
61st Meeting

**WESTERN
SOCIETY
OF
WEED SCIENCE**

March 11-14, 2008

**Hyatt Regency Orange County
Anaheim/Garden Grove, California**



Please bring this program with you.

**WESTERN SOCIETY OF WEED SCIENCE
OFFICERS AND EXECUTIVE COMMITTEE
2007-2008**

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**Welcome To Anaheim/Garden Grove,
California**

Welcome to the 61st annual WSWS meeting in Anaheim, California. The Program Committee, Local Arrangements Committee, and the staff of the Hyatt Regency Orange County have worked together to arrange an exceptional meeting. Enjoy the meeting, visit with friends and new acquaintances, and come away with renewed energy and new ideas. The Program and Local Arrangements Committees wish everyone a successful and productive meeting.

**LOCAL ARRANGEMENTS COMMITTEE
MEMBERS**

**Nelroy Jackson, Chair
Carl Bell
Keith Duncan
April Fletcher
Carol Mallory-Smith**



Student
Presentation



Breakfast



Break



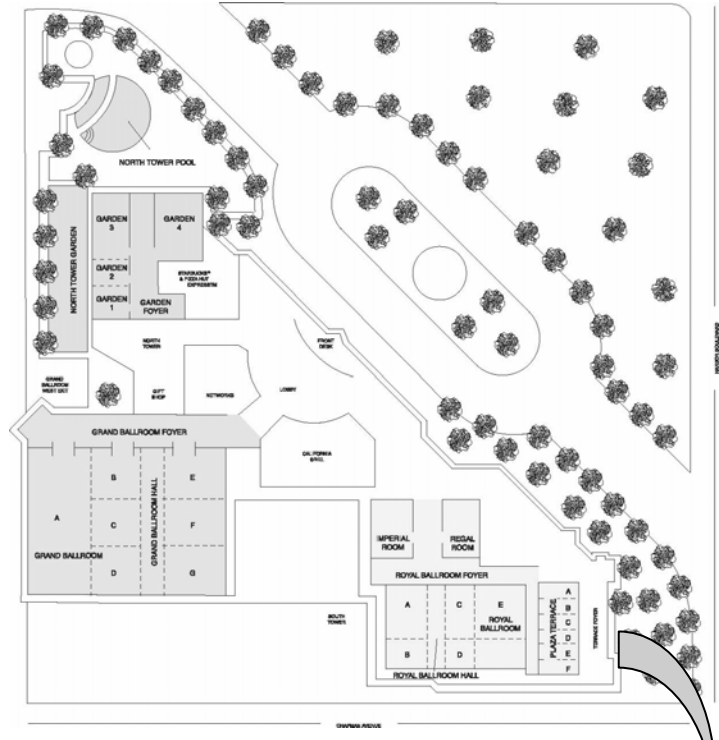
Reception

WSWS 2008 PROGRAM AT A GLANCE

Tuesday, March 11				
Poster Session 7:45 am - 9:15 am Authors of Odd # Posters Present Royal A & B				
General Session 9:30 am - 11:45 am Royal Ballroom				
Royal A & B	Royal C	Royal D	Royal E	Imperial
Poster Room Open 7:00 am to 5:00 pm	Project 3 Agronomic Crops 1:15-5:15 Oral Papers	Project 2 Hort. Crops 1:15-3:15 Discussion Session Elect Chair	Project 1 Range & Forest 1:15-3:15 Oral Papers Project 3 Agronomic Crops 3:30-5:30 Oral Papers	Project 6 Basic Sciences 3:30-4:45 Oral Papers
Wednesday, March 12				
Poster Session 7:45 am - 9:15 am Authors of Even # Posters Present Royal A & B				
Royal A & B	Royal C	Royal D	Royal E	Imperial
Poster Room Open 7:00 am to 5:00 pm	Project 3 Agronomic Crops 9:45-11:45 Discussion Session Elect Chair	Project 2 Hort. Crops 9:15-11:45 Oral Papers	Project 1 Range & Forest 9:15-11:45 Oral Papers	Project 4 Teaching & Technology Transfer 9:30-11:30 Discussion Session Elect Chair
WSWS Awards Luncheon 12:00 - 1:30 Garden 1 – 3 (North Tower)				
Royal A & B	Royal C	Royal D	Royal E	Imperial
Poster Room Open 7:00 am to 5:00 pm Remove posters	Project 3 Agronomic Crops Oral Papers 1:45-5:00 What's New in Industry 5:15-6:15	Special Symposium: Enhancing Weed Control Through Adjuvant Technology 1:40-4:50	Project 5 Wetlands & Wildlands Oral Papers 1:45-3:15 Project 1&5 Range & Wildlands 3:30-5:00 Joint Discussion Session Elect Chair	Project 6 Basic Sciences 1:45-3:15 Discussion Session Elect Chair 3:30-4:15 Oral Papers
Thursday, March 13				
WSWS Business Meeting Breakfast and Student Awards 6:30 am - 9:00 am Garden 1 – 3 (North Tower)				
Royal C	Royal D	Royal E		
Arundo / Phragmites Symposium Thursday 9:15 am-5:00 pm Friday 8.15 am - noon (Garden 4, N. Tower)	Education & Regulatory Section Special Symposium 9:15-11:30	Project 3 Agronomic Crops Oral Papers 9:15-12:00		

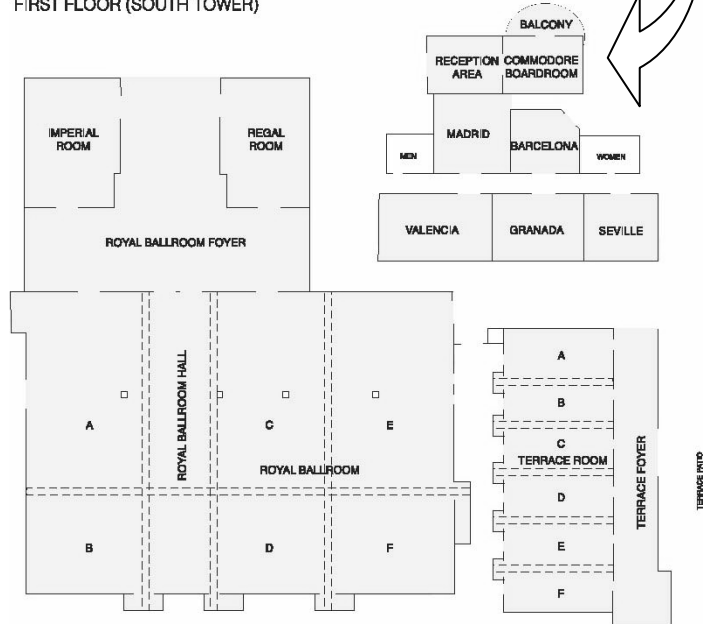
Hyatt Regency Orange County

Overview of Facility Grounds



Meeting Rooms

FIRST FLOOR (SOUTH TOWER)



WSWS SPECIAL EVENTS - MONDAY

- 8:00 am – 5:00 pm Executive Board Meeting – Valencia
- 6:00 pm – 11:00 pm Presentation Practice Room – Regal Room
- 6:00 pm – 11:00 pm Set-up Posters – Royal A & B
- 6:00 pm – 11:00 pm Set-up Commercial Displays – Royal Ballroom Hall
- 4:00 pm – 6:00 pm Meeting Registration – Royal Registration Desk
- 6:00 pm – 8:00 pm WSWS Members Welcome and Retirees Reception – Garden 1-3 North Tower

*Hosted by: Kassim Al-Khatib
Immediate Past President*

 *Compliments of Monsanto Company*

WSWS SPECIAL EVENTS - TUESDAY

- 6:30 am – 11:00 pm Presentation Practice Room – Regal Room
- 6:00 am – 7:30 am Graduate Student Breakfast – Barcelona (2nd floor)
- 7:00 am – 11:00 pm Sustaining Member Displays & Breaks – Royal Ballroom Hall
- 7:00 am – 4:00 pm Meeting Registration – Royal Registration Desk
- 8:00 am – 9:30 am Spouses Welcome Breakfast – Granada (2nd floor)

 *Compliments of Syngenta Crop Protection*

- 7:45 am – 9:15 pm Poster Session – Royal A & B Authors of Odd Numbered Posters Present
- 9:30 am – 11:45 am General Session – Royal Ballroom

 *Breaks - Compliments of BASF Corporation*

WSWS SPECIAL EVENTS - WEDNESDAY

6:30 am – 10:00 pm Presentation Practice Room – Regal Room

6:00 am – 7:30 am Graduate Student Breakfast – Barcelona
(2nd floor)

 *Compliments of Syngenta Crop Protection*

7:00 am – 11:00 pm Sustaining Member Displays
& Breaks – Royal Ballroom Hall

7:00 am – 4:00 pm Meeting Registration – Royal
Registration Desk

7:45 am – 9:15 am Poster Session – Royal A & B
Authors of Even Numbered Posters
Present

Remove all posters and displays after 5:00 pm

12:00 pm – 1:30 pm WSWS Awards Luncheon- Garden 1-3
(North Tower)


5:15 pm – 6:15 pm What's New in Industry – Royal C



*Breaks - Compliments of DuPont Crop Protection &
Dow AgroSciences*

WSWS SPECIAL EVENTS - THURSDAY

6:30 am – 9:00 am WSWS Business Breakfast and
Student Awards – Garden 1-3 North Tower

 *Compliments of BASF Corporation*

7:00 am – 11:00 am Sustaining Member Display – Royal
Ballroom Hall

12:15 pm – 1:30 pm Executive Committee Meeting
2007 Outgoing and 2008 New Officers &
Committee Chairs – Commodore
Boardroom

9:15 am – 5:00 Arundo/Phragmites Symposium – Royal C
(Continues Friday 8.15 am – Noon
in Garden 4, North Tower)

Tuesday Morning, March 11

Set up for Posters will be available between 6:00 pm and 11:00 pm on Monday, March 10.

Authors of Odd Numbered Posters will be present on Tuesday 7:45 – 9:15 am.

Authors of Even Numbered Posters will be present on Wednesday 7:45 – 9:15 am.

Posters must be removed after 5 pm Wednesday, March 12.

POSTER SESSION

Royal Ballrooms A & B

Chair:

*Dave Belles
Syngenta
Chandler, AZ*

Poster Session Business Meeting 7:30 am Wednesday
Royal Ballroom A & B – **Elect new Chair for 2010**

Project 1. Weeds of Range and Forest

Range Renovation: Multi-year Weed Management. Michael T. Edwards *, DuPont Crop Protection, Wilmington, DE. [1]

⌘ Interspecific Interactions between Black Henbane and Three Native Grasses. Jordana LaFantasie* and Stephen Enloe, University of Wyoming, Laramie. [2]

An Ethylated Seed Oil Adjuvant For Use In Invasive Weed Control Programs. Philip Westra, Colorado State University, Fort Collins, and William Bagley, Wilbur-Ellis, San Antonio, TX. [3]

Plant Community Response to African Rue Control with Three Herbicides. Tracy Sterling*, Laurie Abbott, Greg Bettmann, Kevin Branum, Nina Klypina, and Amber Vallotton, New Mexico State University, Las Cruces. [4]

⌘ Perennial Grass Tolerance to ALS Herbicides. Karl R. Israelsen*, Corey V. Ransom, Utah State University, Logan; and Thomas Monaco, USDA-ARS, Logan, UT. [5]

Longevity of Herbicide Efficacy on African Rue Plants. Nina Klypina*, Laurie Abbott, Greg Bettmann, Kevin Branum, Amber Vallotton, and Tracy Sterling, New Mexico State University, Las Cruces. [6]

Aerial Imagery to Quantify Impacts of Blackberry Rust Fungus (*Phragmidium violaceum*). Amy Peters*, Oregon State University, Myrtle Point; and Norman R. Harris, University of Alaska, Fairbanks. [7]

8 The Effects of DPX-KJM44 on Native and Non-Native Colorado Rangeland Species . Ryan Edwards*, University of Northern Colorado, Greeley. [8]

Site Characteristics Determine the Success of Prescribed Burning for Medusahead Control. Guy B. Kyser*, University of California, Davis; Morgan P. Doran, UC Cooperative Extension, Fairfield; Neil K. McDougald and Ronald N. Vargas, UC Cooperative Extension, Madera; Stephen B. Orloff, UC Cooperative Extension, Yreka; Robert G. Wilson, UC Cooperative Extension, Susanville; and Joseph M. DiTomaso, UC Davis. [9]

Yellow Nutsedge control in Potato with Imazosulfuron. Rick A. Boydston, USDA-ARS, Prosser, WA Joel Felix, Oregon State University, Ontario. [10]

Milestone® VM Plus (aminopyralid + triclopyr), a New Industrial Vegetation Management Product. Vanelle Peterson, Byron Sleugh*, Randy Smith, Jeff Nelson, Pat Burch, Mike Melichar; Dow AgroSciences; Mulino, OR; West Des Moines, IA; Indianapolis, IN; Calgary, Canada; Christiansburg, VA; and Indianapolis, IN, respectively. [11]

Project 2. Weeds of Horticultural Crops

Effect of Pre-transplant and Mid-season Herbicides on Newly Planted Strawberries. Timothy Miller and Carl Libbey*, Washington State University, Mount Vernon. [12]

Evaluation of Pre-emergence Herbicides in Stone Fruit Field Nurseries. Bradley D. Hanson*, USDA-ARS, Parlier, CA. [13]

8 Economics of Crop Rotation for Integrated Pest Management in Chile Pepper. Jessica L. Ebler*, James Libbin, Jill Schroeder, Stephen H. Thomas, New Mexico State University, Las Cruces; and Leigh Murray, Kansas State University, Manhattan. [14]

Glyphosate-resistant Hairy Fleabane (*Conyza bonariensis*) Documented in California. Anil Shrestha*, University of California, Parlier; Bradley D. Hanson, USDA-ARS, Parlier; and Kurt J. Hembree, University of California Cooperative Extension, Fresno. [15]

Activity Density and Weed Seed Predation Potential of Ground Beetles in Annual Row Crops of the Pacific Northwest. Ed Peachey*, Alysia Greco, Jessica Green, Oregon State University, Corvallis; and Rick Boydston, USDA-ARS, Prosser, WA. [16]

Project 3. Weeds of Agronomic Crops

Safflower tolerance to Sulfentrazone . Brian M. Jenks, Shana Mazurek, and Gary P. Willoughby*. North Dakota State University, Minot. [17]

A Second Year Assessment of Long-Term Viability of Glyphosate-Resistant Cropping Systems-Measuring the Seedbank. Patricia M. Nielsen*, Lori A. Howlett, Robert G. Wilson, Gustavo M. Sbatella, Univ. of Nebraska, Scottsbluff; Micheal D. K. Owen, Iowa State Univ., Ames; David R. Shaw, Mississippi State Univ.; Stephen C. Weller, Purdue Univ., West Lafayette; David Jordon, North Carolina State Univ., Raleigh; and Bryan G. Young, Southern Illinois Univ., Carbondale. [18]

Lentil Tolerance to Linuron, Diuron, and KIH-485. Brian M. Jenks, Gary P. Willoughby, Shanna A. Mazurek, and Kent R. McKay*, North Dakota State University, Minot. [19]

⌘ Organic Transition Cropping Systems for Weed Management in Eastern Washington. Randall Stephens*, Amanda Snyder, Washington State University, Pullman; Robert Gallagher, Pennsylvania State University, University Park; Dennis Pittman, Kate Painter, Ian C. Burke, E. Patrick Fuerst, and Richard Koenig, Washington State University, Pullman. [20]

Searching For Weed Control Options in Brown Mustard. Robert K. Higgins*, Drew J. Lyon, University of Nebraska Panhandle Research & Extension Center, Scottsbluff. [21]

Fall vs Spring Application of Sulfentrazone in Chickpea (*Cicer arietinum*). Eric N. Johnson*, Agriculture and Agri-Food Canada, Scott, SK, Robert E. Blackshaw, Agriculture and Agri-Food Canada, Lethbridge, AB, Ken L. Sapsford, and Frederick A. Holm, University of Saskatchewan, Saskatoon. [22]

⌘ Determination of Russian Thistle Epicuticular Wax Density and Composition in Response to Water Stress. Lillian Kuehl*, Ian C. Burke, Washington State University, Pullman; and Frank L. Young, USDA-ARS, Pullman, WA. [23]

DuPont ExpressSun Trait with Pioneer 63N81 Sunflower Hybrid and DuPont Herbicide Systems . James D. Harbour*, Michael T. Edwards, Robert N. Rupp, Jeff Meredith, DuPont Crop Protection, Wilmington, DE; Eric Hoeft, Pioneer Hybrid International, Inc., Woodland, CA. [24]

DuPont Affinity products tankmixed with Starane NXT, Cleanwave or Florasulam. Michael T. Edwards*, Eric P. Castner, James D. Harbour, C. William Kral and Jeff H. Meredith, DuPont Crop Protection, Wilmington, DE. [25]

⌘ The effects of PH on *Lactuca serriola* germination. Cherie Flint*and Ian Burke, Washington State University, Pullman. [26]

Effect of No-till, Deep Plowing, and Herbicide-resistant Winter Wheat on Jointed Goatgrass Population Dynamics. Frank L. Young*; Laylah S. Bewick; Eric Zakarison; Joseph P. Yenish; and John W. Burns, Washington State University, Pullman. [27]

Yellow Nutsedge Control in Roundup Ready Alfalfa. Mick Canevari* and Don Colbert, University of California Cooperative Extension, Stockton. [28]

A Second Year Assessment of the Long-Term Viability of Glyphosate-Resistant Cropping Systems - Measuring Weed Density. Lori A. Howlett*, Patricia M. Nielsen, Robert G. Wilson, Gustavo M. Sbatella, University of Nebraska, Scottsbluff; Micheal D. K. Owen, Iowa State University, Ames; David R. Shaw, Mississippi State University, Mississippi State, MS; Stephen C. Weller, Purdue University, West Lafayette; David Jordon, North Carolina State University, Raleigh; and Bryan G. Young, Southern Illinois University, Carbondale. [29]

Volunteer Creeping Bentgrass Control in Kentucky Bluegrass Seed Production with Mesotrione. Marvin D. Butler*, Richard P. Affeldt and Claudia K. Campbell, Oregon State University, Madras. [30]

Answers to some application issues and pesticide interactions with glyphosate in Roundup Ready sugar beet. J. Daniel Henningsen*, Don W. Morishita, and Donald L. Shouse, University of Idaho, Twin Falls. [31]

Cross-resistance Patterns to ALS- and ACCase- inhibiting Herbicides in One Italian Ryegrass Population from Oregon. Alejandro Perez-Jones and Carol Mallory-Smith, Department of Crop and Soil Science, Oregon State University, Corvallis. [32]

Adjuvant Class Screening with Propoxycarbazone for Control of Downy Brome. Angela J. Kazmierczak* and Kirk A. Howatt, North Dakota State University, Fargo. [33]

Herbicide Solution pH Effect on Control of Downy Brome and Wild Oat. Angela J. Kazmierczak* and Kirk A. Howatt, North Dakota State University, Fargo. [34]

Weed Control in Alfalfa Using Flumioxazin (Chateau). Erin L. Taylor* University of Arizona Cooperative Extension, Phoenix; and Kevin Rice, University of Arizona Cooperative Extension, Casa Grande. [35]

Weed Control Possibilities for Native Grasses. Barbara Hinds-Cook*, Daniel Curtis, Bill Brewster, Carol Mallory-Smith, and Andy Hulting Oregon State Univ., Corvallis. [36]

♣ Control of Foxtail Barley (*Hordeum jubatum* L.) in Irrigated Pastures Using Imazapic. Randall D. Violet*, Abdel O. Mesbah, and Stephen D. Miller, University of Wyoming, Laramie. [37]

Roundup Ready Alfalfa: Effect of Weed Control on Stand Establishment and Productivity . Edward Davis* and Fabian Menalled, Montana State University, Bozeman. [38]

Control of Glyphosate-resistant Alfalfa with Herbicides. Steven R. King, SARC-Montana State University, Huntley. [39]

Dry Pea Tolerance to Linuron, Diuron, and KIH-485. Brian M. Jenks, Gary P. Willoughby, Shanna A. Mazurek, and Lee Novak*, North Dakota State University, Minot. [40]

Evaluation of Herbicides for Camelina sativa, A New Crop for the Central Great Plains. Alan Helm*, Colorado State University Extension, Julesburg; Curtis Thompson, Kansas State University, Garden City; Drew Lyon, University of Nebraska, Scottsbluff. [41]

Herbicide-resistant Weeds in the Western United States. Steven King, SARC-Montana State University, Huntley; Steven Seefeldt, University of Alaska, USDA-ARS, Fairbanks; Monte Anderson, Bayer CropScience, Spangle WA; Craig Alford, DuPont Crop Protection, Wilmington, DE; John O'Barr, BASF, Pasco WA. [42]

Confirmation of ALS-Resistant Cheat and Japanese Brome in Kansas. Dallas E. Peterson, Kansas State University, Manhattan and Curtis R. Thompson*, Kansas State University, Garden City. [43]

Can Drift Reduction Adjuvants Increase Weed Efficacy?. Jerry L. Ries and Richard K. Zollinger, North Dakota State University, Fargo. [44]

Deposition Adjuvants for Enhancing Wild Oat and Downy Brome Control. Michael H. Ostlie and Kirk A. Howatt, North Dakota State University, Fargo. [45]

Project 4. Teaching and Technology Transfer

Chemigation and Sprinkler Incorporation Systems for Small Plot Research. JaNan Farr*, Justin Wheeler, and Pamela J. S. Hutchinson, University of Idaho, Aberdeen. [46]

8 Developing an Extension Identification Guide for Common Weeds of the Yard and Garden. Brenda J. Lowry*, Ralph E. Whitesides, and Steven A. Dewey, Utah State University, Logan. [47]

Strategic Planning and Decision-making: How the Weed Science Society of America (WSSA) Board of Directors Decides What to do. Tom C. Mueller*, University of Tennessee, Knoxville, and John J. Jachetta, Dow AgroSciences, LLC, Indianapolis, IN. [48]

Project 5. Wetlands & Wildlands

Water Use Analysis of Greenhouse Grown Weeds Common on the Leasburg Canal System in Dona Ana County, New Mexico. Cheryl Fiore*, Jill Schroeder, April Ulery, New Mexico State University, Las Cruces; and Leigh Murray, Kansas State University, Manhattan. [49]

8 Sago Pondweed (*Stuckenia pectinatus*) Response to Simulated Dry Canal Applications of Imazamox, Imazapyr, Flumioxazin, Fluridone, and Penoxsulam. Joseph Vassios, Scott Nissen, Colorado State University, Ft. Collins. [50]

Broadleaf Herbicide Effects on Established Native Forbs, Shrubs, and Grasses. James R. Sebastian* and K.G. Beck, Colorado State University, Fort Collins. [51]

USU Wildland Weed Mapping Methods Training Supplement. Kimberly A. Edvarchuk* and Steven A. Dewey, Utah State University, Logan. [52]

Project 6. Basic Sciences

Comparative Rates of Metabolism of Atrazine, Propazine, Ametryn and Metribuzin, In 19 Soils with Different Histories of Triazine Use. Dale Shaner* USDA-ARS, Fort Collins, CO; Brien Henry, USDA-ARS, Mississippi State, MS; Jason Krutz, USDA-ARS, Stonevill, MS; Curtis Rainbolt, University of Florida, Belle Glade; Michael Poteet, Hawaii Agriculture Research Center, Aiea. [53]

Environmental and Genetic Effects on Seed Dormancy and Germination in Jointed Goatgrass. Lynn Fandrich* and Carol A. Mallory-Smith, Oregon State University, Corvallis; Tony D. White, Monsanto Company, Hannibal, MO; Thomas F. Peeper and Amber Roberson, Oklahoma State University, Stillwater; Joseph P. Yenish, Washington State University, Pullman. [54]

Utilizing R Software Package for Dose Response Studies: The Concept and Data Analysis. Steven Z. Knezevic, University of Nebraska, Concord, J. C. Streibig and C. Ritz, Royal Veterinary and Agricultural Univ., Copenhagen, Denmark. [54a]

Tuesday Morning, March 11

9:00 **New WSWS Member Orientation** – Phil Banks, WSWS Business Manager – Imperial

Tuesday Morning, March 11

GENERAL SESSION

Royal Ballroom

9:30 Introductions and Announcements
*Moderator: Dan Ball
WSWS President-Elect
Oregon State University
Pendleton*

9:40 Welcome to Anaheim: Anaheim Orange County Visitor and Convention Bureau

- 9:50 WWS Presidential Address: Personal Reflections on a Career in Weed Science. Looking Back, While Walking Forward. [55]
Ron Crockett,
Vancouver, WA.
- 10:15 National and Regional Weed Science Societies: Director of Science Policy Update. [56]
Lee Van Wychen,
Director of Science Policy,
Washington, D.C.
- 10:30 Exotic Marine Plants: A New Invasive Pest Concern. [57]
Lars Anderson
USDA-ARS Exotic Invasive Species Research
Davis, CA
- 11:00 Preventing Invasive Species Transport on Boats Kept in Saltwater. [58]
Leigh Johnson, Marine Advisor
University of California Cooperative Extension
Sea Grant Extension Program
San Diego, CA.
- 11:30 Update on the new journal, Invasive Plant Science and Management. [59]
Joe DiTomaso, Editor
University of California, Davis
- 11:45 Adjourn

Tuesday Afternoon, March 11

PROJECT 3: WEEDS OF AGRONOMIC CROPS **Royal C**
Oral Presentations

Chair and Moderator: *Steve King*
 Montana State University
 Huntley

- 1:15 2,4-D Resistant Prickly Lettuce (*Lactuca serriola* L.) in Washington. Ian C. Burke*, Joseph P. Yenish, Dennis Pittmann, Washington State University, Pullman; and Robert Gallagher, Pennsylvania State University, University Park. [60]
- 1:30 ⚔ Efficacy of Nicosulfuron and Rimsulfuron in Acetolactate Synthase (ALS) Resistant Grain Sorghum. D. Shane Hennigh* and Kassim Al-Khatib, Kansas State University, Manhattan; and Mitch R. Tuinstra, Purdue University, West Lafayette, IN. [61]
- 1:45 New Technologies to Manage Weeds in Grain Sorghum. Kassim Al-Khatib, Kansas State University, Manhattan; Mitch R. Tuinstra, Purdue University, West Lafayette, IN; David L. Regehr*, D. Shane Hennigh,

and Kellan Kershner, Kansas State University, Manhattan. [62]

- 2:00 ⚡ Absorption and Translocation of 2,4-D in Resistant Prickly Lettuce. Dilpreet S. Riar*, Ian C. Burke and Joseph P. Yenish, Washington State University, Pullman, WA. [63]
- 2:15 Weed Control in Sorghum with Pyrasulfotole. Amy M. Wyman*, Greg W. Hudec, Charles P. Hicks and Michael Weber, Bayer CropScience, RTP, NC. [64]
- 2:30 ⚡ Sunflower Tolerance to Imazamethabenz. Shanna A. Mazurek*, Brian M. Jenks, and Gary P. Willoughby. North Dakota State University, Minot. [65]
- 2:45 Broadleaf Weed Control in Tribenuron Tolerant Sunflower with Preemergence Followed by Sequential Postemergence Herbicides. Richard N. Arnold*, Michael K. O'Neill and Dan Smeal, New Mexico State University Agricultural Science Center, Farmington. [66]
- 3:00 ⚡ Tillage Affects Imazamox Carryover in Yellow Mustard. Jonquil Rood*, Traci Rauch, Donn Thill, Bahman Shafii, University of Idaho, Moscow; Dan Ball, Larry Bennett, Oregon State University, Pendleton; Joe Yenish, Rod Rood, John Nelson, Washington State University, Pullman. [67]

3:15  **Break - Compliments of BASF Corporation**

- 3:30 ⚡ Downy Brome Control with Herbicides in No-Till Hard Red Spring Wheat. Michael H. Ostlie and Kirk A. Howatt, North Dakota State University, Fargo. [68]
- 3:45 Pyroxsulam: Grass and Broadleaf Weed Control in Winter Wheat. Monte R. Weimer*, Brett B. Oemichen, Roger E. Gast, Harvey H. Yoshida, and Mark A. Peterson. Dow AgroSciences, Indianapolis, IN. [69]
- 4:00 ⚡ A Survey of Italian ryegrass (*Lolium multiflorum*) Herbicide Resistance in Northern Idaho and Eastern Washington. Seth A. Gersdorf* and Donn C. Thill, University of Idaho, Moscow. [70]
- 4:15 Ryegrass Management with Pyroxsulam in Oklahoma Winter Wheat. B. Heath Sanders* and Thomas F. Peeper, Oklahoma State University, Stillwater. [71]
- 4:30 Rotational Crop Response Following Application of Pyroxsulam in Wheat. Brett Oemichen*, Monte R. Weimer, Roger Gast, and Mark Peterson, Dow AgroSciences, Indianapolis, IN. [72]
- 4:45 Mannagrass Control in Annual Ryegrass Grown for Seed. Daniel Curtis*, Bill Brewster, Barbara Hinds-

Cook, Carol Mallory-Smith and Andy Hulting, Oregon State University, Corvallis. [73]

5:00 California Brome Biology and Management in Grass Seed Cropping Systems. Andrew G Hulting*, Karin Neff and Carol Mallory-Smith, Oregon State University, Corvallis. [74]

Tuesday Afternoon, March 11

PROJECT 2. WEEDS OF HORTICULTURAL CROPS Royal D
Discussion Session

Chair and Moderator: *Tim Miller*
Washington State University
Mount Vernon

1:15 – 3:15 Discussion Topic:

The Problem of Off-Label Herbicide Recommendations in Horticultural Crops.

Elect Session Chair for 2010


3:15  **Break - Compliments of BASF Corporation**

Tuesday Afternoon, March 11


PROJECT 1: WEEDS OF RANGE & FOREST Royal E
Oral Presentations

Chair and Moderator: *Lars Baker*
Fremont Co. Weed & Pest
Lander, WY.

1:15 Fall applications of Rimsulfuron in Rangelands for the Control of Downy Brome and Medusahead. Craig M. Alford*, Ronnie G. Turner, Jerry R. Pitts, Michael T. Edwards, Norman D. McKinley, C. William Kral, John D. Cantlon, Roxanne K. Gutschenritter DuPont Crop Protection, Wilmington, DE. [75]

1:30  Soil Characteristics Associated with Downy Brome Invasion of a Wyoming Rangeland. Caley Gasch-Salava* and Stephen Enloe, University of Wyoming, Laramie. [76]

1:45 Integrated GIS Based Invasive Species Management. John L. Baker* and Kim K. Johnson, Fremont County Weed and Pest, Lander, WY. [77]

2:00  Probability of Occurrence Maps for Invasive Weeds using only Weed Presence Locations. Melissa Bridges*, Thomas J. Stohlgren, Paul H. Evangelista, Sunil Kumar, Philip Westra, and Robin M. Reich, Colorado State University, Fort Collins. [78]

- 2:15 Integrating Herbicides and Perennial Grass
Revegetation for Weed Suppression in Pasture and
Non-Crop Areas in Northern California. Rob Wilson*,
University of California Cooperative Extension,
Susanville; Steve Orloff, UC Cooperative Extension,
Yreka; Don Lancaster, UC Cooperative Extension,
Alturas; Joseph DiTomaso, UC, Davis; Harry Carlson,
and Don Kirby, University of California IREC,
Tulelake. [79]
- 2:30 ☞ The Effects of *Puccinia jaceae* on Yellow Starthistle
Competition and Growth. Jon M. O'Brien*, Joseph M.
DiTomaso, Guy B. Kyser, University of California,
Davis, and Dale M. Woods, California Department of
Food and Agriculture. [80]
- 2:45 Incubator for Invasive Plants: A Survey of Invasive
Plants on the Arizona State University Tempe campus.
Amy E. Coe* and John H. Brock, Applied Biological
Sciences, Arizona State University Polytechnic, Mesa.
[81]
- 3:00 ☞ Greasewood (*Sarcobatus vermiculatus*), Rubber
Rabbitbrush (*Chrysothamnus nauseosus*) and Plant
Community Response to Chlorsulfuron and
Metsulfuron. Jordana LaFantasie*, Stephen Enloe,
Andrew Kniss, Mark Ferrell, University of Wyoming,
Laramie. [82]
- 3:15 ☞ **Break - Compliments of BASF Corporation**

Tuesday Afternoon, March 11

PROJECT 3. WEEDS OF AGRONOMIC **Royal E**
Oral Presentations

- Moderator:** *Ed Davis*
Montana State University
Bozeman
- 3:30 Field Data Collection with a Tablet Computer. Richard
P. Affeldt*, Oregon State University, Madras. [83]
- 3:45 Evaluation of Roundup Ready and Liberty Link Cotton
Systems for Sharppod Morningglory Control. Paul A.
Baumann, Travis W. Janak, and Matt E. Matocha,
Texas Cooperative Extension, College Station. [84]
- 4:00 Evaluation of Weed Control in Winter Canola in the
Southern Great Plains. Joshua A. Bushong* Thomas F.
Peeper, Mark C. Boyles, and B. Heath Sanders,
Oklahoma State University, Stillwater. [85]
- 4:15 Tolerance of an oil seed crop, Lesquerella, to
preemergence herbicides. William B. McCloskey*,
University of Arizona, Tucson; and David Dierig,
USDA-ARS Arid Land Agricultural Research Center,
Maricopa, AZ. [86]

- 4:30 Weed Control in Direct-Seeded Field Pea. Gregory Endres* and Blaine Schatz, North Dakota State University, Carrington. [87]
- 4:45 Broadleaf Weed Control in Dry Beans with Preemergence Followed by Sequential Postemergence Herbicides. Richard N. Arnold*, Michael K. O'Neill and Dan Smeal, New Mexico State University Agricultural Science Center, Farmington. [88]
- 5:00 A Cropping Systems Approach to Managing Soybean Cyst Nematode and Winter Annual Weeds. J. Earl Creech*, University of Nevada Cooperative Extension, Fallon; Valerie A. Mock, and William G. Johnson, Purdue University, West Lafayette, IN. [89]
- 5:15 Combining Weed and Feed Treatments for Winter Wheat. Robert N. Klein* and Gordon E. Hanson, University of Nebraska WCREC, North Platte. [90]

Tuesday Afternoon, March 11

PROJECT 6. BASIC SCIENCES

Imperial

Oral Presentations

Chair and Moderator:

*Lynn Fandrich
Ft. Collins, CO*

- 3:30 ⚔ Interspecific Hybrids Between Spotted and Diffuse Knapweed in North America and the Implications for Management. Amy C. Blair* and Ruth A. Hufbauer, Colorado State University, Fort Collins. [91]
- 3:45 Leafy Spurge Prairie Populations and Mycorrhizae. Terence McGonigle* and Cameron Nykoliation, Brandon University, Brandon, MB, Canada. [92]
- 4:00 ⚔ Imazamox Absorption and Metabolism by Eurasian Watermilfoil (*Myriophyllum spicatum*). Joseph Vassios*, Scott Nissen, Galen Brunk, Colorado State University, Ft. Collins. [93]
- 4:15 Comparing Aminopyralid and Clopyralid Absorption and Translocation in Canada Thistle. Bekir Bukun*, Scott J. Nissen, Galen Brunk and Phil Westra, Colorado State University, Ft. Collins. [94]
- 4:30 ⚔ Influence of Other Herbicides on BAS 800H Absorption and Translocation in Winter Wheat. John C. Frihauf*, Kansas State University, Manhattan; Phillip W. Stahlman, Kansas State University Agricultural Research Center-Hays; Kassim Al-Khatib, Kansas State University, Manhattan; and Leo D. Charvat, BASF Corporation, Lincoln, NE. [95]

4:45 ⌘ Seed Biology of Galega officinalis. Michelle Oldham* and Corey Ransom, Utah State University, Logan. [95a]

Wednesday Morning, March 12

POSTER SESSION

Royal A & B

Chair: Dave Belles
Syngenta
Chandler, AZ

Authors of Even Numbered Posters will be present on
Wednesday 7:45 – 9:15 am

Posters must be removed after 5:00 pm Wednesday.

Wednesday Morning, March 12

9:00 **New WWS Officer Orientation** - Phil Banks,
WWS Business Manager – Imperial

Wednesday Morning, March 12

PROJECT 3: WEEDS OF AGRONOMIC CROPS **Royal C**
Discussion Session

Chair: Steve King
Montana State University
Huntley

9:45- 11:45 Discussion Topic:

**“Growing crops for biofuels and the potential effects on
cropping systems and weeds in western agriculture”**

Elect Project Chair for 2010

Wednesday Morning, March 12

PROJECT 2: WEEDS OF HORTICULTURAL CROPS **Royal D**
Oral Presentations

Chair and Moderator: Tim Miller
Washington State University
Mount Vernon

9:15 Efficacy of Topramezone and Tembotrione Herbicides
in Sweet Corn: Effect of Atrazine Rate, Adjuvants, and
Timing . Ed Peachey*, Oregon State University,
Corvallis; Marty Williams, USDA, Urbana, IL; and
Rick Boydston, USDA, Prosser, WA. [96]

9:30 ⌘ Using Brassicaceae Seedmeals as a Bioherbicide in
Fresh Carrot Production. Lydia A. Clayton* and
Donald C. Thill, University of Idaho, Moscow, ID. [97]

- 9:45 Mustard Seed Meal suppresses Weeds in Potato and Peppermint. Rick A. Boydston, USDA-ARS, Prosser, WA. [98]
- 10:00 Cover Crop Choice Affects Overwintering Weeds in Pacific Northwest Organic Vegetables. Tim Miller, Tyler Breum, Christiane Steen, and Carl Libbey, Washington State University, Mount Vernon. [99]
- 10:15 Evaluation of Herbicide and Fertilizer Programs for Weed Management in Amenity Turf. Cheryl Wilen*, University of California Statewide IPM Program, South Coast, CA; and J. Michael Henry, University of California Cooperative Extension, Riverside County, CA. [100]
- 10:30 Evaluation of Postemergence Herbicides for Khakiweed Control in Turf. Kai Umeda, University of Arizona Cooperative Extension, Phoenix. [101]
- 10:45 Off-target Movement Potential of Two Oxyfluorfen Formulations. Jesse Richardson, Barat Bisabri, Jeff Nelson, James Mueller and Roger Gast, Dow AgroSciences, Indianapolis, IN. [102]
- 11:00 BAS 800H: A New Herbicide for Use in Tree Fruit and Nut Crops. Philip H. Munger*, John H. O'Barr, Max A. Landes, Kyle E. Keller, BASF Corporation, Research Triangle Park, NC. [103]
- 11:15 Hairy Nightshade Critical Interference Period in Potato. Pamela J.S. Hutchinson*, JaNan Farr, and Justin Wheeler, University of Idaho, Aberdeen Research and Extension Center. [104]
- 11:30 Weed Control and Potato Crop Safety with Chemigated Dimethenamid-p Applied Early Postemergence. Pamela J.S. Hutchinson and Justin J. Wheeler*, University of Idaho, Aberdeen. [105]

Wednesday Morning, March 12

PROJECT 1: WEEDS OF RANGE & FOREST **Royal E**
Oral Presentations

Chair and Moderator: *Lars Baker*
Fremont Co. Weed & Pest
Lander, WY

- 9:15 Rush Skeletonweed (*Chondrilla juncea*); Only Four Genotypes Found in North America. John Gaskin, USDA ARS, Sidney, MT Mark Schwarzlaender, University of Idaho, Moscow. [106]
- 9:30 ⚔ Prairie Community Response to Aminopyralid. Travis L. Almquist* and Rodney G. Lym, North Dakota State University, Fargo. [107]

- 9:45 Prickly Lettuce Recruitment and Control in CRP Land in Eastern Washington. Randall Stephens* and Ian C. Burke, Washington State University, Pullman. [108]
- 10:00 Noxious Weed and Invasive Plant Control with GF-2050, a New Rangeland and Pasture Product from Dow AgroSciences. Mary B. Halstvedt* and Vanelle F. Peterson, Dow AgroSciences, Billings, MT and Mulino, OR; Celestine A. Duncan, Weed Management Services, Helena, MT; Stephen F. Enloe, University of Wyoming, Laramie; and Rob G. Wilson, University of California, Susanville. [109]
- 10:15 Use of Aminopyralid in Habitat Restoration Projects. Vanelle Peterson*, Dow AgroSciences, Mulino, OR; Dean Gaiser, Eco-Logical Management, Newman Lake, WA; Jerry Benson, BFI Native Seeds, Moses Lake, WA; and Mike Finch, Washington Dept of Fish and Wildlife, Creston, WA. [110]
- 10:30 Canada Thistle Control from Combinations of Aminopyralid and Perennial Grasses. Robert G. Wilson*, University of Nebraska, Scottsbluff; Scott J. Nissen, Colorado State University, Ft. Collins; and Stephen Enloe, Auburn University, Auburn, AL. [111]
- 10:45 Effect of Aminopyralid on Non-target Vegetation Following Aerial Application. Celestine Duncan*, Weed Management Services, Helena; Andy Kulla, USDA Forest Service, Missoula; Mary Halstvedt, Dow AgroSciences, Billings, MT. [112]
- 11:00 Does Adding Diflufenzopyr + Dicamba to Auxinic Herbicide Treatments Improve Fall Russian Knapweed Control. Stephen F. Enloe*, Auburn University, Auburn AL. [113]
- 11:15 Weed Management in Pasture and Rangeland with Propoxycarbazone. Charlie Hicks*, Tom Kleven and Mary Paulsgrove, Bayer CropScience, Research Triangle Park, NC. [114]
- 11:30 Effect of Herbicides on Butterflybush Control in Forestry and Riparian Areas. Amy Peters* and Cassie Bouska, Oregon State University, Myrtle Point; Tim Miller, Washington State University, Mt. Vernon; and Chuck Cole, Oregon State University, Corvallis. [115]

Wednesday Morning, March 12

PROJECT 4: TEACHING AND TECHNOLOGY TRANSFER


Discussion Section

Imperial

Chair and Moderator:

*Anita Dille
Kansas State University
Manhattan*

9:30 – 11:30 Discussion Topic:

- 3:00 Glyphosate Resistant Sugarbeet in Wyoming: A Look into the Future. Andrew R. Kniss, University of Wyoming, Laramie. [121]
- 3:15  **Break-Compliments of DuPont Crop Protection & Dow AgroSciences**
- 3:30 BAS 800H: A New Herbicide for Preplant Burndown and Preemergence Dicot Weed Control. Rex Liebl, Helmut Walter, Steven Bowe*, Tom Holt and Dan Westberg, BASF Corporation, Research Triangle Park, NC. [122]
- 3:45 Preplant Weed Control and Wheat Tolerance to BAS 800H. Brian M. Jenks*, North Dakota State University, Minot; Daniel A. Ball, Oregon State University, Pendleton; Phillip W. Stahlman and John C. Frihauf, Kansas State University Agricultural Research Center-Hays. [123]
- 4:00 Fall Burndown Control of Winter Annuals with BAS 800H as Influenced by the Type of Adjuvant. Stevan Z. Knezevic, and Jon Scott, Haskell Ag. Lab., University of Nebraska, Concord; Leo Charvat, BASF Corporation, Lincoln, NE. [124]
- 4:15 Investigation of Sunflower Response to BAS800H as a Preharvest Desiccant. Kirk A. Howatt*, North Dakota State University, Fargo. [125]
- 4:30 Broadleaf Weed Control in Chemical Fallow with BAS 800H. Daniel A. Ball*, Oregon State University, Pendleton; Brian M. Jenks, North Dakota State University, Minot; Phil W. Stahlman and John C. Frihauf, Kansas State University Agricultural Research Center, Hays. [126]
- 4:45 Preseed Applications with BAS 800H for Broadleaf Weed Control Prior to Cereal and Pulse Crops. Mark Oostlander*, Glen Forster, Lyle Drew, BASF Canada Inc., Missisauga, ON; and Siyuan Tan, BASF Corporation, Research Triangle Park, NC. [127]


Wednesday Afternoon, March 12

PROJECT 5. WETLANDS & WILDLANDS **Royal E**
Oral Presentations

Chair and Moderator: *Scott Steinmaus*
California Polytechnic State Univ.
San Luis Obispo, CA

- 1:45 Controlling Aquatic Weeds in Irrigation Canals with Endothall. Cody J. Gray* United Phosphorus, Inc., Peyton, CO and K. Jayne Walz, United Phosphorus, Inc., King Of Prussia, PA. [128]

- 2:00 Impact of Long-term Purple Loosestrife Management in Cascade County, MT. D. Eric Hanson*, Jim Freeman, and Kitty Knaphus, Cascade County Weed District, Great Falls, MT. [129]
- 2:15 Efficacy and Cost Analysis for Control of Scotch Broom and Tree Tobacco. Joseph M. DiTomaso*, Scott R. Oneto, Guy B. Kyser; University of California, Davis. [130]
- 2:30 Using Activated Charcoal as a Herbicide Safener for Native Species Establishment in California . Ken Lair, DOI-Bureau of Reclamation, Denver, CO and Scott J. Nissen*, Colorado State University, Ft. Collins, CO. [131]
- 2:45 Factors Correlated with Recognition of Plants and Mammals: Implications for Weed Control. Jeffrey W. Brasher*, University of Wyoming, Laramie; Neil Snow, University of Northern Colorado, Greeley. [132]
- 3:00 Canada Thistle Spread in Prairie Dog Affected Plant Communities. Luke W. Samuel, Monsanto Company, Leland, MS; and Rodney G. Lym*, North Dakota State University, Fargo. [133]

3:15  **Break-Compliments of DuPont Crop Protection & Dow AgroSciences**

Wednesday Afternoon, March 12

**PROJECT 1&5: RANGE & FORESTRY / WETLANDS
& WILDLANDS**

Royal E

Discussion Section

Chair: *Scott Steinmaus
California Polytechnic State Univ.
San Luis Obispo, CA*

3:30 – 5:00 Discussion Topic:

**“Barriers to Invasive Plant Management at the
Rangeland-Riparian Interface”**

Elect Project Chair for 2010

Wednesday Afternoon, March 12

PROJECT 6: BASIC SCIENCES
Discussion Section


Imperial

Chair and Moderator: *Lynn Fandrich
Ft. Collins, CO*

1:45 – 3:15 Discussion Topic:

“The Genetics of Invasion”

Elect Project Chair for 2010

3:15  **Break-Compliments of DuPont Crop Protection
& Dow AgroSciences**

Oral Presentations

- 3:30 Mechanisms of Resistance and Gene Flow in Glyphosate Resistant Palmer Amaranth. Todd A. Gaines*, Philip Westra, Sarah Ward, Jan Leach, Bekir Bukun, Scott Nissen, Stephen Chisholm, Colorado State University, Ft. Collins; Christopher Preston, University of Adelaide, Australia; Dale L. Shaner, USDA-ARS, Ft. Collins, CO; Stanley Culpepper, Timothy Grey, University of Georgia, Tifton; William Vencill, University of Georgia, Athens; Ted Webster, USDA-ARS, Tifton, GA; Patrick Tranel, University of Illinois, Urbana. [134]
- 3:45 A Lucid Interactive Key to Knapweeds, Starthistles, and Relatives (Asteraceae) in the Western United States. Jeffrey W. Brasher, University of Wyoming, Laramie. [135]
- 4:00 The Future of Computerized Interactive Identification Keys in Weed Science. Jeffrey W. Brasher, University of Wyoming, Laramie. [136]


Wednesday Afternoon, March 12

**SPECIAL SYMPOSIUM: ENHANCING WEED CONTROL
THROUGH ADJUVANT TECHNOLOGY**

Royal D

Chair: *Patrick McMullan
agroTECHNOLOGY Research, Inc.
Memphis, TN*

- 1:45 Symposium Introduction. P. McMullan, agroTECHNOLOGY Research, Inc. Memphis. [137]
- 1:50 Adjuvant Types And Uses For Optimizing Weed Control. Richard Zollinger, North Dakota State Univ., Fargo. [138]
- 2:15 Water Conditioning Agents and Ammonium Sulfate Substitutes for Glyphosate. Curt Thompson, Kansas State Univ., Garden City; Dallas Peterson, Kansas State Univ., Manhattan. [139]
- 2:40 Drift Control Additives and Deposition Agents. Patrick McMullan, agroTECHNOLOGY Research, Inc. Memphis. [140]
- 3:05 CPDA Adjuvant Standards. Bill Bagley, Wilbur Ellis Company, San Antonio, TX. [141]

3:15  **Break-Compliments of DuPont Crop Protection
& Dow AgroSciences**

- 3:45 The Adjuvant Distributor and Adjuvants. G. Dahl, WinField Solutions, St. Paul, MN. [142]
- 4:00 Adjuvant Labeling And The Pesticide Manufacturer. Bayer Cropscience (To Be Confirmed) [143]
- 4:15 Adjuvants – The Extension Perspective. M. Bernards, Univ. of Nebraska, Lincoln. [144]
- 4:30 Questions and Discussion.
- 4:50 Adjourn

Wednesday Afternoon, March 12

WHAT'S NEW IN INDUSTRY

Royal C

Organizer and Moderator: Doug Ryerson, Monsanto

5:15 pm – 6:15 pm

Thursday Morning, March 13

WSWS BUSINESS BREAKFAST

Garden 1-3, North Tower

6:30 am – 9:00 am

Chair: Ron Crockett, WSWS President

WSWS Business Meeting
Committee Reports
Student Poster and Paper Awards

 **Breakfast Compliments of BASF Corporation**

Thursday Morning, March 13

PROJECT 3: WEEDS OF AGRONOMIC CROPS

Royal E

Oral Presentations

*Chair and Moderator: Steve King
Montana State University
Huntley*

- 9:15 Impact of Glyphosate Resistant Volunteer Corn in Irrigated Corn. Randall S. Currie, Kansas State University, Garden City; Philip Westra, Colorado State University, Ft. Collins; and John Fenderson, Kiowa, KS; Jeff Tichota Centennial CO; and Jeff Mueller Gothenburg NE ; Monsanto Technology Development Representatives. [145]

- 9:30 In Search for Answers to Limited Control of Kochia in Corn with Isoxaflutole. Gustavo M. Sbatella* and Robert G. Wilson, University of Nebraska, Scottsbluff. [146]
- 9:45 BAS 800H: A New Active Ingredient for Preemergence Broadleaf Weed Control in Field Corn and Grain Sorghum. Caren A. Judge, Dan E. Westberg, Leo D. Charvat*, Troy D. Klingaman and Walter E. Thomas, BASF Corporation, Research Triangle Park, NC. [147]
- 10:00 Impact of Pre- and Split Applications of Flucarbazone-sodium on Grass Weed Control and Spring Wheat (*Triticum Aestivum*) Yield. Ken L. Sapsford*, Frederick A. Holm, University of Saskatchewan, Saskatoon, Sk and Eric N. Johnson Agriculture and AgriFood Canada, Scott, Sk. [148]
- 10:15 Wild Oat Response to Imazamox Rate in Herbicide Resistant Spring Wheat. Bob Stougaard and Qingwu Xue, Montana State University, Northwestern Agricultural Research Center, Kalispell. [149]
- 10:30 Axial XL: the Next Generation of Grass Control in Wheat and Barley. Stephen M. Schraer*, Donald J. Porter, Jason C. Sanders, Peter C. Forster, Christopher G. Clemens, and Steven L. Pyle, Syngenta Crop Protection, Inc., Greensboro, NC. [150]
- 10:45 Huskie Herbicide - Efficacy in Northern Plains Cereals. Dean W. Maruska*, Kevin B. Thorsness, Mary D. Paulsgrove, Michael C. Smith, George S. Simkins, Thomas Kleven, and Mark Wrucke, Bayer CropScience, Research Triangle Park, NC. [151]
- 11:00 Huskie Herbicide - Use in Pacific Northwest Winter Wheat. Monte Anderson* and Dean Christie, Bayer CropScience, Spokane WA. [152]
- 11:15 Orion™: New Broadleaf Herbicide for Wheat and Barley. Christopher G Clemens*, Peter C. Forster, Donald J. Porter and Jason C. Sanders, Syngenta Crop Protection Inc., Greensboro, NC. [153]
- 11:30 Wild Oat and Broadleaf Weed Management in Organic Malt Barley Production. Don W. Morishita*, J. Daniel Henningsen, and Donald L. Shouse, University of Idaho, Twin Falls. [154]
- 11:45 Agronomic Crop Responses to KJM-44 Herbicide. Philip Westra, Colorado State University, Ft. Collins, CO; Robert Wilson, Univ. of Nebraska, Scottsbluff; Mike Edwards, Dupont, Denver, CO. [155]
- 12:00 Adjourn

Thursday Morning, March 13

EDUCATION AND REGULATORY SECTION

Royal D

Special Program

Chair: *Mike Edwards*
E. I. DuPont Inc.
Broomfield, CO.

Program Title: "Advances in the Agronomic Sciences"

- 9:15 Corn Production Under Rainfed or Limited Irrigation. Robert N. Klein* and Jeffrey A. Golus, University of Nebraska WCREC, North Platte, NE. [156]
- Strip-Till vs. Conventional Tillage; Impact on Irrigated Corn Production. Jeffrey M Tichota - Monsanto, St Louis, MO. [157]
- 9:50 New Developments in Seed Treatment Technology. Charlie Hicks*, Jeff Daniels and Louis Holloway, Bayer CropScience, Research Triangle Park, NC. [158]
- 10:10 Genetic Tools Used to Breed New Traits in Crops. Paul J. Isakson - Monsanto, St Louis, MO. [159]
- 10:30 What Industry May Require From a Graduate Student. Jeffrey Koscelny - Monsanto, St Louis, MO. [160]
- 10:50 Testing Drought Tolerant Corn under a USDA / APHIS Permit. Philip Westra and Todd Gaines, Colorado State University; and Jeff Tichota, Monsanto. [161]
- 11:10 Questions and Panel Discussion
- 11:30 Adjourn

Thursday March 13

ARUNDO/PHRAGMITES SYMPOSIUM

ROYAL C

SESSION 1 – BIOLOGY AND ECOLOGY OF GIANT REED AND COMMON REED

Moderator: *Joe DiTomaso*
Department of Plant Sciences
University of California, Davis, CA

- 9:15 Introduction
- 9:20 Biology, Origin, and Current Range of Giant Reed (*Arundo donax*). Tom Dudley, University of California, Santa Barbara, CA. [162]
- 9:45 Invasion and Establishment of Giant Reed. Jodie Holt, University of California, Riverside, CA. [163]

10:10 Growth and Development of Giant Reed. Scott Steinmaus, California Polytechnic State University, San Luis Obispo, CA. [164]

10:35 *Break*

10:50 Biology, Origin, and Current Range of Common Reed (*Phragmites australis*). Adam Lambert, Eastern Connecticut State University, Willimantic, CT. [165]

11:15 Invasion and Establishment of Common Reed. Jacques Brisson, University of Montreal, Quebec. [166]

11:40 – 1:15 *Lunch on your own*

1:15 Growth Dynamics of Common Reed. Laura Meyerson, University of Rhode Island, Kingston, RI. [167]

1:40 Genetics of Common Reed. Kristin Saltonstall, Smithsonian Tropical Research Institute, Balboa, Panama. [168]

Thursday March 13

ARUNDO/PHRAGMITES SYMPOSIUM

ROYAL C

SESSION 2 – IMPACTS OF REED GRASSES ON NATURAL ECOSYSTEMS

Moderators:

Tom Dudley & *Adam Lambert*
Marine Science Institute *Department of Biology*
University of California *Eastern Connecticut State College*
Santa Barbara, CA *Willimantic, CT*

2:05 Common Reed Impacts on Native Species. Erik Kiviat, Hundsonia Ltd. Annandale, NY. [169]

2:30 Ecosystem Impacts of Common Reed in the Eastern and Western U.S. Laura Meyerson, URI and Adam Lambert, ECSU. [170]

2:55 – 3:10 *Break*

3:10 Giant Reed Impacts on Native Vegetation. Karen Gaffney, West Coast Watershed, Healdsburg, CA. [171]

3:35 Impacts of Giant Reed to Native Fauna. David Kisner, URS Corporation, Santa Barbara, CA. [172]

4:00 Giant Reed and Fluvial Processes. Edward Keller, University of California, Santa Barbara, CA. [173]

4:25 Ecohydrology of Giant Reed. Georgianne W. Moore, Texas A&M University, College, Station, TX. [174]

4:50 Adjourn

5:15 – 7:30 Reception / Q & A and Discussion Groups
(Terrace Foyer, S. Tower)

Friday Morning, March 14

**ARUNDO/PHRAGMITES SYMPOSIUM GARDEN 4, NORTH
TOWER**

SESSION 2 – CONT’.

8:15 Relationship between Giant Reed Invasion and
Wildfire. Gretchen Coffman, University of California,
Los Angeles, CA. [175]

8:45 Economic Impacts of Giant Reed. Lisa Berry,
University of California, Santa Barbara, CA. [176]

**SESSION 3 – MANAGEMENT OF GIANT REED AND COMMON
REED**

Chair and Moderator: *Carl Bell*
University of California
Cooperative Extension
San Diego, CA

9:10 Giant Reed Control in Riparian Habitats. Carl E. Bell,
University of California Cooperative Extension, San
Diego, CA. [177]

9:35 Management of Common Reed. Jeffrey Derr, Virginia
Tech, Virginia Beach, VA. [178]

10:00 The Potential for Biological Control of Giant Reed.
John Goolsby, USDA-ARS, Weslaco, TX. [179]

10:25 10:40 *Break*

10:40 Biological Control Prospects for Common Reed. Bernd
Blossey, Cornell University, Ithaca, NY. [180]

11:05 Planning and Implementing Watershed Based Giant
Reed Eradication. Jason Giessow, Santa Margarita and
San Luis Rey Weed Management Area and Dendra,
Inc. Fallbrook, CA. [181]

11:30 Education and Outreach Aids Giant Reed Control
Programs. Mark Newhouser, Sonoma Ecology Center,
Eldridge, CA. [182]

11:55 Arundo/Phragmites Symposium Adjourns

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1938	H. L. Spence, Jr.	1978	Lowell S. Jordon
1940	G. R. Hyslop	1979	Richard D. Comes
1941	C. L. Corkins	1980	Larry C. Burrill
1942	W. W. Robbins	1981	L. E. "Jack" Warren
1944	E. Hutchings	1982	Alex G. Ogg, Jr.
1945	Lee M. Burge	1983	J. Wayne Whitworth
1946	B. E. Kuhns	1984	Gary Massey
1947	H. E. Morris	1985	E. Stanley Heathman
1948	Virgil H. Freed	1986	Harvey D. Tripple
1949	Bruce J. Thornton	1987	John O. Evans
1950	E. W. Whitman	1988	Larry W. Mitich
1952	W. W. Robbins	1989	Donn C. Thill
1954	Clarence I. Seely	1990	Sheldon E. Blank
1956	Walter S. Ball	1991	Peter K. Fay
1958	H. Wolfe	1992	Paul J. Ogg
1960	Richard A. Fosse	1993	Stephen D. Miller
1962	William R. Furtick	1994	Doug K. Ryerson
1963	P. Eugene Heikes	1995	Tom D. Whitson
1965	Jesse M. Hodgson	1996	Gus Foster
1967	Louis A. Jensen	1997	Charlotte V. Eberlein
1968	S. Strew	1998	Barbra Mullin
1969	K. C. Hamilton	1999	Rodney G. Lym
1970	Harold P. Alley	2000	Jeffrey M. Tichota
1971	Kenneth W. Dunster	2001	Don Morishita
1972	Arnold P. Appleby	2002	Robert Parker
1973	David E. Bayer	2003	Jill Schroeder
1974	D. Burgoyne	2004	Gilbert Cook
1975	Gary A. Lee	2005	Phil Stahlman
1976	William L. Anliker	2006	Phil Banks
1977	Clyde L. Elmore	2007	Kassim Al-Khatib

HONORARY MEMBERS

1976	Dick Beeler
1978	Dale W. Bohmont
1982	R. Phillip Upchurch
1983	Virgil H. Freed
1984	Warren C. Shaw
1987	Norman B. Akesson
1988	Logan A. Norris
1989	Gary A. Lee
1990	Earl Spurrier
1992	Bruce Ames
1993	Jerry Caulder
1994	Will D. Carpenter
1995	K. James Fornstrom
1997	F. Dan Hess
2001	Darrell Hanavan
2002	Senator Larry Craig - Idaho
2003	Roy Nishimoto
2004	Doug Schmale
2006	Wanda Graves
2007	Rob Hedberg

WSWS FELLOWS

1968	Robert B. Balcom	1989	John O. Evans
	Walter S. Ball		W.B. "Jim" McHenry
	Alden S. Crafts	1990	Harry S. Agamalian
	F.L. Timmons		Bart A. Brinkman
	D.C. Tingey	1991	Larry W. Mitich
1969	Lambert C. Erickson		Edward E. Schweizer
	Jesse M. Hodgson	1992	Donald C. Thill
1970	Lee M. Burge		Harold M. Kempen
	Bruce Thornton	1993	Paul J. Ogg
1971	Virgil H. Freed		Peter K. Fay
	W.A. Harvey	1994	Sheldon E. Blank
1972	H. Fred Arle		Gus J. Foster
	Boysie E. Day	1995	Stephen D. Miller
1973	Harold P. Alley		John T. Schlesselman
	K.C. Hamilton	1996	Don Colbert
1974	William R. Furtick		Robert Parker
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1975	Richard A. Fosse		Mike Newton
	Clarence I. Seely	1998	Doug K. Ryerson
1976	Arnold P. Appleby		Tom D. Whitson
1977	J. LaMar Anderson	1999	Charlotte V. Eberlein
	Arthur H. Lange		John E. Orr
1978	David E. Bayer	2000	Rodney G. Lym
	Kenneth W. Dunster		Frank L. Young
1979	Louis A. Jensen	2001	Barbra Mullin
	Gary A. Lee		Jill Schroeder
1980	W.L. Anliker	2002	Jeff Tichota
1981	P. Eugene Heikes		Philip Westra
	J. Wayne Whitworth	2003	Vanelle Carrithers
1982	Bert L. Bohmont		Carol Mallory-Smit
	Lowell S. Jordan	2004	Don Morishita
1983	Richard D. Comes		Phil Banks
	Clyde L. Elmore	2005	Nelroy Jackson
1984	Larry C. Burrill		Roland Shirman
1985	L.E. "Jack" Warren	2006	Celestine Duncan
1986	Dwight V. Peabody		Joan Campbell
	Robert L. Zimdahl	2007	Bill Cobb
1987	Alex G. Ogg, Jr.		Phil Stahlman
	Jean H. Dawson		
1988	Harvey D. Tripple		
	E. Stan Heathman		

OUTSTANDING WEED SCIENTISTS

1989	Jean H. Dawson	1999	Gus J. Foster
1990	Arnold P. Appleby		Philip Westra
1991	Stephen D. Miller	2000	Bart Brinkman
	Harvey D. Tripple		K. George Beck
1992	Alex G. Ogg, Jr.	2001	John E. Orr
	Kenneth W. Dunster		Phillip W. Stahlman
1993	Edward E. Schweizer	2002	Doug Ryerson
	Sheldon E. Blank		Tom Whitson
1994	Larry C. Burrill	2003	Frank Young
1995	Larry W. Mitich	2004	Ron P. Crockett
	Paul J. Ogg		Joe DiTomoso
1996	Donald C. Thill		Jim Vandecoevering
	Neal R. Hageman	2005	Kassim Al-Khatib
1997	Jeff Tichota		Kelly Luff
	Harry S. Agamalian	2006	Rick Arnold
1998	Donald R. Colbert	2007	John Fenderson
	Clyde L. Elmore		Rod Lym

OUTSTANDING ACHIEVEMENT AWARDS

2003	Bill Brewster	Professional Staff
2005	Guy Kyser	Professional Staff
	Eric Lane	Weed Manager
2006	Ed Peachey	Professional Staff
2007	Jim Freeman	Weed Manager

PRESIDENTIAL AWARD OF MERIT

1994	Rodney G. Lym
1995	John E. Orr
1996	Steven A. Dewey
1997	Jill Schroeder
1999	Celestine Duncan
2000	Gus Foster
2001	Jack Schlesselman
2002	Tom Whitson
2003	Nelroy Jackson
2004	Joan Campbell
2005	Tony White
2006	Janet Clark
2007	Tim Miller

NOTES

NOTES

THANK YOU!

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

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FUTURE MEETING DATES AND SITES

March 9-12, 2009
Embassy Suites Hotel
Albuquerque, NM

March 8-12, 2010
Waikoloa Beach Marriott
Waikoloa, HI

TIME	TUESDAY	WEDNESDAY	THURSDAY
6:30			WSWS Business Breakfast and Student Awards Garden 1-3 (North Tower)
6:45			
7:00			
7:30			
7:45	Poster Session Odd # Authors Present Royal A & B	Poster Session Even # Authors Present Royal A & B	
8:00			
8:15			
8:30			
8:45			
9:00			
9:15			
9:30	General Session Royal Ballroom		
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6:15			