaflex	Ube Industries
Benazolin	Asset	Bayer CropScience
Benefin	Balan	Dow AgroSciences
Bensulfuron	Londax	DuPont
Bensulide	Prefar	Gowan
Bentazon	Basagran	BASF
Benzofenap	Taipan	Bayer CropScience
Bifenox	Modown	Bayer CropScience
Bispyribac	Regiment	Valent
Bromacil	Hyvar	DuPont
Bromoxynil	Buctril	Bayer CropScience
Butachlor	Machete	Monsanto
Butafenacil	Rebin, Inspire	Syngenta
Butoxydim	Falcon	Syngenta
Butylate	Sutan	Cedar
Cacodylic acid	Cotton-Aide HC	Monterey
Carbetamide	Carbetamex	Feinchemie
Carfentrazone	Aim, Shark	FMC
Chlorimuron	Classic	DuPont
Chlorotoluron	Dicuran	Syngenta
Chlorsulfuron	Glean, Telar	DuPont
Cinmethylin	Argold, Cinch	BASF
Clethodim	Select, Prism	Valent
Clodinfop	Topik	Syngenta
Clodinafop/propargy	Discover	Syngenta
Clomazone	Command	FMC
Clopyralid	Stinger	Dow AgroSciences
Cloransulam-mezthyl	Firstate	Dow AgroSciences
Cyanazine	Bladex	DuPont
Cycloate	RoNeet	Cedar
Cyclosulfamuron	Invest	BASF
Cycloxydim	Focus	BASF
Cyhalofop	Clincher	Dow AgroSciences
DCPA	Dacthal	Amvac
2,4-D	Several	Several



<b>Common or Code Name*</b>	<b>Trade Name</b>	<b>Manufacturer</b>
2,4-DB	Several	Several
Dazomet	Basamid	BASF
Desmedipham	Betamix	Bayer Crop Science
Desmetryn	Semeron	Syngenta
Dicamba	Banvel, Clarity	BASF
Dichlobenil	Casoron	Uniroyal
Dichlorprop	several	Bayer Crop Science
Diclofop	Hoelon	Bayer Crop Science
Diclosulam	Strongarm	Dow AgroSciences
Difenzoquat	Avenge	BASF
Diflufenican	Javelin	Bayer Crop Science
Diflufenzopyr	Distinct	BASF
Dimethenamid	Frontier	BASF
Diquat	Reward, Reglone	Syngenta
Dithiopyr	Dimension	Monsanto
Diuron	Karmex	DuPont
DSMA	several	several
Endothall	several	Atochem
EPTC	Eptam	Syngenta
Ethalfuralin	Sonalan	Dow AgroSciences
Ethametsulfuron	Muster	DuPont
Ethofumesate	Nortron, Prograss	Bayer Crop Science
Ethoxysulfuron	Sunrice	Bayer Crop Science
Fenoxaprop	Whip	Bayer CropScience
Fentrazamide	Lecs	Bayer CropScience
Flazasulfuron	Katana	Ishihara Sangyo
Florasulam	Frontline, Boxer	Dow AgroSciences
Fluazifop-P	Fusilade DX	Syngenta
Flucarbazone-sodium	Everest	Arvesta
Flufenacet	Axiom (flufenacet + metribuzin) Epic (flufenacet + isoxaflutole)	Bayer CropScience
Flufenpyr-ethyl	S-3153	Valent
Flumetsulam	Python, Broadstrike	Dow AgroSciences
Flumiclorac	Resource	Valent
Flumioxazin	Valor	Valent
Fluometuron	Cotoran others	Syngenta others
Flupyrsulfuron	Lexus	DuPont
Fluridone	Sonar	Dow AgroSciences
Flurchloridone	Racer	Syngenta
Fluroxypyr	Starane, Vista	Dow AgroSciences
Fluthiacet	Action	Syngentia
Fomesafen	Reflex, Flexstar	Syngenta
Foramsulfuron	Equip	Bayer CropScience
Fosamine	Krenite	Dupont
Glufosinate	Liberty, Rely	Bayer CropScience
Glyphosate	Roundup, Ultra, Rodeo TouchDown	Monsanto, Syngenta
Halosulfuron	Permit, Battalion	Monsanto
Haloxyfop	Verdict	Dow AgroSciences
Hexazinone	Velpar	DuPont
Imazamethabenz	Assert	BASF
Imazamox	Raptor	BASF
Imazapic	Cadre, Plateau	BASF
Imazapyr	Arsenal	BASF
Imazaquin	Scepter	BASF
Imazethapyr	Pursuit	BASF

<b>Common or Code Name*</b>	<b>Trade Name</b>	<b>Manufacturer</b>
Iodosulfuron	Husar	Bayer CropScience
Isoxaben	Gallery	Dow AgroSciences
Isoxaflutole	Balance	Bayer CropScience
Lactofen	Cobra	Valent
Linuron	Lorox	DuPont
	others	others
MCPA	several	several
MCPB	several	several
Mecoprop	MCPP, Mecopex	several
Mesotrione	Callisto	Syngenta
Metham	Metham Sodium	Amvac
Metolachlor	Dual	Syngenta
	Dual Magnum	
Metribuzin	Sencor, Lexone	Bayer CropScience
Metsulfuron	Ally, Escort	DuPont
MSMA	several	several
Napropamide	Devrinol	United Phosphorus
Naptalam	Alanap	Uniroyal
Nicosulfuron	Accent	DuPont
Norflurazon	Zorial, Solicam	Syngenta
Oryzalin	Surflan	Dow AgroSciences
Oxadiazon	Ronstar	Lesco
Oxasulfuron	Expert	Syngenta
Oxyfluorfen	Goal	Dow AgroSciences
Paraquat	Gramoxone Extra	Syngenta
	Gramoxone Max	
Pebulate	Tillam	Monterey
Pelargonic acid	Scythe	Dow AgroSciences
Pendimethalin	Prowl	BASF
Phenmedipham	Spin-Aid	Bayer CropScience
Picloram	Tordon	Dow AgroSciences
Picolinafen	Pico	BASF
Primisulfuron	Beacon	Syngenta
Prodiamine	Barricade	Syngenta
Prometon	Pramitol	Agriliance
Prometryn	Caparol	Syngenta
Pronamide	Kerb	Dow AgroSciences
Propanil	Stam	Dow AgroSciences
Propaquizafop	Shogun	Syngenta
Propoxycarbazone	Olympus	Bayer CropScience
Prosulfocarb	Boxer (in France)	Syngenta
Propazine	MiloPro	Griffin
Prosulfuron	Peak	Syngenta
Pyrazone	Pyramin	BASF
Pyrasulfuron-ethyl	Sirius	Bayer CropScience
Pyridate	Tough	Syngenta
Pyriothiobac	Staple	DuPont
Quinclorac	Facet, Paramount	BASF
Quinmerac	Fiesta	BASF
Quizalofop	Assure	DuPont
Rimsulfuron	Matrix, Basis	DuPont
Sethoxydim	Poast	BASF
	Poast Plus	
Siduron	Tupersan	DuPont
Simazine	Princep, others	Syngenta, others
Sulcotrione	Mikado, Galleon	Bayer CropScience
Sulfentrazone	Spartan, Authority	FMC
Sulfometuron	Oust	DuPont
Sulfosulfuron	Monitor,	Monsanto
	OutriderMaverick	
Tebuthiuron	Spike	Dow AgroSciences

<b>Common or Code Name*</b>	<b>Trade Name</b>	<b>Manufacturer</b>
Tepaloxymid	Equinox	BASF
Terbacil	Sinbar	DuPont
Terbutryn	Igran	Syngenta
Thiazopyr	Visor	Dow AgroSciences
Thifensulfuron	Pinnacle, Harmony	DuPont
Thiobencarb	Bolero	Valent
Tralkoxydim	Achieve	Syngenta
Triallate	FarGo	Monsanto
Triasulfuron	Amber, Fuego	Syngenta
Tribenuron	Express	DuPont
Triclopyr	Garlon	Dow AgroSciences
Trifloxysulfuron	Envoke	Syngenta
Trifluralin	Treflan, others	Dow AgroSciences, others
Triflusulfuron	Upbeet	DuPont
Vernolate	Vernam	Drexel

\* Not all common names have been approved by WSSA. Some herbicides are listed under both a proposed common name and a code number.

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### **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	

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\* 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	J.R. Hay
F.W. Slife	E.G. Rodgers
1971—W.A. Harvey	R.P. Upchurch
L.G. Holm	1976—A.P. Appleby
D.D. Hemphill	R.D. Ilnicki
1972—B.E. Day	D.E. Moreland
W.H. Minshall	1977—E.L. Knake
1973—E.K. Alban	C.G. McWhorter
W.R. Furtick	H.S. Friesen
R. Behrens	L. Southwick
G.C. Klingman	1978—O.H. Fletchall
1974—D.L. Klingman	J.L. Hilton
R.D. Sweet	H.M. LeBaron
P.W. Santelmann	D.W. Staniforth
L.L. Danielson	1979—H.P. Alley
1975—D.E. Davis	R.E. Frans

	K.C. Hamilton		A.D. Worsham
	T.J. Sheets	1990—	S.W. Bingham
	A.F. Wiese		R.W. Bovey
1980—	J.D. Bandeen		T.J. Monaco
	S.N. Fertig		E.W. Stoller
	C.L. Foy		E.W. Stroube
	L.S. Jordan		R.E. Talbert
	R.A. Peters	1991—	R.M. Devlin
1981—	J.F. Ahrens		T.L. Lavy
	L.H. Hannah		M. Newton
	W.F. Meggitt		C.J. Scifres
	R.R. Romanowski		B. Truelove
	C.R. Swanson		J.A. Young
1982—	J. Antognini	1992—	R.J. Aldrich
	G.H. Bayer		C.C. Dowler
	J.H. Dawson		S.O. Duke
	C.L. Switzer		C.G. Messersmith
	R.B. Taylorson		A.G. Ogg, Jr.
1983—	R.N. Andersen		J.V. Parochetti
	W.D. Carpenter	1993—	R.E. Doersch
	J.E. Gallagher		C.L. Elmore
	D.L. Linscott		R.E. Eplee
	L.W. Mitich		J.O. Evans
1984—	G.A. Buchanan		L.R. Oliver
	W.A. Gentner		D. Penner
	M.M. Schrieber		W.V. Welker
	R.L. Zimdahl	1994—	J.R. Abernathy
1985—	S.R. McLane		J.R. Baker
	J.F. Miller		J.F. Ellis
	W.J. Saidak		R.E. Hoagland
	E.E. Schweizer		G. Kapusta
	R.J. Smith, Jr.		W.A. Skroch
	J.B. Weber	1995—	E.F. Eastin
1986—	L.C. Burrill		A.S. Hamill
	R.D. Comes		K.K. Hatzios
	R.A. Evans		H.D. Tripple
	R.H. Schieferstein		H.J. von Amsberg
1987—	FM. Ashton		H.P. Wilson
	J.W. Herron	1996—	FL. Baldwin
	G.R. Miller		W.L. Barrentine
	M.G. Merkle		P.C. Bhowmik
	J.D. Nalewaja		J.C. Graham
	W.H. Vanden Born		FD. Hess
1988—	D.E. Bayer		A.E. Smith, Jr.
	G.H. Friesen	1997—	H.D. Coble
	M.C. McGlamery		R.G. Harvey
	J.A. Meade		R. Prasad
	A.R. Putnam		R.L. Rogers
	J.D. Riggleman		M. Singh
1989—	O.C. Burnside		W.W. Witt
	W.R. Mullison	1998—	J.L. Barrentine
	E.C. Spurrier		M.D. Devine
	G.R. Stephenson		A.G. Dexter
	L.M. Wax		C. V. Eberlein

S.D. Miller	2002—R.E. Blackshaw
P.S. Zorner	J.M. Chandler
1999—I. Morrison	J.D. Doll
D.S. Murray	J.C. Hall
R.F. Norris	D.R. Shaw
H.D. Skipper	S.C. Weller
D.C. Thill	2003—S. A. Dewey
R.D. Wauchope	R.M. Hayes
2000—L.K. Binning	R. Nishimoto
N.D. Camper	A. Watson
R. Charudattan	T. Whitson
J.S. Holt	J. Wilcut
D.L. Shaner	2004—B.J. Brecke
G.A. Wicks	J.L. Griffin
2001—C.E. Beste	A.E. Miller
R.R. Hahn	M.K. Upadhyaya
A. Legere	2005—D.D. Buhler
A. Martin	J.E. McFarland
R.D. Williams	M.D.K. Owen
G. Wills	C. Swanton

### Honorary Members\*

1974—Hans Gysin	1991—Okezie Akobundu
1975—A. John Speziale	1992—Jonathan Gressel
1976—Keith C. Barrons	1993—Hwan Seung Ryang
1978—John D. Fryer	1994—Peter Böger
1979—Menashe Horowitz	1995—Keith Moody
1980—Virgil H. Freed	1996—Su Shao Quan
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1982—Gideon D. Hill, Jr.	1998—Jens C. Streibig
1983—Shooichi Matsunaka	1999—Jost Harr
1985—Abed R. Saghir	2000—Allan Walker
1986—Beatriz L. Mercado	2001—Baruch Rubin
1987—Yang-han Li	2002—Karl Hurle
1988—Werner Koch	2003—Helmut Walter
1989—Tetsuotakema Tsu	2004—Aldo Alves
1990—Agustin Mitidieri	2005—Aurora M. Baltazar

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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
FD. Hess .....	1998–1999
J.M. Chandler .....	1999–2000
L.R. Oliver .....	2000–2001
C. V. Eberlein .....	2001–2002
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D.C. Thill .....	2004–2005



## NOTES

## NOTES

## NOTES

## PERSONAL TIME SCHEDULE

Time	Monday	Tuesday	Wednesday	Thursday
7:30				
8:00				
8:15				
8:30		View CDs For Wed- nesday	View CDs For Thurs- day	
8:45				
9:00				
9:15		Poster Sessions 8:30- 10:00	Poster Sessions 8:30- 10:00	
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	View CD's For Tuesday			
3:15				
3:30				
3:45				
4:00				
4:15	General Session and Awards Presenta- tions			
4:30				
4:45				
5:00				
5:15				
5:30			Business Meeting	
5:45				
6:00				
6:15				
6:30				
6:45	Awardee Reception & Member Social			
7:00				
7:15				
7:30				
7:45				
8:00				
8:15				
8:30				
8:45				