



President's Message

Brad Minton

It is an honor to serve as president of the Southern Weed Science Society and I want to thank you for the opportunity. I attended my first meeting in 1987 and the society has provided me an excellent opportunity for professional development. The annual meetings provide a venue to meet, discuss projects, share knowledge and renew professional as well as personal relationships. My goal is to serve with the same level of leadership of past Presidents and continue working to strengthen the society.

The 2015 annual meeting in Savannah was a great success. The Hyatt hotel staff did an outstanding job meeting our needs and minimizing the impact of the ongoing renovations. There



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Future Meeting Site:
Sheraton Puerto Rico Hotel
San Juan, PR
February 8-11, 2016



WWW.SWSS.WS

were 370 attendees and 274 papers presented which is similar to the last year. As I began working on the meeting program, I quickly realized how much effort it took to plan a successful meeting and how many people would be involved. I greatly appreciate the guidance and advice from Scott Senseman, previous program chair, as well as Phil Banks, our business manager. A special thanks to the Local Arrangement Committee composed of Larry Newsom, Tim Grey and Sandy Newell. The local arrangements are critical to a successful meeting and require attention before, during and after the meeting. The committee did an outstanding job coordinating activities with the hotel and assuring all logistical details were covered. Hunter Perry led the effort again this year in organizing the annual golf tournament on Sunday with the proceeds going the Endowment Foundation. Thanks to the program chairs for putting together an informative program and organizing the sessions. I appreciate Peter Dotray agreeing to organize the symposium this year and serving as Master of Ceremonies for the Awards Banquet. Finally,

I would like to recognize BASF for hosting the nice evening social following the Quiz Bowl.

The student paper contest has grown the past three years. This year there were 54 M.S. and Ph.D. oral presentations in three separate sessions. We decided to start the sessions at 7:15 am to accommodate all of presentations. Additionally, there were 11 M.S. and 7 Ph.D. posters entered into the contest. This is an excellent opportunity for professional development for students as well as those sitting in the audience. The quality of the presentations and posters was very impressive. I want to thank Drew Ellis, Matt Goddard and Hunter Perry for the efforts they put into organizing the contest. Thank you to the all that volunteered to judge this year and the students that participated.

The General Session this year included very informative talks from the three 2014 Endowment Enrichment Scholarship recipients – Matt Inman, Ethan Parker and Vijay Singh. The Enrichment Program provides students with an opportunity to expand experience through a week-long educational experience with Industry or Academia. Thanks to the Endowment Committee for providing this opportunity and to those that volunteered to host the students.

Plans are coming together for the 2016 annual meeting. Many of you may remember going to Puerto Rico for the 2011 meeting. Next year we will be back in Puerto Rico and will be meeting jointly with the WSSA. The SWSS and WSSA met jointly for the first time in 2009 and the meeting was success. Peter Dotray is the SWSS program chair for the meeting and has already started working closely with the WSSA on the meeting agenda as well as SWSS activities like the student contest. I am sure Peter would welcome your thought on the program. The meeting will be held at the Sheraton Puerto Rico Hotel, February 8-11, 2016.

Departing members from the Board were Steve Kelly (Immediate Past President), Jason Bond (Member at Large - Academia), John Richburg (Member at Large - Industry) and Blake Edwards (Graduate Student Rep.). Thank you for your service and contributions to the society. New members joining the Board are Gary Schwarzlose (Vice President), Joyce Tredaway Ducar (Member at Large - Academia), James Holloway (Member at Large - Industry) and Sandeep Rana (Graduate Student Rep.). Welcome to the Board.

Soon there will be a call for award nominations. There are many SWSS members that are deserving of the awards and it is well worth the effort to nominate them. The SWSS Awards Committee has worked to make the process as efficient as possible. Please begin thinking of individuals who should be nominated for one of our awards and be ready to submit nominations.

I look forward serving as your president this year and building on the success of the society. Please let me know if you have ideas or suggestions that will improve the society. I hope all of you have a safe and productive season.

Sincerely,
Brad Minton
SWSS President

**Directory of Officers, Executive Board Members,
Committees and Committee Members
January 31, 2015 - January 31, 2016**

Note: Duties of each Committee are detailed in the Manual of Operating Procedures, which is posted on the SWSS web site at <http://www.swss.ws>

100. SOUTHERN WEED SCIENCE SOCIETY OFFICERS AND EXECUTIVE BOARD

100a. OFFICERS

President - Brad Minton - 2016
President Elect - Peter Dotray - 2017
Vice-President - Gary Schwarzlose - 2018
Secretary-Treasurer - Daniel Stephenson - 2017
Editor - Nilda Burgos - 2017
Immediate Past President - Scott Senseman - 2016

100b. ADDITIONAL EXECUTIVE BOARD MEMBERS

Member-at-Large - Academia - Scott McElroy 2016
Member-at-Large - Academia - Joyce Tredaway Ducar - 2017
Member-at-Large - Industry - Vernon Langston - 2016
Member-at-Large - Industry - James Holloway - 2017
Representative to WSSA - Eric Palmer - 2017

100c. EX-OFFICIO BOARD MEMBERS

Constitution and Operating Procedures – Carroll Johnson 2016
Business Manager - Phil Banks
Student Representative - Sandeep Rana
Web Master – David Kruger
Newsletter Editor - Bob Scott

101. SWSS ENDOWMENT FOUNDATION

101a. BOARD OF TRUSTEES - ELECTED

Renee Keese - President	2016
James Holloway - Secretary	2017
Brent Sellers	2018
Darrin Dodds	2019
Donnie Miller	2020

101b. BOARD OF TRUSTEES - EX-OFFICIO

Daniel Stephenson (SWSS Secretary-Treasurer)
Peter Dotray (SWSS Finance Committee Chair, VP)
Phil Banks (SWSS Business Manager)
Carroll Johnson (SWSS Constitution & Operating Proc. Committee Chair)
Sandeep Rana (SWSS Student Representative)

102. AWARDS COMMITTEE PARENT (STANDING) - *The Parent Awards Committee shall consist of the immediate Past President as Chairperson and each Chair of the Award Subcommittees.*
 Scott Senseman** 2016 Brent Sellers 2016 Neil Rhodes 2016
 Stanley Culpepper 2016 David Gealy 2016
The Awards Subcommittees shall consist of six members including the Chair, serving staggered three-year terms with two rotating off each year.
- 102a. SWSS Fellow Award Subcommittee
 Brent Sellers* 2016 Dan Reynolds 2017 John Byrd 2018
 Bob Scott 2016 Tom Mueller 2017 Robert Nichols 2018
- 102b. Outstanding Educator Award Subcommittee
 S. Culpepper* 2016 Greg Armel 2017 Tim Grey 2018
 Peter Dittmar 2016 James Griffin 2017 Greg MacDonald 2018
- 102c. Outstanding Young Weed Scientist Award Subcommittee
 David Gealy* 2016 Eric Palmer 2017 Eric Prostko 2018
 Nilda Burgos 2016 Shawn Askew 2017 Bob Hayes 2018
- 102d. Outstanding Graduate Student Award Subcommittee
 Neil Rhodes* 2016 Vinod Shivrani 2017 Wayne Keeling 2018
 Stephen Enloe 2016 Neha Rana 2017 David Jordon 2018
103. COMPUTER APPLICATION COMMITTEE (STANDING)
 Shawn Askew* 2016 Michael Cox 2016 Angela Post 2016
104. CONSTITUTION AND OPERATING PROCEDURES COMMITTEE (STANDING)
 W. Carroll Johnson* 2016
105. FINANCE COMMITTEE (STANDING) - *Shall consist of the Vice President as Chair and President-Elect, Secretary-Treasurer, Chair of Sustaining Membership Committee, and others as the President so chooses, with the Editor serving as ex-officio member.*
 Gary Schwarzlose * 2017
 Peter Dotray 2016
 Bruce Kirksey 2016
 Daniel Stephenson 2017 Nilda Burgos (ex-officio)
106. GRADUATE STUDENT ORGANIZATION
 President Sandeep Rana (Virginia Tech)
 Vice President Drake Copeland (Mississippi State)
 Secretary Ralph Hale (Arkansas)
 Herbicide Resistance & Tech. Committee Rep Chris Rouse (Arkansas)
 Student Program Committee Rep. Drew Denton (Mississippi State)
 Endowment Committee Rep. Ryan Miller (Arkansas)

107. WEED RESISTANCE AND TECHNOLOGY STEWARDSHIP (ad hoc)
Jason Bond* Hubert Menne
Peter Dotray Jason Norsworthy
Eric Palmer Tom Eubank
Jim Griffin Andrew Price
Griff Griffith Eric Prostko
Andy Kendig Larry Steckel
Ramon Leon Daniel Stephenson
Hunter Perry
108. HISTORICAL COMMITTEE (STANDING)
Bill Witt* 2016
John Byrd 2017
109. LEGISLATIVE AND REGULATORY COMMITTEE (STANDING)
Bob Nichols* 2016 Lee Van Wychen 2016 Bill Vencill 2016
110. LOCAL ARRANGEMENTS COMMITTEE - 2016 MEETING (STANDING)
None – WSSA Joint Meeting
111. LONG-RANGE PLANNING COMMITTEE (STANDING) - *Shall consist of the previous five presidents with the most recent past-president serving as Chair.*
Scott Senseman 2020 Steve Kelly* 2019 Tom Mueller 2018 Barry Brecke 2017
Tom Holt 2016
112. MEETING SITE SELECTION COMMITTEE (STANDING) - *Shall consist of six members and the SWSS Business Manager. The members will be appointed by the President on a rotating basis with one member appointed each year and members shall serve six-year terms. The Chairmanship will rotate to the senior committee member from the geographical area where the meeting will be held.*
J. Norsworthy 2016 G. Oliver 2018 E. Webster 2020
M. Edwards 2017 G. Schwarzlose 2019 J. Byrd 2021
P. Banks - Business Mgr. (Ex-officio)
113. NOMINATING COMMITTEE (STANDING) - *Shall be composed of the Past President as Chair.*
Scott Senseman* - 2016
114. PROGRAM COMMITTEE - 2015 MEETING (STANDING)
Peter Dotray - 2016
115. PROGRAM COMMITTEE - 2016 MEETING (STANDING)
Gary Schwarzlose – 2017
116. RESEARCH COMMITTEE (STANDING)
Gary Schwarzlose * - 2016
Alabama – Joyce Tredaway Ducar North Carolina – Wes Everman

Arkansas – Bob Scott
 Florida – Ramon Leon
 Georgia – Eric Prostko
 Louisiana – Donnie Miller
 Mississippi – John Byrd
 Missouri – Kevin Bradley

Oklahoma – Todd Baughmann
 South Carolina – Mike Marshall
 Tennessee – Larry Steckel
 Texas – Peter Dotray
 Virginia – Shawn Askew

117. RESOLUTIONS AND NECROLOGY COMMITTEE (STANDING)
 David Black* 2016 Peter Dittmar 2016 Larry Walton 2016
118. SOUTHERN WEED CONTEST COMMITTEE (STANDING)
 S. Askew J. Griffin
 N. Burgos G. MacDonald W. Vencill
 P. Dotray S. McElroy E. Webster
 T. Eubank* T. Mueller
 W. Everman** D. Reynolds open to all SWSS members
119. STUDENT PROGRAM COMMITTEE (STANDING)
 Matt Goddard* 2016 Hunter Perry** 2017 Darrin Dodds 2018
120. WEED IDENTIFICATION COMMITTEE (STANDING)
 Angela Post 2016 Katelyn Venner 2014
121. SUSTAINING MEMBERSHIP COMMITTEE (STANDING)
 Bruce Kirksey* 2016 John Richburg 2018 Peter Eure 2018
 Cheryl Dunne 2016 Trey Koger 2016 Larry Steckel 2018
122. CONTINUING EDUCATION UNITS COMMITTEE (SPECIAL)
 Tim Adcock 2016 Matt Matocha 2016
 Shawn Askew 2016 Pat McCullough 2016
 Todd Baughmann 2016 Scott McElroy 2016
 John Byrd 2016 Ken Muzyk 2016
 Alan Estes 2016 Bob Scott 2016
 Travis Gannon 2016 Ron Strahan 2016
 Mike Harrell 2016 Bobby Walls* 2016
123. MEMBERSHIP COMMITTEE (SPECIAL)
 Chad Brommer* 2016 Cecil Yancy 2015

2015 Award Winners

2015 Fellow Award



Bobby Walls, Ph.D., is a Product Development Manager in Turf & Ornamentals for FMC Corp. Bobby received both his Master's degree and his Ph.D. from North Carolina State University in Crop Science. His career has focused on agricultural research to discover and develop new products and technology to improve production of food, fiber, materials for shelter, aesthetic value of the landscape.

Dr. Walls holds five patents for currently used herbicides. His work has concentrated on development of products and technologies primarily across the United States. However, he has experiences working in Canada, Brazil, Argentina and Mexico. He is a Certified

Crop Advisor and Certified Professional Agronomist by the American Society of Agronomy.

His service to the SWSS includes being Chair of Membership, Necrology, and Continuing Education Committees as well as the Agronomic Section; and as a member of Local Arrangements, Public Relations, Legislative, and Graduate Student Committees. He also has been session moderator numerous times and a graduate student contest judge. Dr. Walls has published 38 abstracts in the SWSS proceedings dealing with weed science and pest management in Agronomic and Horticultural crops.

His professional boards include the Crop Protection Society of North Carolina, Weed Science Society of North Carolina, and The Certified Crop Advisors of North Carolina. He is an active member of the Northeast Weed Science Society (NEWSS) and holds membership in many state and national organizations related to the Agricultural industry.

Dr. Walls awards include two Innovation Awards from Professional Group of FMC; American Home Products' Agricultural Legislator Communicator' Advocate Award and Distinguished Service Award Weed Science Society of North Carolina. Bobby received the Crop Protection Association of North Carolina's Spirit Award. Previously, Dr. Walls was a Senior Field Researcher for American Cyanamid.

Prior to coming to FMC he served as Assistant Director of Agronomic Division – North Carolina Department of Agriculture and Consumer Services. Bobby resides in Goldsboro, NC with his wife Susan. They are the proud parents of one son, one daughter and two granddaughters. Bobby and Susan are members of the Rosewood First Baptist Church.

2015 Fellow Award



John received a B.S. degree in Plant Protection and a Master's degree in Crop Science and Botany from North Carolina State University. Growing up on a family farm in eastern North Carolina, his passion was remaining involved in the agricultural community. After graduation in 1974, he joined BASF at their research farm in Greenville, MS, screening herbicides. Over the years with BASF he remained in R&D serving as a Market Development / Tech Service Rep; Tech Service Manager, Field Research Manager and currently as a Biology Project leader. The current focus is the development of various herbicides projects in cotton, peanuts, rice, and soybeans.

John first attended the SWSS in 1974. He has served on Local Arrangements, several Awards committees, Weed Contest, Executive Board, and as President of the SWSS in 2004-05. He is currently active in the WSSNC and WSSA.

John resides in Raleigh, NC and been married to Patricia for 42 years. They have 4 daughters and 2 granddaughters

2015 Outstanding Young Weed Scientist-Academia



Jim Brosnan is an Associate Professor in the Department of Plant Sciences at the University of Tennessee. In this role, he leads research and extension programs targeting the needs of individuals managing broadleaf and grassy weed control in various turfgrass systems, including golf courses, athletic fields, and residential landscapes.

He maintains an active research program focused on control of problematic weeds in turfgrass systems, particularly biotypes evolving herbicide resistance. Efforts have led to authorship of over 70 peer-reviewed scientific journal articles in his career and mentorship of six M.S and Ph.D. students, all whom moved into positions within academia or industry.

From an extension perspective, Dr. Brosnan coordinates the University of Tennessee Turf & Ornamental Field Day, the UT Turf Herbicide Resistance Field Day, as well as the annual Tennessee Turfgrass Conference and Trade Show. He also led the development of Mobile Weed Manual, a mobile application for selecting herbicides labeled for use in turf and ornamentals.

Jim is an active member in the Weed Science Society of America (WSSA) and the Southern Weed Science Society (SWSS). He currently serves on several WSSA committees and is an Associate Editor for Weed Technology. In 2011, Jim co-hosted the WeedOlympics, the first-ever national weed science contest involving student members of the SWSS, NEWSS, the North Central Weed Science Society, and the Western Society of Weed Science. Dr. Brosnan and his students have been actively involved in every SWSS meeting since 2009.

Dr. Brosnan's efforts have earned him several awards, including being named the Tennessee Turfgrass Association Professional of the Year in 2010, the highest honor bestowed by the Association. In 2013, the Northeastern Weed Science Society (NEWSS) recognized Dr. Brosnan with their Outstanding Researcher Award.

2015 Outstanding Educator Award



Nilda Roma-Burgos graduated from the Visayas State College of Agriculture, Leyte, Philippines in 1983 with a B.S. in Agriculture, majoring in Soil Science. She attended the University of Arkansas, Fayetteville where she completed her M.S. in Agronomy-Weed Science in 1994 and her Ph.D. in Agronomy-Weed Science in 1997. She worked as Field Biologist for Zeneca Ag Products from 1997-1998 and served as faculty in the Department of Crop, Soil and Environmental Sciences at the University of Arkansas for 16 years starting in October 1998. Dr. Burgos conducts research on basic and applied aspects of weed physiology, molecular weed biology, and weed management; specifically, herbicide-resistant weeds; gene flow; evolution of weedy traits; weed population genetics; management options for weedy and volunteer rice; and weed management options for specialty crops. She has taught Principles of Weed Control from 2000-2006; Weed Physiology and Herbicide Resistance in Plants between 1999 and 2009; team taught Weed Science Practicum and co-coached the

University of Arkansas Weed Team since 1999; taught Ecology and Morphology of Weedy and Invasive Species since 2011; and team taught Advanced Crop Science in 2014. Dr. Burgos was one of the pioneering UA Faculty Team that established the Global Community Development Service Project in Belize in 2006 and served as mentor for students participating in this Study Abroad Program from 2007 to 2011. The Agriculture Team developed teaching modules for elementary kids, established school gardens, and conducted community sanitation and beautification projects, among other activities. Before leaving the Belize Project, Dr. Burgos initiated the International Research Experience Program for the UA College of Agriculture, which was launched in 2012 in collaboration with Universities in Rio Grande do Sul, Brazil. The Program expanded to the Philippines in 2014 and will include Costa Rica in 2015. Dr. Burgos has served as resource speaker and invited lecturer for seminars, trainings, workshops, or conferences in the US and other countries including Bolivia, Brazil, China, Costa Rica, India, Nicaragua, Peru, Thailand, the Philippines, and Vietnam. She has served as Major Advisor and co-Advisor of 17 M.S. and 17 Ph.D. students; advised 5 undergraduate honors student research; served on 28 graduate student committees and 6 undergraduate student research

committees. Collectively, graduate students mentored by Dr. Burgos won numerous awards for oral and poster competitions, competitive national and international travel grants to conferences, and various awards at the SWSS Weed Contest, and Outstanding Graduate Student awards. Her Ph.D. student won the first International Weed Science Larry Burrill Award for Outstanding Research in 2008. Dr. Burgos has served as the State Liaison for the IR-4 Program since 2005; Director of the IR-4 Research Center for Region 4 since 2009; Secretary and Chair of the SWSS Resistance Committee over several years; Past Secretary and current Chair of the SWSS Foundation; member, Outstanding Young Scientist Award Committee; member of the SWSS Weed Contest Committee across several years; Associate Editor of the Weed Science journal; was elected as Secretary-Treasurer of the International Weed Science Society (2008-2012) and elected as Vice-President of IWSS for 2012-2016. She also proposed, led the assembly, and served as co-Associate Editor of the upcoming Special Issue on Research Methods in Weed Science. She is the daughter of Virgilio Roma and Dalia Oplimo, married to Redentor Burgos for 32 years and blessed with a son, Ronelo.

2015 Outstanding Graduate Student Award (MS)



Garret was born and raised in rural northwest Tennessee near Union City, by his loving parents Bob and Amy. He received a B.S. degree in Plant and Soil Science with a row crop concentration from the University of Tennessee, Martin in 2012. After graduation, he began a M.S. degree with a concentration in Weed Science at Mississippi State University under direction of Dr. Jason Bond. In the spring of 2014, Garret completed his M.S. degree and started pursuit of a PhD in Weed Science at the University of Tennessee with Dr. Larry Steckel as his advisor. Beginning in 2007 and continuing through the fall of 2011 Garret worked as a crop scout to assess and help with management decisions in cotton, corn, soybean, and wheat production in northwest Tennessee, southeast Missouri, and northeast Arkansas. His thesis research was centered on the use of saflufenacil in rice and aided in achieving a supplemental label that allowed for postemergence applications. Garret is now working on his dissertation which is focused on integrating cover crops into traditional weed management programs to aid in

controlling difficult weed species. During his M.S. and PhD endeavors, he has been involved with presenting data in extension, field day, and professional settings. Garret is a member of state, regional, and national agronomic and graduate student societies, and is the current president of SWSS Graduate Student Organization. He was a member of the Mississippi State University weed team that claimed 3rd place overall in the 2013 SWSS Weed Contest and placed 2nd in the M.S. paper presentation in the 2014 SWSS Graduate Student competition. He placed twice in the internal graduate student paper presentation contest at Mississippi State. He has authored 3 refereed journal articles, and authored or co-authored 12 extension or newsletter publications, and 20 professional society abstracts.

2015 Outstanding Graduate Student Award (PhD)



Sushila Chaudhari grew up on a farm in Sri Ganganagar, Rajasthan, India. After finishing the high school, she was awarded the National Talent Scholarship from the Indian Government to obtain her B.S. (Hons.) in Agriculture from Punjab Agricultural University. She received her degree in 2008. She participated in many activities and was awarded many honors in games, clay-modeling, and rangoli (a folk art in India). She was active in the National Service Scheme program organized by the university. Sushila earned her M.S. degree in weed science under the direction of Brent Sellers at the University of Florida. Her research focused on the management of paragrass (*Urochloa mutica*, an invasive weed) in the Florida Wetlands using chemical and cultural weed management practices. In 2011, Sushila began her PhD program in weed science with Katie Jennings and David Monks at North Carolina

State University. Her dissertation research focused on determining the critical period for weed control, and herbicide tolerance of grafted tomato and eggplant. Sushila provided leadership for additional research projects in blueberry, strawberry, sweetpotato, bell pepper, tomato, and cucumber. Sushila also conducted tomato grafting and weed identification workshops for growers, extension agents, and visiting scholars from Mali and Senegal. Sushila has authored two peer reviewed journal publications and co-authored several others. Sushila has presented at numerous professional meetings, including the Florida Weed Science Society, Florida Exotic Pest Plant Council Symposium, Weed Science Society of North Carolina (WSSNC), Northeastern Weed Science Society (NEWSS), Southern Weed Science Society (SWSS), Weed Science Society of America (WSSA), and American Society for Horticultural Science. She has won several awards including 1st place overall individual at the 2013 NEWSS weed contest, WSSNC Outstanding Ph.D. Graduate Student, WSSNC Endowment Scholarship, SWSS Endowment Enrichment Scholarship, four travel grants, and five awards for poster and paper presentations. Her goal is to work for an agricultural chemical company in research and development contributing to cutting-edge research and addressing the critical needs of growers and weed science.

Graduate Student Contest Winners

MS Poster

1st Place – Shilpa Singh (UofArk)
2nd Place – Drew Denton (MSU)

MS Oral

Section 1

Tie so two 1st places
1st Place – Matt Inman
1st Place – Zachary Lancaster

Section 2

Tie so three 1st places
1st Place – Nicholas Basinger (NCSU)
1st Place – Jeremy Green (UofArk)
1st Place – Chris Meyer (UofArk)

Section 3

1st Place – Austin Scott (UTK)
Tie for 2nd
2nd Place – Shawn Butler (UTK)
2nd Place - Seth Bernard Abugho (UofArk)

PhD Poster

1st Place – Ryan Miller (UofArk)
2nd Place – Trevor Israel (UTK)

PhD Oral

Section 1

1st Place – Charles Cahoon (NCSU)
2nd Place – Reiofeli Salas

Section 2

1st Place – Rafael Pedroso
2nd Place – Christopher Rouse

Section 3

1st Place – Eric Reasor (UTK)
2nd Place – Seth Byrd (UGA)



Pictured above: 2015 Graduate Student Contest winners

What is the SWSS Endowment Board and what does it do for YOU?

The Endowment was created to support the scientific and educational commitments of the Southern Weed Science Society. In recent years discussion has shifted to increasing support of SWSS students. The monies raised have been used to fund graduate student awards, for both the paper and poster contests, and helps support the Weed Contest. The annual Golf Tournament is one of the major fundraisers for the Endowment, and we always encourage participation in this event. Most recently, a Student Enrichment Scholarship opportunity was created. Six students have taken advantage of this 1-week opportunity to visit another scientist, a company site or a government facility, using this \$1500 scholarship. Numerous hosts are available to allow a student to visit and learn about other programs; depending on where they are in their studies, this opportunity can help with deciding where to study for a Ph.D. or help with a job decision. Each year the Endowment Board solicits student applications for these scholarships and matches the winning students with a host of their choice. We were pleased to have the three student winners from last year make brief presentations at the opening General Session of the January annual meeting in Savannah, GA. M. D. Inman of North Carolina State University, E. T. Parker of Auburn University and V. Singh of the University of Arkansas did an outstanding job!

The scholarship solicitation was posted and the deadline to receive applications was April 8. The committee is hard at work judging the applications. We hope that faculty members will continue to support and encourage students to apply. If you would like to join the list of potential hosts for next year, contact a board member. We are looking for more hosts and top notch students to take advantage of this unique opportunity!

2015-2016 Endowment Board: James Holloway (Secretary), Syngenta; Brent Sellers, University of Florida; Darrin Dodds, Mississippi State University; Donnie Miller, LSU Ag Center; Ryan Miller (grad student rep), University of Arkansas; ex officio members: Nilda Burgos, University of Arkansas and Phil Banks.

Renee J. Keese, Ph.D.
President, SWSS Endowment Board
renee.keese@basf.com

IWSS Graduate Student Award—A Competition

The IWSS has decided to continue with its tradition to encourage the participation of graduate (M.Sc. and Ph.D.) students in the 7th International Weed Science Congress in Prague (<http://www.iwsc2016.org>).

A limited number of awards will cover registration fees, accommodation and part of travel expenses. The Graduate Students Award Committee will select the awardees according to the following criteria:

1. The candidate must be enrolled as a M.Sc. or Ph.D. student, pursuing a degree related to weed science as of **1 January 2016**.
2. A 5-page manuscript including tables, figures and photos (PDF file, 12 pt font, 1.5 line spacing, and 3-cm margin all around), with Abstract, Introduction, Materials and Methods, Results and Discussion. **Deadline for submission is 1 January 2016.**

3. Submissions will be appraised based on the following merits: quality of research, novelty, and contribution to the discipline of weed science.

4. Submissions should include a letter of commitment from the major Professor or institution to provide additional travel support should the student receive the award from IWSS.

5. All material should be sent via e-mail, **no later than 1 January, 2016** to the three members of the Graduate Students Award Committee: pbhowmik@umass.edu paolo.barberi@sssup.it and rubin@mail.huji.ac.il.

Please ask for confirmation that your manuscript has arrived safely to **all** committee members.

The IWSS is grateful to the EWRS and the WSSA for their financial support to partially cover these important awards. The student submitting the most outstanding paper as determined by the Graduate Students Award Committee will receive the "**IWSS Larry Burrill Graduate Student Travel Award**", which covers all expenses to attend the Congress.

Initiative Nurtures Women Pursuing Weed Science Careers

LAWRENCE, Kansas – February 24, 2015 – Today less than 15 percent of the members of the Weed Science Society of America (WSSA) are women. It's a sobering statistic, but one that reflects national trends.

According to data gathered by the National Academies¹, roughly equal numbers of women and men earn degrees in the agricultural sciences. However, women lag behind when it comes to pursuing a career in their field of study. Of the 8,000 Ph.D. holders employed in the agricultural and food sciences today, women represent only about a third.

Anita Dille, a professor of agronomy at Kansas State University and a WSSA member, is one of those bucking the trend. She says her career in weed science has been incredibly rewarding, and she wishes more women would follow in her footsteps.

As president-elect of North Central Weed Science Society (NCWSS) and the first woman to hold that position, Dille is hoping to expose women studying weed science to individuals who can serve as career mentors. With enthusiastic support of her board, she recently launched a new networking breakfast scheduled during the NCWSS annual meeting. Nearly 50 women attended the first event in December 2014 – half students and half established weed scientists.

"It was great way for students like me to connect with those further along in their careers," said Cara McCauley, a graduate student in weed science at Purdue University. "It was my first NCWSS meeting, and I didn't know many people. But after our breakfast, I was able to see familiar faces in the crowd and continue the conversations we started."

Dille says that's exactly the response she was after.

"We want to help women feel more comfortable and welcomed by the organization and to offer opportunities for networking and professional development," she said. "Meeting and talking to women already working in the field can help them understand potential career paths that provide a diverse and rewarding way to use what they've learned."

Dille is quick to point to the impact of women on her own career. She grew up on a farm where she helped her family in the fields. It seemed natural to pursue an undergraduate degree in agricultural science at the University of Guelph in Canada, but she was unsure what she wanted

to do with her degree. During her senior year, though, she worked as an intern under Susan Weaver, Ph.D., at Agriculture Canada.

"I worked with her on a research project I was really interested in, and I came away knowing that weed science research was the direction I wanted to pursue," she said.

Today Dille conducts studies on the ecology of weeds in sorghum, corn, soybean and winter wheat crops. And in the classroom, she is training future agronomists in weed science and the principles of Integrated Weed Management – including weed identification and control.

"Today is an exciting time to be a weed scientist, with a host of challenges to address," says Lee Van Wychen, Ph.D., science policy director of the Weed Science Society of America. "Experts with the National Laboratory for Agriculture and the Environment say our growing population will need more food over the next four decades than we've cumulatively produced over the past 10,000 years. That makes it imperative that we engage both men *and* women who have the skills needed to help us protect crops from the ravages of weeds."

About the Weed Science Society of America

The Weed Science Society of America, a nonprofit scientific society, was founded in 1956 to encourage and promote the development of knowledge concerning weeds and their impact on the environment. The Society promotes research, education and extension outreach activities related to weeds, provides science-based information to the public and policy makers, fosters awareness of weeds and their impact on managed and natural ecosystems, and promotes cooperation among weed science organizations across the nation and around the world. For more information, visit www.wssa.net.

Visit the 2,4-D Research Portal

Friends, this year is the 70th anniversary of 2,4-D. Marking seven decades of research and innovation, we have launched the 2,4-D Research Portal as a place to gather the most robust peer reviewed studies as well as video interviews with leading experts. Follow the link [2,4-D Research Portal](#).

The world's first selective herbicide, 2,4-D is still one of the most widely used agricultural herbicides today. It has played a critical role in drastically increasing food production while simultaneously lowering cost. For its contributions to agriculture and food safety, the Henry Ford organization identified 2,4-D as one of the 75 most important inventions of the past 75 years. In determining 2,4-D's safety, merit and the value of its continued use, regulatory agencies in countries across the world draw on the vast literature on 2,4-D.

2,4-D has been registered for use as an agricultural herbicide since 1947 and since then the molecule has been re-evaluated and registered by regulatory agencies across the world. I invite you take a look at our Research Portal, watch the videos we have posted, and pass this message along to your peers and colleagues.

With sincere appreciation,
Jim Gray
Executive Director
Industry Task Force II on 2,4-D Research Data

People and Places

Dr Joe Massey, formerly of MSU, is now Agronomist with the Yazoo Mississippi Delta Water Management District.

Mathew Wiggins just graduated with a Ph.D from the University of Tennessee under the direction of Larry Steckle and now works for Monsanto at their learning center in Iowa.

Whitney Crow just graduated with M.S. from the University of Tennessee under the direction of Larry Steckle and now is pursuing a Ph.D in entomology at Miss St. with Angus Catchot.

Zach Hill received his M.S. from the University of Arkansas under the direction of Jason Norsowrthy. Zach is currently employed by Tom Barber as a Research Associate.

Caleb Fish graduated with a M.S.degree in Weed Science from LSU in December 2014and is employed in Sales with Sepro in Memphis, TN.

Matt McGowin completed the requirements for the M. S. degree under the direction of John Byrd -MSU. Matt's thesis title is "Evaluating New Herbicides for the Electric Utility Industry." Matt is employed by DuPont.

The Weed Science Society of America (WSSA) presented awards to more than two dozen individuals for their outstanding contributions to the field of weed science. The awards were presented during the organization's annual meeting, held this year in Lexington, Kentucky. Two SWSS members received awards during the meeting.

Public Service Award: WSSA honored **David Shaw**, Ph.D., for his leadership on the issue of herbicide resistance. Shaw is past-president of the Society, current chair of the Herbicide Resistance Education Committee and vice president for research and economic development at Mississippi State University. He chaired a USDA-APHIS task force on Herbicide Resistance Best Management Practices and Recommendations, a Council for Agricultural Science and Technology task force on the impacts of resistant weeds on tillage systems, and the planning committee for two Herbicide Resistance Summits at the National Academy of Sciences. He also has participated in the largest long-term field projects on glyphosate resistance management ever established. Among his many honors and awards are fellow recognitions from both WSSA and the American Association for Advancement of Science.

Outstanding Extension Award: WSSA honored **Larry Steckel**, Ph.D., a professor of weed science, extension and agricultural research at the University of Tennessee. Steckel has received several awards for his extension, outreach and research efforts, including recognitions from Gamma Sigma Delta and the university's Institute of Agriculture. He has an extensive applied research program on weed management in agronomic crops, including glyphosate resistant horseweed, giant ragweed and Palmer amaranth. He and his graduate students also evaluate novel integrated weed management technologies. Steckel is a former agronomist with Pioneer Hi Bred International.

Second Circular

25th Asian-Pacific Weed Science Society Conference

on
Weed Science for Sustainable Agriculture,
Environment and Biodiversity

13-16 October, 2015
Hyderabad, INDIA

APWSS

Website: <http://isws.org.in/apwss2015.aspx>



Organized by:

Indian Society of Weed Science

In collaboration with:

Indian Council of Agricultural Research

Directorate of Weed Research

PJT State Agricultural University



Venue

The 25th Asian-Pacific Weed Science Society Conference (APWSS 2015) will be held at Hyderabad, India from 13-16 October, 2015. Hyderabad, located in south-central part is the fifth largest city of India and is well connected by air with many international and national destinations. It is also well connected by rail from several major cities of the country. The city is nearly 400 years old and is noted for its natural beauty, mosques and minarets, bazaars and bridges, hills, lakes and several historical attractions.

Participants

The 25th APWSS Conference will provide an excellent opportunity to all stakeholders dealing with different aspects of weeds to share their ideas and learn from international experiences.

Agricultural scientists, teachers, students, extensional workers, administrators, policy makers, non-governmental organizations, executives from the herbicide industry, and those associated with environment and biodiversity conservation, are invited to participate in the Conference. About 600 delegates are expected to participate in this Conference, including more than 100 delegates from the countries of Asian-Pacific region.

Conference Theme and Sub-themes

The 25th Asian-Pacific Weed Science Society Conference returns to India for the second time in 2015 and will focus on the theme "Weed Science for Sustainable Agriculture, Environment and Biodiversity".

There will be presentations on the following sub-themes:

- Weed biology and ecology
- Weed management options in crops and cropping systems
- Improving weed management in conservation agricultural systems
- Weed management in horticulture, plantation crops/cropping systems and non-arable lands
- Role of biological control in integrated weed management systems
- Herbicide resistance management
- Herbicide persistence and its impact in different ecosystems
- Allelopathy: the current status and role in weed management
- Aquatic weeds: biology, management and utilization
- Parasitic weeds and their management
- Weed management in organic farming systems
- Strategic farmers' participatory approaches to weed management
- Economics of managing weeds in agro-ecosystems
- Alien invasive weeds and their management
- Herbicide tolerant crops: role and future in Asian-Pacific region
- New herbicide molecules and products: the role of herbicide industry
- New tools and technologies for better weed management
- Weed biology and management under changing climate
- Education, research methodology and communication in weed science

Currency

The currency in India is Indian National Rupee (INR, ₹). The equivalents of INR in terms of major international currencies are as follows:

Currency	INR Equivalent (Approx.)	Currency	INR Equivalent (Approx.)
US Dollar (US \$)	62	Australia Dollar (Aus \$)	51
Euro (€)	72	Japanese Yen (¥)	0.5
British Pound (£)	94	Chinese Yuan (¥)	10

Visa

Delegates from abroad are required to get their Visa through Indian Embassy/ High Commission in their country. Visa on Arrival facility is available for holders of passport of several countries. Please check out with Indian Embassy/High Commission for details.

Travel Desk

Cox and Kings (www.coxandkings.com) have been identified as our official Travel Partner who will take all your queries and provide services related to travel, excursions and money exchange. There are a large number of places of tourist interest including sacred Buddhist shrines in India and also in and around Hyderabad (please visit www.incredibleindia.org for details). A number of attractive and competitive packages of different durations and for different group sizes both for delegates and for spouses have been worked out. The details of these packages are posted on the website.

Accommodation

A wide range of hotels with tariffs ranging from US\$ 80 to 300 per person per day are available in the city within a distance of 10-15 km from the Conference venue. For the benefit of the Conference delegates, the organizers have negotiated with some selected hotels for discounted rates to the participants attending the 25th APWSS Conference. The list and contact details of such hotels along with tariff are given below and are also available on the website. The delegates are advised to book accommodation on their own well in advance. Transport facility from these hotels to the venue of the Conference will be provided by the Organizers. No transport facility will be provided by the organizers from Airport/Railway stations to the Hotels or Guest houses.

Hotel	Tariff (INR per night per room)		Privileges	Booking and queries
	Single	Double		
Mamori, Hyderabad Opposite Hussain Sagar Lake Tank Bund Road, Hyderabad- 500080	4500	5000	Buffer breakfast Swimming pool Gym	Email: almn.hyderabad@mamrihotels.com Duty Manager: +919958600063
Mamori Courtyard Opposite Hussain Sagar Lake Tank Bund Road, Hyderabad- 500080	4000	4250	Buffer breakfast Swimming pool Gym	Email: almn.cyhyderabad@courtyard.com Duty Manager: +919958600297
Hotel AVASA HITEC City Madhapur Hyderabad- 500081	Silver-4500	4000	Buffer breakfast Free Wi-Fi Sky Pool Gymnasium	Email: Sales1.hyd@hotelgreenpark.com Manager: +914067363036 Fax: +914067363637
Lemon Tree Premier HITEC City Madhapur Hyderabad- 500081	Superior-5000 Deluxe-6000 Premier-6500	6000 7000 8000	Buffer breakfast Free Wi-Fi Pool Gymnasium	Email: sales6.hy@lemon-treehotels.com Manager: +91660294323
Radico Hotel HITEC City Madhapur Hyderabad-500081	Standard-3500 Premium-4500	4500 5500	Buffer breakfast Free Wi-Fi Gymnasium	Email: sales6.hy@lemon-treehotels.com Manager: +91660294323

Dr. Steve Adkins

Professor of Plant Physiology, University of Queensland, Brisbane, Australia
Former APWSS President (2009-11)

Topic: Biology, ecology and management of the invasive *Parthenium* weed (United Kingdom)

**Dr. Vallurupalli Sivaji Rao**

Formerly, Cornell University, New York, USA; Editor-in-Chief, Indian Journal of Weed Science (1982-90)

Topic: Transgenic herbicide resistant crops for sustainable weed management in the Asian-Pacific region: Perspectives and alternatives

**Dr. Buddhi Maramba**

Professor of Weed Science, Department of Crop Science, University of Peradeniya, Sri Lanka; Former APWSS President (2005-07)

Topic: Strengthening the capacity to control invasive alien species - Sri Lankan experiences

**Dr. Chris Parker**

International Consultant, United Kingdom

Editor - *Hausorium*

Topic: Parasitic weeds and their control : Are we winning?

**Dr. Raghavan Charudattan**

Emeritus Professor, Univ. Florida, Plant Pathology Dept., Gainesville, FL

Topic: Weed control with microbial bioherbicides

**Invited Lead Speakers**

One or two lead presentations will be made for each sub-theme to present current status of research in the respective technical sessions. The invited lead speakers include: Dr. Anis Rahman, New Zealand; Dr. Samunder Singh, India; Dr. Krishna N. Reddy, USA; Dr. Vijay Nandula, USA; Dr. Prasanta C. Bhowmik, USA; Dr. Mahesh K. Upadhyaya, Canada; Dr. Inderjit, India; Dr. R.M. Kathiresan, India; Dr. Do-Soon Kim, South Korea; Dr. Prashant Jha, USA; Dr. Nilda Burgos, USA; Dr. Baruch Rubin, Israel; Dr. B.S. Chauhan, Australia; Dr. Megh Singh, USA; Dr. K. Dhileepan, Australia; Dr. Michael Renton, Australia; Dr. Deidre Lamerle, Australia; Dr. H.R. Mashadi, Iran and a few others. Besides, selected oral presentations (3-4) will be arranged in each technical session.

Registration

Register now to save! We are pleased to offer a special discounted rate for those who register early. This offer is only available until the specified period.

Category	Before 31 August, 2015	After 1 September, 2015
Indian participants		
• ISWS members	INR 6000	INR 7000
• Non-ISWS members	INR 7000	INR 8000
• Students	INR 3000	INR 3500
• Accompanying person	INR 4000	INR 4000
• Industry representatives	INR 20000	INR 25000

*INR – Indian National Rupees

Category	Before 31 August, 2015	After 1 September, 2015
Overseas participants		
• SAARC countries	US\$ 275	US\$ 325
• Other countries	US\$ 350	US\$ 400
• Accompanying person (SAARC)	US\$ 150	US\$ 200
• Accompanying person (Non-SAARC)	US\$ 200	US\$ 250
• Students	US\$ 200	US\$ 250
• Industry representatives	US\$ 1000	US\$ 1100

The Registration Fee includes the Conference kit, access to Conference sessions, tea / snacks during session breaks, daily lunch, one Conference dinner, and transport from the guest house / hotel to the venue. It does not include accommodation.

Indian delegates can pay their registration fees online through CC Avenue or by transfer to the Society's Account No. 940710110001156 or through Demand Draft / Pay Order in favour of the Organizing Secretary, 25th Asian-Pacific Weed Science Society Conference, payable at Bank of India (IFSC Code : BKD0009407) Jabalpur, India. The foreign delegates are requested to submit the registration fees through Paypal or CC Avenue. Link for payment of registration fee is available on the website.

Important Dates

Abstract Submission Deadline	30 April, 2015
Abstract Review	1 May, 2015 - 22 June, 2015
Abstract Status Notification	Between 10 July, 2015 and 24 July, 2015
Plenary and Lead Papers	31 July, 2015
Early Bird Registration Deadline	31 August, 2015

Invitation to Submit Papers

The participants are invited to submit their papers to the 25th Asian-Pacific Weed Science Society Conference. All papers should be submitted online only as per the guidelines available on the website.

Papers submitted for Oral Presentation will be reviewed and selected on merit for inclusion in the programme. All papers submitted as Posters will also be reviewed and accepted. Posters not conforming to the guidelines will not be accepted. If a paper for an Oral Presentation is selected on merit, but not accepted as a platform presentation, the authors will be invited to present a Poster instead. Only two papers will be allowed as a senior author.

Notification of acceptance/rejection of the paper will be sent via email to the corresponding author only on or after 10 July, 2015. If you have not received the email notification by 24 July, 2015, you are invited to contact the Secretariat for clarifications. No paper will be included in the proceedings without the payment of registration fee.

Weather

The weather in the month of October will be quite pleasant with mean maximum and minimum temperatures of 30°C and 20°C, respectively. Normally rains are not expected and warm clothes are not required during this period.

Currency

The currency in India is Indian National Rupee (INR, ₹). The equivalents of INR in terms of major international currencies are as follows:

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Marrriott Courtyard Opposite Hussain Sagar Lake Tank Bund Road, Hyderabad- 500080	4000	4250	Buffer breakfast Swimming pool Gym	Email: altem.cyhyderabad@courtyard.com Duty Manager: +919949400297
Hotel A/ASA HITEC City Madhapur Hyderabad- 500081	Silver-4500	4000	Buffer breakfast Free Wi-Fi Sky Pool Gymnasium	Email: Sales1.hyd@hotelgreenpark.com Manager: +914667363034 Fax: +914667363637
Lemon Tree Premier HITEC City Madhapur Hyderabad- 500081	Superior-5000 Deluxe-6000 Premier-6500	6000 7000 8000	Buffer breakfast Free Wi-Fi Pool Gymnasium	Email: sales6.hyd@lemontrreehotels.com Manager: +91560204323
Radisson Hotel HITEC City Madhapur Hyderabad-500081	Standard-3000 Premium-4500	4500 5500	Buffer breakfast Free Wi-Fi Gymnasium	Email: sales6.hyd@lemontrreehotels.com Manager: +91560204323

For Indian delegates, efforts will be made to provide accommodation in various guest houses located in and around the venue on "First come, first serve basis". However, due to non-availability in the guest house, they may also be accommodated in hotels. Student participants will be accommodated in university hostels around the venue. All efforts will be made to inform the registered delegates the place of accommodation well in advance.

Awards

Awards will be given to young scientists and for poster presentations as per the norms of APWSS. Two fellowships each of US \$500 will be awarded to Young and Deserving Scientists to attend the 25th APWSS Conference. Candidates who are less than 40 years of age, presenting an accepted oral talk at the Conference and will have made a significant contribution in weed science to APWSS region, either in research, training or in administration are eligible for the award. Interested candidates may submit their curriculum vitae to the ISWS Secretariat before 31st August, 2015.

Sponsorships

Opportunities are available for sponsoring this Conference by the industry, and other private and government organizations. The categories of sponsors and the associated privileges are given in the website. Exhibition stalls will be available for showcasing the products and technologies. Download the brochure from the website or write to Chairman, Finance Committee for more information.

International Advisory Committee

Chairman: Dr. S. Ayyappan, Secretary, DARE & Director General, ICAR, India

Co-Chairman: Dr. Steve Adkins, Immediate Past President, APWSS, Australia
Dr. Gurbachan Singh, Chairman, ASRB, New Delhi, India

Convenor: Dr. N.T. Yaduraju, President, APWSS, Hyderabad, India

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Local Organizing Committee**Chairman:** Dr. V. Praveen Rao, Special Officer, PJTSAU, Hyderabad**Co-Chairman:** Dr. D. Raji Reddy, Director of Research, PJTSAU, Hyderabad**Convenor:** Dr. P.C. Rao, Controller, PJTSAU, Hyderabad**Members:**

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Dr. A.R.G. Ranganatha, IICR, Hyderabad	Dr. A.S. Rao, ANGRAU, Hyderabad
Dr. M. Yakshi, PJTSAU, Hyderabad	Chairpersons of all local committees

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Dr. J.S. Mishra, ICAR-RCER, Patna	Dr. Shobha Sondhia, DWR, Jabalpur
Dr. G.N. Dhanagat, UAS, Bengaluru	Dr. K.A. Gopinath, CRIDA, Hyderabad
Dr. Gita Kulshreshtha, IARI, New Delhi	Dr. T.K. Das, IARI, New Delhi

Technical Programme Committee**Chairman:** Dr. A.N. Rao, Visiting Scientist, IIRI / ICRISAT, Hyderabad**Members:**

Dr. J.S. Mishra, ICAR-RCER, Patna	Dr. M.B.B. Prasad Babu, IIRR, Hyderabad
Dr. T.V.R. Prasad, Consultant, NIPHM, Hyderabad	Dr. Bhimesh Kumar, DWR, Jabalpur
Dr. M. Madhavi, PJTSAU, Hyderabad	Dr. P.P. Choudhury, DWR, Jabalpur

Finance Committee**Chairman:** Dr. C. Chinnusamy, Dean, TNAU, Madurai**Co-Chairman:** Dr. Dev Raj Arya, Monsanto India Ltd., Mumbai**Convenor:** Dr. Shobha Sondhia, DWR, Jabalpur**Members:**

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Dr. Samunder Singh, CCSHAU, Hisar	Dr. V. Vasudev Rao, PJTSAU, Hyderabad
Dr. R.K. Singh, BHU, Varanasi	Dr. M. Yakshi, PJTSAU, Hyderabad
Dr. M.L. Kewat, JNKVV, Jabalpur	Dr. R.S. Chhokar, IMBR, Kamal

For further details, please contact:**Dr. N.T. Yaduraju**

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Director, Directorate of Weed Research
Jabalpur 482 004, India
Mobile: +91 9425807290
Email: sharma.ar@rediffmail.com

Herbicide-Resistant Weeds in SWSS (03/27/2015)

State	Year	Weed	WSSA Mechanism of Action
Alabama	1980	annual bluegrass (<i>Poa annua</i>)	5
	1987	goosegrass (<i>Eleusine indica</i>)	3
	1988	common cocklebur (<i>Xanthium strumarium</i>)	17
	2008	Palmer amaranth (<i>Amaranthus palmeri</i>)	9
	2012	annual bluegrass (<i>Poa annua</i>)	2
	2012	annual bluegrass (<i>Poa annua</i>)	3
	2013	horseweed (<i>Conyza canadensis</i>)	9
	2013	common ragweed (<i>Ambrosia artemisiifolia</i>)	9
Arkansas	1989	goosegrass (<i>Eleusine Indica</i>)	3
	1989	common cocklebur (<i>Xanthium strumarium</i>)	17
	1990	barnyardgrass (<i>Echinochloa crus-galli</i> var. <i>crus-galli</i>)	7
	1994	Palmer amaranth (<i>Amaranthus palmeri</i>)	2
	1995	common cocklebur (<i>Xanthium strumarium</i>)	2
	1995	redroot pigweed (<i>Amaranthus retroflexus</i>)	2
	1995	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	1&2
	1999	barnyardgrass (<i>Echinochloa crus-galli</i> var. <i>crus-galli</i>)	4&7
	2003	horseweed (<i>Conyza canadensis</i>)	9
	2003	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	2
	2004	common ragweed (<i>Ambrosia artemisiifolia</i>)	9
	2005	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	1
	2005	giant ragweed (<i>Ambrosia trifida</i>)	9
	2006	Palmer amaranth (<i>Amaranthus palmeri</i>)	9
	2007	johnsongrass (<i>Sorghum halepense</i>)	9
	2008	barnyardgrass (<i>Echinochloa crus-galli</i> var. <i>crus-galli</i>)	13
	2008	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	9
	2010	rice flatsedge (<i>Cyperus iria</i>)	2
	2010	smallflower umbrella sedge (<i>Cyperus difformis</i>)	2
	2013	yellow nutsedge (<i>Cyperus esculentus</i>)	2
	2015	tall waterhemp (<i>Amaranthus tuberculatus</i>)	9
Florida	1985	American black nightshade (<i>Solanum americanum</i>)	22
	1996	goosegrass (<i>Eleusine indica</i>)	22
	2001	dotted duckweed (<i>Landoltia punctata</i>)	22
	2002	hydrilla (<i>Hydrilla verticillata</i>)	12
	2008	Palmer amaranth (<i>Amaranthus palmeri</i>)	2
	2013	Palmer amaranth (<i>Amaranthus palmeri</i>)	9
	2013	Palmer amaranth (<i>Amaranthus palmeri</i>)	2&9

State	Year	Weed	WSSA Mechanism of Action
Georgia	1992	goosegrass (<i>Eleusine indica</i>)	3
	1993	prickly sida (<i>Sida spinosa</i>)	2
	1995	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	1
	2000	Palmer amaranth (<i>Amaranthus palmeri</i>)	2
	2005	Palmer amaranth (<i>Amaranthus palmeri</i>)	9
	2008	Palmer amaranth (<i>Amaranthus palmeri</i>)	2&9
	2008	Palmer amaranth (<i>Amaranthus palmeri</i>)	5
	2008	large crabgrass (<i>Digitaria sanguinalis</i>)	1
	2009	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	1&2
	2010	Palmer amaranth (<i>Amaranthus palmeri</i>)	2&5&9
Kentucky	1987	smooth pigweed (<i>Amaranthus hybridus</i>)	5
	1991	johnsongrass (<i>Sorghum halepense</i>)	1
	1992	smooth pigweed (<i>Amaranthus hybridus</i>)	2
	2001	horseweed (<i>Conyza canadensis</i>)	9
	2004	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	1
	2005	giant ragweed (<i>Ambrosia trifida</i>)	9
	2006	common ragweed (<i>Ambrosia artemisiifolia</i>)	9
	2006	johnsongrass (<i>Sorghum halepense</i>)	2
	2010	tall waterhemp (<i>Amaranthus tuberculatus</i>)	9
	2010	Palmer amaranth (<i>Amaranthus palmeri</i>)	9
Mississippi	2013	common chickweed (<i>Stellaria media</i>)	2
	2013	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	2
	1989	common cocklebur (<i>Xanthium strumarium</i>)	2
	1991	johnsongrass (<i>Sorghum halepense</i>)	1
	1992	johnsongrass (<i>Sorghum halepense</i>)	3
	1994	common cocklebur (<i>Xanthium strumarium</i>)	17
	1994	goosegrass (<i>Eleusine indica</i>)	3
	1994	horseweed (<i>Conyza canadensis</i>)	22
	1995	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	2
	1996	annual bluegrass (<i>Poa annua</i>)	5
	2003	horseweed (<i>Conyza canadensis</i>)	9
	2005	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	9
	2007	horseweed (<i>Conyza canadensis</i>)	9&22
	2008	johnsongrass (<i>Sorghum halepense</i>)	9
	2008	Palmer amaranth (<i>Amaranthus palmeri</i>)	2&9
	2010	tall waterhemp (<i>Amaranthus tuberculatus</i>)	9

State	Year	Weed	WSSA Mechanism of Action
Mississippi	2010	goosegrass (<i>Eleusine indica</i>)	9
	2010	giant ragweed (<i>Ambrosia trifida</i>)	9
	2011	barnyardgrass (<i>Echinochloa crus-galli</i> var. <i>crus-galli</i>)	1,2,7,&26
	2012	spiny amaranth (<i>Amaranthus spinosus</i>)	9
	2014	common ragweed (<i>Ambrosia artemisiifolia</i>)	9
North Carolina	1973	goosegrass (<i>Eleusine indica</i>)	3
	1980	common Lambsquarters (<i>Chenopodium album</i>)	5
	1980	smooth Pigweed (<i>Amaranthus hybridus</i>)	5
	1990	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	1
	1994	common cocklebur (<i>Xanthium strumarium</i>)	17
	1995	Palmer amaranth (<i>Amaranthus palmeri</i>)	2
	1995	annual bluegrass (<i>Poa annua</i>)	5
	1997	annual bluegrass (<i>Poa annua</i>)	3
	1999	common cocklebur (<i>Xanthium strumarium</i>)	2
	2003	horseweed (<i>Conyza canadensis</i>)	9
	2005	Palmer amaranth (<i>Amaranthus palmeri</i>)	9
	2006	common ragweed (<i>Ambrosia artemisiifolia</i>)	2
	2006	common ragweed (<i>Ambrosia artemisiifolia</i>)	9
	2007	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	2
	2007	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	1&2
	2009	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	9
Oklahoma	1992	kochia (<i>Kochia scoparia</i>)	2
	1996	common cocklebur (<i>Xanthium strumarium</i>)	2
	2002	tall waterhemp (<i>Amaranthus tuberculatus</i> A. <i>rudis</i>)	2
	2009	cheat (<i>Bromus secalinus</i>)	2
	2009	horseweed (<i>Conyza canadensis</i>)	9
	2011	tall waterhemp (<i>Amaranthus tuberculatus</i> A. <i>rudis</i>)	9
	2013	kochia (<i>Kochia scoparia</i>)	9
South Carolina	1974	goosegrass (<i>Eleusine Indica</i>)	3
	1985	common cocklebur (<i>Xanthium strumarium</i>)	17
	1989	Palmer amaranth (<i>Amaranthus palmeri</i>)	3
	1990	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	1
	1997	Palmer amaranth (<i>Amaranthus palmeri</i>)	2
	2006	Palmer amaranth (<i>Amaranthus palmeri</i>)	9
	2010	Palmer amaranth (<i>Amaranthus palmeri</i>)	2&9
	2010	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	1&2

State	Year	Weed	WSSA Mechanism of Action
Tennessee	1988	goosegrass (<i>Eleusine indica</i>)	3
	1991	common cocklebur (<i>Xanthium strumarium</i>)	17
	1992	common cocklebur (<i>Xanthium strumarium</i>)	2
	1994	Palmer amaranth (<i>Amaranthus palmeri</i>)	2
	1995	johnsongrass (<i>Sorghum halepense</i>)	1
	1998	common lambsquarters (<i>Chenopodium album</i>)	5
	1998	Palmer amaranth (<i>Amaranthus palmeri</i>)	3
	2001	horseweed (<i>Conyza canadensis</i>)	9
	2006	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>Multiflorum</i>)	1
	2006	Palmer amaranth (<i>Amaranthus palmeri</i>)	9
	2007	annual bluegrass (<i>Poa annua</i>)	3
	2007	giant ragweed (<i>Ambrosia trifida</i>)	9
	2007	tall waterhemp (<i>Amaranthus tuberculatus</i>)	2
	2009	Palmer amaranth (<i>Amaranthus palmeri</i>)	2&9
	2011	tall waterhemp (<i>Amaranthus tuberculatus</i>)	9
	2011	annual bluegrass (<i>Poa annua</i>)	9
	2011	goosegrass (<i>Eleusine indica</i>)	9
	2012	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	9
	2013	annual bluegrass (<i>Poa annua</i>)	2&5
Texas	1989	perennial ryegrass (<i>Lolium perenne</i>)	2
	1991	barnyardgrass (<i>Echinochloa crus-galli</i> var. <i>crus-galli</i>)	7
	1993	Palmer amaranth (<i>Amaranthus palmeri</i>)	5
	1998	kochia (<i>Kochia scoparia</i>)	2
	2000	johnsongrass (<i>Sorghum halepense</i>)	2
	2006	tall waterhemp (<i>Amaranthus tuberculatus</i> A. <i>rudis</i>)	9
	2011	Palmer amaranth (<i>Amaranthus palmeri</i>)	9
Virginia	1976	smooth pigweed (<i>Amaranthus hybridus</i>)	5
	1979	common lambsquarters (<i>Chenopodium album</i>)	5
	1993	Italian ryegrass (<i>Lolium perenne</i> ssp. <i>multiflorum</i>)	1
	1993	redroot pigweed (<i>Amaranthus retroflexus</i>)	5
	1994	smooth pigweed (<i>Amaranthus hybridus</i>)	2
	1995	johnsongrass (<i>Sorghum halepense</i>)	1
	2001	annual bluegrass (<i>Poa annua</i>)	5
	2003	shattercane (<i>Sorghum bicolor</i>)	2
	2005	horseweed (<i>Conyza canadensis</i>)	9
	2008	common chickweed (<i>Stellaria media</i>)	2
	2011	Palmer amaranth (<i>Amaranthus palmeri</i>)	9

Submitted by Jason Bond

WASHINGTON REPORT

April 1, 2015

Lee Van Wychen

Superweed Definition Unanimously Approved

At the recent WSSA meeting in Lexington, KY, the Board of Directors unanimously approved the following definition for “superweed”

Superweed: Slang used to describe a weed that has evolved characteristics that make it more difficult to manage due to repeated use of the same management tactic. Over-dependence on a single tactic as opposed to using diverse approaches can lead to such adaptations.

The most common use of the slang refers to a weed that has become resistant to one or more herbicide mechanisms of action (www.weedscience.org) due to their repeated use in the absence of more diverse control measures. Dependence on a single mechanical, biological, or cultural management tactic has led to similar adaptations (e.g. hand-weeded barnyardgrass mimicking rice morphology, dandelion seed production in a regularly mowed lawn, knapweed resiliency to gall fly biocontrol).

Two common misconceptions about a superweed are that they are the result of gene transfer from genetically altered crops and that they have superior competitive characteristics. Both of these myths have been addressed by the Weed Science Society of America (WSSA) at www.wssa.net/weed/wssa-fact-sheets. WSSA has created a variety of free educational materials and recommendations concerning herbicide resistance and how to avoid it, available at www.wssa.net/weed/resistance.

FY 2016 USDA Appropriations

The administration released its FY 2016 budget request at the beginning of February. Things look pretty good for USDA budget items overall with NIFA, ARS, NRCS, the Economic Research Service (ERS), and National Ag Statistics Service (NASS) all receiving higher budget requests compared to FY 2015 that was just passed in December. Within USDA-NIFA, the Agriculture and Food Research Initiative (AFRI) grants program was recommended for a large increase from \$325 million to \$450 million. Many of USDA-NIFA's capacity building programs also were recommended for increases compared to FY 2015, including the Hatch Act increasing from \$244 million to \$256 million and Smith Lever 3b and 3c increasing from \$300 million to \$304 million. FY 2016 funding for the IR-4 program (\$11.9 million) and the Crop Protection and Pest Management line item (\$17.2 million) would remain as in FY 2015.

House Ag Committee Passes “NPDES Fix” Bill

On March 19, the House Agriculture Committee passed [The Reducing Regulatory Burdens Act of 2015 \(H.R. 897\)](#). This legislation has passed the U.S. House as a stand-alone bill in two previous sessions of Congress but failed in the Senate. H.R. 897 clarifies congressional intent and eliminates the duplicate regulatory requirement of a National Pollutant Discharge Elimination System (NPDES) permit for the use of herbicides in, over, or near waters of the United States that are already approved for use under FIFRA. This stems from the problem created in 2009 by a three-judge Court of Appeals Ruling for the Sixth Circuit. The 2009 court ruling invalidated a 2006 EPA regulation exempting pesticide applications that are in compliance with FIFRA from a requirement to also comply with NPDES permits.

Milkweed and Monarchs

The Fish and Wildlife Service (FWS) was petitioned by three environmental groups last August that claimed that extensive use of glyphosate on glyphosate resistant corn and soybeans in the Midwest has devastated native populations of milkweed, the sole source of food for monarch butterfly larvae. The petitioners claim that monarch butterfly populations have decreased 90 percent over the past 20 years. FWS is reviewing the status of the monarch butterfly to consider if it needs federal intervention under the Endangered Species Act (ESA). However, if we actually want to see monarch butterfly numbers rebound, listing it under the ESA is a bad idea as the ESA has a terrible track record for promoting species recovery. Along those lines, Monsanto has taken a proactive approach by contributing \$3.6 million over three years to the National Fish and Wildlife Foundation (NFWF) Monarch Butterfly Conservation Fund. The \$3.6 million will be used to match funds provided by FWS and other federal agencies that will support habitat restoration, education, outreach, and milkweed seed production to benefit monarch butterflies. To learn more about the Monarch Butterfly Conservation Fund, visit www.nfwf.org/monarch. In addition to its commitment to NFWF's Monarch Butterfly Conservation Fund, Monsanto will provide approximately \$400,000 in grants to other organizations working to protect biodiversity through both immediate and long-term actions.

Washington Post – We Don't Need Labels on Genetically Modified Foods

In a March 29 editorial by the Washington Post, the editorial board discusses the false balance between scientific consensus and fear mongering in the GM food debate. They state "The GM-food debate is a classic example of activists overstating risk based on fear of what might be unknown and on a distrust of corporations." The editorial can be found at: http://www.washingtonpost.com/opinions/we-dont-need-labels-telling-us-our-food-has-been-genetically-modified/2015/03/29/66f97f4a-d4c5-11e4-8fce-3941fc548f1c_story.html

USDA Stakeholder Workshop on Coexistence

USDA recently conducted a two day stakeholder workshop to advance an understanding of agricultural coexistence – the concurrent cultivation of conventional, organic, identity preserved (IP), and genetically engineered (GE) crops consistent with farmer choices and consumer preferences – and discuss opportunities for making coexistence more achievable for all stakeholders. The workshop was organized around three sessions: 1) the current state of affairs of coexistence; 2) knowledge gaps, challenges, and USDA's responses so far to the AC21 recommendations; and 3) additional steps USDA is considering to respond to the challenges. Webcasts of the workshop as well as copies of workshop's presentations and summaries of USDA activities that are either newly proposed or already underway to support of coexistence—are available for public viewing on the USDA Stakeholder Workshop on Coexistence Web page: <http://1.usa.gov/1CCWEXU>. There is a ton of information provided there, but I would like guide your attention to two excellent presentations in particular regarding USDA and EPA actions on herbicide resistance weeds:

[**U.S.D.A. Actions to Address Herbicide Resistance in Weeds**](#): Jill Schroeder, Ph.D, USDA Office of Pest Management Policy

[**EPA's Perspective on Herbicide Resistance in Weeds**](#): Jack Housenger

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

Position Vacancy Announcements

Principal Research Specialist, Crop Sciences

College of Agricultural, Consumer and Environmental Sciences
University of Illinois at Urbana Champaign

Illinois is a world leader in research, teaching, and public engagement. We serve the state, the nation, and the world by creating knowledge, preparing students for lives of impact, and addressing critical societal needs through the transfer and application of knowledge. Illinois is the place where we embrace difference. We embrace it because we value it. Illinois is especially interested in candidates who can contribute, through their research, teaching, and/or service, to the diversity and excellence of the Illinois community.

POSITION SUMMARY

Provide managerial leadership of the herbicide evaluation program.

SPECIFIC DUTIES AND RESPONSIBILITIES

- Conduct applied weed science research through planning, coordination, treatment application, data collection, entry and analysis for field and greenhouse experiments.
- Provide research knowledge and advice to faculty, staff, and graduate students in weed science.
- Coordinate the management and leadership of the herbicide evaluation program.
- Conduct field tours and presentations with weed science faculty and staff and perform other outreach activities as needed.
- Maintain and analyze pesticide application records.
- Collaborate with growers, industry representatives, and other research personnel.
- Produce annual research summaries and reports.
- Supervise hourly student employees by training, assigning work, and approving time sheets

QUALIFICATIONS:

Required qualifications: a B.S. in agronomy or related agricultural discipline; three years of weed

science research experience and experience with computer software for word processing, data entry and analysis, and slide preparation. Applicant must possess a thorough knowledge of weed science field and greenhouse research techniques, and of pesticides and their associated application techniques. This position requires possession of, or ability to obtain, an Illinois Research Pesticide Applicators license.

Preferred qualifications: Preference will be given to candidates with a M.S. in weed science and experience in row-crop agronomic production.

SALARY

Salary will be commensurate with training and experience.

APPOINTMENT STATUS

This is a 12-month, 100% academic professional position.

PROPOSED STARTING DATE

As soon as possible after the closing date.

APPLICATION PROCEDURES

Please create your candidate profile at <http://jobs.illinois.edu> and upload a cover letter indicating your qualifications, resume and contact information for three references by February 22, 2015. All requested information must be submitted for your application to be considered.

For further information regarding application procedures, you may contact Linda Kemplin, kemplin@illinois.edu. You may also visit <http://cropsci.illinois.edu> for additional information.

Illinois is an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, sex, age, status as a protected veteran, or status as a qualified individual with a disability. Illinois welcomes individuals with diverse backgrounds, experiences, and ideas who embrace and value diversity and inclusivity (www.inclusiveillinois.illinois.edu).

Research/Extension Professor (Assistant/Associate/Full) Weed Science

Position Function

This is a split appointment with 75% research activity with the Mississippi State University, Mississippi Agricultural and Forestry Experiment Station (MAFES) and 25% Extension activity with the Mississippi State University Extension Service (MSU-ES). The position is housed at the Delta Research and Extension Center in Stoneville, MS. The incumbent will develop a nationally recognized research and Extension program supported by external funding sources that addresses critical weed control issues in corn and cotton. The incumbent will also have opportunities for weed control research and Extension in other crops (grain sorghum, peanut, sesame, and wheat) grown by producers in the Mississippi Delta and surrounding areas.

Essential Duties and Responsibilities

Conduct in-depth research in corn and cotton weed management emphasizing economic evaluation of weed management strategies. Assist in the coordination of weed management research efforts to improve crop production in the Mississippi Delta. Cooperate in research projects with agronomists, entomologists, plant pathologists, and other weed scientists at DREC, Mississippi State University, and the USDA-ARS. Develop, coordinate, and conduct weed management Extension programs in Mississippi with emphasis on the Delta area. Collaborate with other faculty to ensure that on-going weed management research efforts at DREC address needs of area growers. Work as a team member to develop educational programs for the entire Delta and work with other Extension personnel to refine and carry out these programs. The incumbent will be expected to work with other weed scientists at DREC to develop programs to monitor and manage herbicide-resistant weed species. Incumbent will be expected to secure extramural funding to support research activities, publish research findings in appropriate professional research journals, and make presentations at professional meetings. The incumbent will participate in graduate student training and contribute to collaborative teaching in off-campus and campus-based educational programs in weed science. Additionally, the incumbent will participate in research and graduate education programs in weed science management related to precision agriculture.

Salary and rank will be commensurate with experience.

Minimum Qualifications

- 1) Earned doctorate in Weed Science or a related field.
- 2) Experience in development of weed management research programs.
- 3) Demonstrated ability to work in research teams and with commercial growers.
- 4) Familiarity with modern agricultural production practices.
- 5) Excellent written and verbal communication skills to publish research findings in peer-reviewed journals and interact effectively with producers, faculty, staff, students, researchers, and other personnel.
- 6) Ability to secure extramural funding, design and manage research projects, and supervise personnel.

ABD's will be considered.

Instructions for Applying

Application must be submitted online at jobs.msstate.edu

Applicants should submit hard copies of the following documents: i) curriculum vitae (including statement of current position and responsibilities); ii) academic transcripts; iii) a statement of research philosophy and research interests; and iv) three letters of reference to:

Dr. Jeff Johnson
Head - Delta Research and Extension Center
P.O. Box 197
82 Stoneville Road
Stoneville, MS 38776

Research Assistant II/III - Research Associate I/II

Crop, Soil & Environmental Sciences
Auburn University

Req Nbr 25727
Salary Grade 31
Status Limited Term
Salary Range \$31,300 - \$58,400

Job Summary **This is a three year, limited term position. Continuation of employment is contingent upon availability of funds.**

The individual in this position will develop, conduct, and manage turfgrass weed management and herbicide evaluation research conducted in both field and greenhouse environments. This includes collecting, describing, recording, validating, and interpreting research data and assisting the principle investigator in planning, conducting, and formulating procedures. In addition, this position will assist with development of conclusions and presentations of research findings. May oversee the work of designated personnel and/or students. Periodic travel throughout the state of Alabama to complete research will be required.

Minimum Qualifications Designation as a Research Assistant requires a Bachelor's degree from an accredited institution in Plant Science, Crop Science, or a closely related field and two (2) years of experience in weed and plant identification, pesticide application and/or turfgrass management. Designation as a Research Associate requires a Master's degree from an accredited institution in the subject areas listed above. Current pesticide applicator's license or

ability to obtain one within the first six months of employment is required. Employer will consider advanced degrees in lieu of experience.

Must be fluent with Microsoft Office and SAS and able to learn software to enter, analyze, and summarize data and the ability to collect research data. Will be required to apply pesticides by hand, four-wheeler, or tractor mounted sprayer; ability to lift and carry up to fifty pounds; operate farm equipment; and walk up to three miles per day. Excellent interpersonal communication skills, demonstrated technical excellence, and the ability to work both independently and in a team environment are also required.

Selected applicant must meet eligibility requirements for work in the U.S. by the start date and continue working legally for the proposed term of employment. Please utilize the attachment feature of the on-line application system and attach a cover letter and resume. Only complete application packets will be selected for consideration.

Desired Qualifications Desired qualifications include supervisory experience, knowledge of Word, Powerpoint, Excel, and Agricultural Research Manager (ARM) programs.

Posting Date 04-02-2015

Review Date 04-17-2015

Job Class Code HA01B, HA01C, HA02A, HA02B

FLSA Exempt

Job Category Research

Quicklink for Posting www.auemployment.com/applicants/Central?quickFind=188830

Assistant Professor - Fate and Transport of Chemical Contaminants

Crop, Soil, and Environmental Sciences

University of Arkansas, Fayetteville

Job Number: Y15006-A

Location: The University of Arkansas is located in Fayetteville in the heart of the Ozark Mountains, and is part of the Northwest Arkansas metropolitan area. Northwest Arkansas (<http://www.explorenwar.com/>) is one of the fastest-growing areas in the nation and has a population of more than 500,000. Northwest Arkansas features a thriving local economy, good highway and commercial air access, award-winning K-12 schools, comprehensive healthcare facilities, extensive cultural programs, and outstanding outdoor recreational opportunities. Fayetteville was named the #4 Top 10 College Town in 2014 by Livability.com and named one of the Top 100 Best Places to Live by Livability.com in 2013.

Posted Date: 03/02/2015

Annual Salary: Commensurate with qualifications and experience.

Description: The Department of Crop, Soil, and Environmental Sciences in the University of Arkansas Division of Agriculture seeks an individual that will develop a nationally-recognized research and teaching program encompassing the environmental and physiological fate of chemical contaminants, primarily herbicides, that will improve the sustainable management of agricultural production systems. This is a tenure-track assistant professor position with an 80%-Research and 20% Teaching appointment. The areas of interest for this position may include both basic and applied research on the environmental fate of pesticides and their metabolites in soil, water, and plants, and preference will be given to individuals that integrate research through systems analysis. This position will complement the Division of Agriculture's emerging

strength in sustainability and environmental quality, particularly in regards to pesticide contamination and degradation in water or the environment.

Minimum Requirements: The candidate must have a Ph.D. in chemistry, environmental science, toxicology, soil and water science, weed science, or a closely related discipline. The candidate must have expertise with appropriate instrumentation. The candidate must display effective communication skills. The successful candidate should demonstrate the ability to obtain extramural funding. The candidate must have good interpersonal skills and be able to work and interact with an interdisciplinary team of scientists.

Preferred Qualifications: Field research experience in herbicide/plant interactions and environmental fate of pesticides is desired.

Job Duties: The individual will utilize the statewide resources from the University of Arkansas Agriculture Experiment Station to conduct laboratory and/or field experiments that will compliment ongoing research on agricultural sustainability. The successful candidate is expected to secure extramural funding to support a strong research and teaching program that includes training of graduate and undergraduate students and the publication of research results in peer-reviewed scientific journals.

Where To Apply? Review of materials will begin April 13, 2015, and will continue until a suitable candidate is found. Submit a complete, hard-copy-only application consisting of a letter of application stating career goals, research interests and abilities; resume or CV; academic transcripts; and the names and addresses of three references to:

Dr. Robert Bacon
c/o Rachael Armstrong
115 Plant Science
University of Arkansas
Fayetteville, AR 72701

The University of Arkansas is an equal opportunity, affirmative action institution. The University welcomes applications without regard to age, race, gender (including pregnancy), national origin, disability, religion, marital or parental status, protected veteran status, military service, genetic information or sexual orientation. Persons must have proof of legal authority to work in the United States on the first day of employment. All applicant information is subject to public disclosure under the Arkansas Freedom of Information Act.



To: National Weed Science Contest Coaches and Volunteers

From: Bruce Ackley and Mark Loux

Greetings,

The 2015 National Weed Science Contest will be held on Tuesday, July 21, 2015 at the OARDC Western Agricultural Research Station near South Charleston OH (about 40 miles west of The Ohio State University). As with past contests, Monday, July 20th will be a travel day. Also on the 20th, volunteers will meet at the site during the day to review the contest plots and finalize preparations, and an orientation dinner will be held in the evening for all participants, to communicate arrangements for the contest. The contest will run from 8:00 a.m. to 5:00 p.m. on Tuesday, followed by an evening awards banquet at the Ohio Union on the main campus of OSU. Included in this e-mail message are: 1) team registration forms; 2) volunteer registration forms; 3) rules for the contest, including weed and herbicide lists; and 4) hotel information. Please return the registration forms to Bruce Ackley by June 19 – his contact info is on the forms.

We encourage you and your students to participate in this year's National Weed Science Contest. The contest is an excellent opportunity for students to learn and interact with other students, faculty, and industry professionals. Please be sure to share this invitation with your students and any colleagues who may be interested in participating. We look forward to seeing all of you at the contest in July.

Respectfully, Bruce Ackley and Mark Loux



2015 National Weed Contest July 20-22

OARDC Western Ag Research Station

7721 S. Charleston Pike, South Charleston, OH 45368

Please return by June 19, 2015

University/College	
Contact/Coach	
E-Mail	
Phone	

Type of Team: Graduate or Undergraduate:		
Name	Grad or Undergrad	Shirt Size
1.		
2.		
3.		
4.		

Type of Team: Graduate or Undergraduate:		
Name	Grad or Undergrad	Shirt Size
1.		
2.		
3.		
4.		

Type of Team: Graduate or Undergraduate:		
Name	Grad or Undergrad	Shirt Size
1.		
2.		
3.		
4.		

Please email form to: Bruce Ackley at ackley.19@osu.edu

2015 National Weed Contest Hotel Information

Hampton Inn Columbus – West

5625 Trabue Road
Columbus, Ohio 43228
(614)851-5599 or 1-800-HAMPTON
www.columbuswest.hamptoninn.com

Group Name: North Central Weed Science Society Weeds Contest

Group Code: NCW

Rate: \$125 per night + tax

Reserve by July 6, 2015

Directions:

From Dayton: I-70 East 65 miles, Exit #91 Rome-Hilliard Rd. Left at stop, right at light (Trabue Rd), Right on St. James Lutheran.

From Downtown: Take I-70 West, take Rome Hilliard Rd Exit 91B. At light make right (Trabue Rd). Then right on St. James Lutheran. From Cleveland: 71 South to 270 West Indianapolis to 70 West Exit 91B Rome Hilliard Rd, right at light (Trabue Rd.) right on St. James Lutheran.

From Cincinnati: 71 North to 270 West Indianapolis to I-70 West Exit 91B Rome-Hilliard Rd at light make right (Trabue rd.), right on St. James Lutheran.

From Columbus Airport: 670 West to I-70 West to Exit 91B. Right on Trabue Rd, then right on St. James Lutheran.

Fairfield Inn & Suites Columbus West

5520 Maxwell Place
Columbus, Ohio 43228
(614)643-4300
www.marriott.com/hotels/travel/cmhwe-fairfield-inn-and-suites-columbus-west-hilliard/

Group Name: North Central Weed Science Society

Rate: \$129 per night + tax

Reserve by June 20, 2015

2nd National Weed Contest
Hosted by: The Ohio State University
Location: South Charleston, OH
Date: 20-22 July 2015

The National Weed Contest, called the WeedOlympics, is a joint activity between the Northeastern, North Central, Southern, and Western Weed Science Societies. The purpose of this national contest is to provide an educational experience from which students from universities across the country can broaden their applied skills in Weed Science. The contest provides an opportunity for students to meet and interact with each other, be exposed to researchers from other universities and industry, and apply what they have learned using a contest to measure their capabilities. It is also hoped that the contest will increase the visibility of Weed Science and intensify the interest level of those participating in the discipline of Weed Science.

CONTEST RULES

Note: student cell phones or other communication devices will not be permitted during the contest. Students should leave their cell phones and devices with their coaches during the day of the contest. Any violation of this rule will result in disqualification of that student from the contest

A. Eligibility

Any undergraduate or graduate student currently enrolled and pursuing an A.S., B.Sc., M.Sc. or Ph.D. is eligible to participate. Eligibility includes A.S. students, including 2-year schools, who will compete as undergraduate individuals and teams. Each team will consist of three or four members. If a team has four students, the top three scores will be used to calculate a team score. If a team has three students, all three scores will be used to calculate the team score. A team may be composed of: (a) graduates, (b) undergraduates, or (c) combination (graduates and undergraduates). A combination team must compete as a graduate team; however, the undergraduate students remain eligible for individual undergraduate awards. Conversely, universities within a region may form a three or four member team with students from different universities as long as all participating universities in the joint team have no other teams competing. There is no restriction on the number of teams a single college or university may enter in the contest; however, if resources become constrained universities that bring multiple teams may be asked to reduce their level of participation and preference will be given to graduate student teams. If a college or university does not have sufficient students for a team of three, students may enter as individuals, but will not be eligible for a team award.

All students graduating with an A.S. or B.Sc. degree six months before the contest (and not actively enrolled in a graduate program) will be able to participate as an undergraduate. Each society will be required to bring a minimum of 2 teams in order to compete at the society level.

B. Awards

Plaques and/or trophies will be awarded for the following categories:

National Level

Team – Members of the top overall graduate and undergraduate team will be awarded a plaque. Weed identification, written test and sprayer calibration, unknown herbicides, and problem solving will determine the overall contest winner in both the graduate and undergraduate divisions.

Individual – The highest combined scores from the weed identification, written calibration test, unknown herbicides, and problem solving events will determine the overall top three graduate and top three undergraduate individual winners. The team sprayer calibration event will not count towards individual scores. Each winner will be recognized by a plaque. The highest individual scores by a graduate and an undergraduate student for each contest event (weed identification, problem solving, unknown herbicides, and written calibration test) will be recognized with a plaque.

Society Level

Hosts of the WeedOlympics will not be presenting awards at the society level. All awards at the society level are the responsibility of each individual society's weed contest committee. Societies are not required to present awards at the society level. The breakdown below is only a suggestion of how plaques could be awarded should a society chose to do so.

Team – Members of the top three overall graduate and undergraduate teams in each society will be awarded a plaque. Weed identification, written test and sprayer calibration, unknown herbicides, and problem solving will determine the overall contest winner in both the graduate and undergraduate divisions.

Individual – The highest combined scores from the weed identification, written calibration test, unknown herbicides, and problem solving events will determine the overall top three graduate and top three undergraduate individual winners. The team sprayer calibration event will not count towards individual scores. Each winner will be recognized by a plaque. The highest individual scores by a graduate and an undergraduate student for each contest event (weed identification, problem solving, unknown herbicides, and written calibration test) will be recognized with a plaque if individual societies choose so.

Teams are expected to compete in a society that recognizes them as part of their current region. Some teams have the option of competing in one of two regional societies. For example, "North Carolina State University" is recognized by the SWSS and NEWSS, "University of Kentucky" is recognized by the NCWSS and SWSS, and "Oklahoma State University" is recognized by the SWSS and WSWS. An example of a team regional declaration that would be invalid would be if the "University of Maine" decided to compete as a WSWS team. Teams must declare which society they are competing with before the competition begins or will be designated by the host.

Level	Place	Plaques Awarded
National Level	1st Place Graduate Team	4
	1st Place Undergraduate Team	4
	1st Place Graduate Individual	1
	1st Place Undergraduate Individual	1
Society Level		
	1st Place NEWSS Graduate Team	4
	2nd Place NEWSS Graduate Team	4
	3rd Place NEWSS Graduate Team	4
	1st Place NEWSS Undergraduate Team	4
	2nd Place NEWSS Undergraduate Team	4
	3rd Place NEWSS Undergraduate Team	4
	1st Place NEWSS Graduate Individual	1
	2nd Place NEWSS Graduate Individual	1
	3rd Place NEWSS Graduate Individual	1
	1st Place NEWSS Undergraduate Individual	1
	2nd Place NEWSS Undergraduate Individual	1
	3rd Place NEWSS Undergraduate Individual	1
	1st Place SWSS Graduate Team	4
	2nd Place SWSS Graduate Team	4
	3rd Place SWSS Graduate Team	4
	1st Place SWSS Undergraduate Team	4
	2nd Place SWSS Undergraduate Team	4
	3rd Place SWSS Undergraduate Team	4
	1st Place SWSS Graduate Individual	1
	2nd Place SWSS Graduate Individual	1
	3rd Place SWSS Graduate Individual	1
	1st Place SWSS Undergraduate Individual	1
	2nd Place SWSS Undergraduate Individual	1
	3rd Place SWSS Undergraduate Individual	1

	1st Place NCWSS Graduate Team	4
	2nd Place NCWSS Graduate Team	4
	3rd Place NCWSS Graduate Team	4
	1st Place NCWSS Undergraduate Team	4
	2nd Place NCWSS Undergraduate Team	4
	3rd Place NCWSS Undergraduate Team	4
	1st Place NCWSS Graduate Individual	1
	2nd Place NCWSS Graduate Individual	1
	3rd Place NCWSS Graduate Individual	1
	1st Place NCWSS Undergraduate Individual	1
	2nd Place NCWSS Undergraduate Individual	1
	3rd Place NCWSS Undergraduate Individual	1
	1st Place WSWs Graduate Team	4
	2nd Place WSWs Graduate Team	4
	3rd Place WSWs Graduate Team	4
	1st Place WSWs Undergraduate Team	4
	2nd Place WSWs Undergraduate Team	4
	3rd Place WSWs Undergraduate Team	4
	1st Place WSWs Graduate Individual	1
	2nd Place WSWs Graduate Individual	1
	3rd Place WSWs Graduate Individual	1
	1st Place WSWs Undergraduate Individual	1
	2nd Place WSWs Undergraduate Individual	1
	3rd Place WSWs Undergraduate Individual	1

C. Events

The contest will consist of four major events.

1) **WEED IDENTIFICATION** Plants will be grown in either a field nursery or greenhouse pots and may be in any stage of growth or development, including seed samples. From this list, 30 weeds will be presented in identifiable condition for the contest. Weeds may be presented in any stage of growth or development (seeds, seedlings, mature weeds or plant parts).

No more than five specimens shall consist of weed seeds only. Students will be responsible for correct identification of twenty-five weed species using either the correct scientific name or common name (either will be accepted) with correct spelling. An additional five species will need to be identified by correct scientific name (genus and species) and common name with correct spelling. These individuals will be clearly marked "scientific name and common name both".

Total points available for each of the twenty-five weed species whereby a common or scientific name is required is 3 points. Total points for the five weed species whereby a common and scientific name are required is 5 points. One (1) point will be deducted for a slight misspelling of the common or scientific name (such as incorrect capitalization, a one-letter error, or "*arvensis*" instead of "*arvense*"). Two (2) or more points will be deducted for a more serious misspelling, an incomplete name, or the incorrect choice of closely related weeds (i.e. green foxtail instead of yellow foxtail). While touching of plants may be required to aid in weed identification, willful destruction of plants in order to prevent others from observing key characteristics will result in disqualification.

Common names, scientific names, and spellings must conform to the most current "A composite list of weeds", compiled by the Standardized Plant Names subcommittee of the WSSA, published by Weed Science Society of America, revised April 2007 (www.wssa.net). A list of weeds for the identification is provided below.

Amaranthaceae Amaranth (Pigweed) Family

Amaranthus blitoides prostrate pigweed
Amaranthus palmeri Palmer amaranth
Amaranthus retroflexus redroot pigweed
Amaranthus rudis common waterhemp

Apiaceae (Umbelliferae) Parsley Family

Daucus carota wild carrot
Conium maculatum poison hemlock

Apocynaceae Dogbane Family

Apocynum cannabinum hemp dogbane

Asclepiadaceae Milkweed Family

Galinsoga quadriradiata hairy galinsoga
Helianthus annuus common sunflower
Lactuca serriola prickly lettuce
Senecio vulgaris common groundsel
Solidago canadensis Canada goldenrod
Taraxacum officinale dandelion
Tragopogon dubius Western salsify
Vernonia gigantea tall ironweed
Xanthium strumarium common cocklebur

Brassicaceae (Cruciferae) Mustard Family

Alliaria petiolata garlic mustard
Barbarea vulgaris yellow rocket
Sinapis arvensis wild mustard
Capsella bursa-pastoris shepherd's-purse
Thlaspi arvense field pennycress

Caprifoliaceae Honeysuckle Family

Lonicera japonica Japanese honeysuckle

Caryophyllaceae Pink Family

Stellaria media common chickweed

Chenopodiaceae Goosefoot Family

Chenopodium album common lambsquarters
Kochia scoparia kochia
Salsola tragus Russian thistle

Commelinaceae Spiderwort Family

Commelina benghalensis Bengal dayflower
Commelina communis Asiatic dayflower

Convolvulaceae Morningglory Family

Asclepias syriaca common milkweed

Asteraceae (Composite) Aster Family

Achillea millefolium common yarrow
Ambrosia artemisiifolia common ragweed
Ambrosia trifida giant ragweed
Arctium minus common burdock
Carduus nutans musk thistle
Centaurea biebersteinii spotted knapweed
Centaurea solstitialis yellow starthistle
Cichorium intybus chicory
Cirsium arvense Canada thistle
Cirsium vulgare bull thistle
Conyza canadensis horseweed

Convolvulus arvensis field bindweed
Ipomoea coccinea red morningglory
Ipomoea hederacea ivyleaf morningglory
Ipomoea lacunosa pitted morningglory
Ipomoea purpurea tall morningglory
Ipomoea quamoclit cypressvine morningglory
Ipomoea wrightii palmleaf morningglory
Jacquemontia tamnifolia smallflower morningglory

Cucurbitaceae Gourd Family

Cucumis anguria burgherkin
Cucumis melo smell melon
Sicyos angulatus burcucumber

Cyperaceae Sedge Family

Cyperus esculentus yellow nutsedge
Cyperus rotundus purple nutsedge
Kyllinga brevifolia green kyllinga

Dipsacaceae Teasel Family

Dipsacus fullonum common teasel
Dipsacus laciniatus cutleaf teasel

Equisetaceae Horsetail Family

Equisetum arvense field horsetail

Euphorbiaceae Spurge Family

Acalypha ostryifolia hophornbeam copperleaf
Acalypha virginica Virginia copperleaf
Chamaesyce maculata spotted spurge
Croton glandulosus tropic croton
Euphorbia esula leafy spurge
Euphorbia helioscopia sun spurge

Phyllanthus urinaria Chamber bitter

Fabaceae Bean Family

Lespedeza cuneata Sericea lespedeza

Pueraria montana kudzu

Sesbania herbacea hemp sesbania

Trifolium repens white clover

Geraniaceae Geranium Family

Erodium cicutarium redstem filaree

Geranium carolinianum Carolina geranium

Geranium dissectum cutleaf geranium

Haloragaceae Watermilfoil Family

Myriophyllum spicatum Eurasian watermilfoil

Hydrocharitaceae Frog's-bit Family

Hydrilla verticillata hydrilla

Labiatae (Lamiaceae) Mint Family

Glechoma hederacea ground ivy

Lamium amplexicaule henbit

Lamium purpureum purple deadnettle

Perilla frutescens perilla mint

Salvia lyrata lyreleaf sage

Lemnaceae Duckweed Family

Lemna minor common duckweed

Liliaceae Lily Family

Allium vineale wild garlic

Ornithogalum umbellatum Star of Bethlehem

Lythraceae Loosestrife Family

Eriochloa villosa woolly cupgrass

Microstegium vimineum Japanese stiltgrass

Panicum dichotomiflorum fall panicum

Panicum miliaceum wild proso millet

Panicum repens torpedograss

Paspalum dilatatum dalligrass

Phragmites australis common reed

Poa annua annual bluegrass

Setaria faberi giant foxtail

Setaria pumila yellow foxtail

Setaria viridis green foxtail

Sorghum bicolor shattercane

Sorghum halepense johnsongrass

Urochloa platyphylla broadleaf signalgrass

Polygonaceae Buckwheat Family

Brunnichia ovata redvine

Polygonum aviculare prostrate knotweed

Polygonum convolvulus wild buckwheat

Polygonum pensylvanicum Pennsylvania smartweed

Polygonum perfoliatum mile-a-minute weed

Polygonum persicaria ladythumb

Rumex crispus curly dock

Rumex obtusifolius broadleaf dock

Portulacaceae Purslane Family

Portulaca oleracea common purslane

Rubiaceae Madder Family

Diodia virginiana Virginia buttonweed

Galium aparine catchweed bedstraw

Lythrum salicaria purple loosestrife

Malvaceae Mallow Family

Anoda cristata spurred anoda

Abutilon theophrasti velvetleaf

Hibiscus trionum Venice mallow

Malva neglecta common mallow

Sida spinosa prickly sida

Molluginaceae Carpetweed Family

Mollugo verticillata carpetweed

Moraceae Mulberry Family

Fatoua villosa mulberry weed

Phytolaccaceae Pokeweed Family

Phytolacca americana common pokeweed

Plantaginaceae Plantain Family

Plantago lanceolata buckhorn plantain

Plantago major broadleaf plantain

Poaceae (Gramineae) Grass Family

Andropogon virginicus broomsedge

Avena fatua wild oats

Bromus secalinus cheat

Bromus tectorum downy brome

Cenchrus spinifex field sandbur

Digitaria ischaemum smooth crabgrass

Digitaria sanguinalis large crabgrass

Echinochloa crus-galli barnyardgrass

Eleusine indica goosegrass

Elymus repens quackgrass

Eragrostis cilianensis stinkgrass

Scrophulariaceae Figwort Family

Verbascum thapsus common mullein

Veronica arvensis corn speedwell

Solanaceae Nightshade Family

Datura stramonium jimsonweed

Physalis longifolia var. *subglabrata* smooth groundcherry

Solanum carolinense horsenettle

Solanum ptycanthum eastern black nightshade

Solanum rostratum buffalobur

Typhaceae Cattail Family

Typha latifolia common cattail

Resources: Common names, scientific names, and spellings must conform to the most current

"A composite list of weeds", compiled by the Standardized Plant Names subcommittee of the WSSA, published by Weed Science Society of America, revised April 2007 (www.wssa.net).

Other resources include:

Weeds of the Northeast, 1997. Uva, R.H., J.C. Neal, and J.M. DiTomaso, eds., Cornell University Press, Ithaca, NY.

Weeds of the Great Plains, 2003. Stubbendieck, J., M.J. Coffin, and L.M. Landholt, eds., Nebraska Department of Agriculture, Lincoln, NE.

Weeds of the South, 2009. Bryson, C.T. and M.S. DeFelice, eds., Southern Weed Science Society, Athens, GA.

2) APPLICATION TECHNOLOGY Each component of the two application technology events will be worth 100 points for a total of 200 points.

A. Written Test on Sprayer Calibration (100 points): Questions can potentially be related to all aspects of sprayer calibration, such as volume of spray needed, amount of herbicide needed per gallon or liter, nozzle nomenclature and selection, sprayer pressure, droplet size, boom height, drift reduction techniques, etc. The test will be comprised of multiple choice, short answer, and written calculation questions. The major reference will be the TeeJet Agricultural Spray Products Catalog from Spraying Systems Company, but other sources may be used. Test information will be provided in both English and metric units. Correct answers will be accepted in both English and metric units. A 45-minute time limit will be imposed for the written test. All participants will take this portion of the calibration event as an individual. Students will be provided with calculators.

B. Sprayer Calibration (100 points): This portion of the calibration will be a team event; however those students competing as individuals will also compete as an individual in this portion of the event. All sprayer components, calculators, and stopwatches will be provided. Use of personal calculators will not be permitted. Safety glasses (provided by the host) are required to be worn by all students, judges, observers, etc. who are in the calibration event area. If the judge sees any student without safety glasses during the time they are working on the problem (calculations, sprayer setup and calibration, and calibration run), 25 points will be deducted from the team score.

Part one of this contest section, entitled "Sprayer Calibration", challenges each team to calibrate a CO₂ backpack sprayer based on a basic written problem that will be calculated during this session. The student must apply a designated number of gallons/acre (liters/hectare) that will be determined by the output of each spray tip and the required amount based on the intended combination of tip selection, pressure and speed. Speed will be timed over a measured course. When the team is satisfied that the sprayer is prepared properly, they should notify the judge, and the final calibration will begin. No further adjustments can then be made to the sprayer following this determination by the team. The calibration will be checked with the judge watching for correct boom height, uniformity of spray pattern, and speed. Each nozzle will then be checked for accurate output. Variation in nozzle output of up to +/-10% will be accepted. As an example, if the correct nozzle output is 90 ml/min, the acceptable range will be 81 to 99 ml/min. For each ml of inaccuracy outside this range, one (1) point will be deducted up to a possible 5 points per nozzle. Obtaining the correct output from all four nozzles is worth 15 points.

In the second phase of the sprayer calibration, entitled "Sprayer Competency", teams will demonstrate proper sprayer use and accuracy in application. In this part of the contest, the team will take the calibrated equipment, calculate the amount of pesticides to be added to treat a prescribed area, and will proceed to that prescribed area where they will be judged on the technique and accuracy of their application. If the team accidentally calibrates the sprayer to a different gallons/acre (liters/hectare) then requested in part one ("Sprayer Calibrations") it will not disqualify them from the opportunity to demonstrate proper sprayer use and accuracy with their sprayer calibrated as is. Spray pattern, overlap of spray between passes, and proper boom height will be evaluated by the judges in this portion of the contest as well as accuracy in the application based on the area treated and the mix size of the application.

Sample question: You are asked to spray some research plots with Atrazine 4L at 1 lb ai atrazine/acre plus necessary adjuvants. Each plot is 25 ft long and replicated 4 times. You will spray at 18 GPA with the provided boom (your pressure regulator can only operate in the range of 30---55 psi.). The grassy weeds are 3 inches tall and the corn is 12 inches tall. Calibrate the boom so you can proceed with this job. Using the equipment provided, determine the proper spray tips, pressure, boom height and ground speed to obtain the needed delivery volume. Assume that the distance between spray tips is 20 inches. All sprayer components will be provided. Sprayers should consist of a four---nozzle boom. Each person must choose the appropriate nozzle tips, pressure and speed for accurate calibration and application. Nozzle tips, strainers, and a Tee Jet Agricultural Spray Products catalog will be provided to assist in accurate calibration.

Teams will have 45 minutes to complete both Part I and Part II of the sprayer calibration portion of the WeedOlympics.

Part 1--- Sprayer Calibration (60 points total):

1. Correct problem calculation (20 points)
2. Nozzle output (4 points/nozzle; 32 points total)
3. Walking speed and height (8 points total)

Part 2--- Sprayer Competency (40 points total)

1. Boom height and pattern quality (10 points total)
2. Accuracy in spraying the prescribed area (20 points total)

3) IDENTIFICATION OF UNKNOWN HERBICIDES

Crop and weed species will be planted and treated with herbicides. Approximately 4 wks prior to the contest, PRE and PRE---plant incorporated applications will be made, with POST treatments applied approximately 7 to 10 days prior to the event. A list of crops, weeds, and herbicides are provided below. All herbicides in the list below will be applied at a 1X rate only and only 10 of the 30 herbicides applied will be selected for the contest. From these lists, selections will be made. At least 5 crops but no more than 10 crops from the list below will be used in this portion of the contest. Similarly, at least 5 weeds but no more than 10 weeds from the list below will be used in this portion of the contest. Students will be required to identify the unknown herbicide by visual symptoms on crops and weeds the herbicide previously applied. There will be ten plots and each plot will be worth 10 points. For graduate students and undergraduate students competing on a mix graduate/undergraduate team, scoring will be 5 points for correct common name, 3 points for correct herbicide family, and 2 points for correct site of action and/or group number. For undergraduates, scoring will be 10 points for correct site of action and/or group number. Undergraduates will write both site of action and/or group number and common name, but will be scored only for correct site of action. Correct common name will be used only for tiebreaker.

One (1) point will be deducted for a slight misspelling of the common names, herbicide family, and sites of action (such as a one---letter error, for example "bentazan" instead of "bentazon"). More serious misspellings will result in complete loss of points for that section. There will also be a control plot identified for easy comparison to the herbicide treated plots. Herbicide plots may also be duplicated. While touching of plants may be required to aid in herbicide identification, willful destruction of plants in order to prevent others from observing these symptoms will be grounds for disqualification.

Herbicides, Trade Names, Families, Sites of Action, Use Rates, and Application Timings for Identification Exam

Herbicide	Trade Name	Herbicide Family	Site of Action*/Group (#)	Application Timing	Rate herbicide (g ai/ha) + adjuvant (%v/v unless otherwise specified)
1. Atrazine	AAtrex 4L	triazine	Photosystem II Inhibitor (5)	PRE	2240 g ai/ha
2. Bentazon	Basagran	benzothiadiazole	Photosystem II inhibitor (6)	POST	1120 g ai/ha + COC 1%
3. Bromoxynil	Buctril	nitrile	Photosystem II inhibitor (6)	POST	420 g ai/ha
4. Chlorimuron	Classic	sulfonylurea	ALS inhibitor (2)	POST	9 g ai/ha + COC 1%
5. Clomazone	Command 3ME	isoxazolidinone	Diterpene Synthesis Inhibitor (13)	PRE	420 g ai/ha
6. Clopyralid	Stinger	pyridine carboxylic acid	T1R1 Auxin Receptors (4)	POST	210 g ai/ha
7. 2,4-D	2,4-D L.V. 4 ester	phenoxy	T1R1 Auxin Receptors (4)	POST	420 g ai/ha
8. Dicamba	Clarity	benzoic acid	T1R1 Auxin Receptors (4)	POST	280 g ai/ha
9. Dithiopyr	Dimension	pyridazine	Microtubule Inhibitors (3)	PRE	560 g ai/ha
10. Diuron	Karmex	substituted urea	Photosystem II inhibitor (8)	PRE	896 g ai/ha
11. Flumioxazin	Valor SX	phenylphthalimide	PPO Inhibitors (14)	PRE	107 g ai/ha
12. Glufosinate	Liberty 280 SL	phosphinic acid	Glutamine Synthesis Inhibitor (10)	POST	450 g ai/ha + AMS 3 lb/acre
13. Glyphosate	Power Max	glycine	EPSP Synthase Inhibitor (9)	POST	1058 g ai/ha
14. Halosulfuron	Sandea	sulfonylurea	ALS inhibitor (2)	POST	35 g ai/ha + NIS 0.25%
	/Sedgehammer				
15. Imazethapyr	Pursuit 2 AS	imidazolinone	ALS inhibitor (2)	POST	70 g ai/ha + NIS 0.25%
16. Isoxaben	Gallery	benzamide	Cellulose synthase inhibitor (21)	PRE	840 g ai/ha
17. Isoxaflutole	Balance Pro	isoxazole	HPPD inhibitor (27)	PRE	105 g ai/ha
18. Fomesafen	Reflex	Diphenylether	PPO inhibitors (14)	POST	219 g ai/ha + NIS 0.25%
19. Mesosulfuron	Osprey	sulfonylurea	ALS Inhibitor (2)	POST	15 g ai/ha + MSO 1%
20. Mesotrione	Callisto	triketone	HPPD Inhibitors (27)	POST	105 g ai/ha + COC 1%
21. Metribuzin	Metribuzin 75DF	triazine	Photosystem II inhibitor (5)	PRE	840 g ai/ha
22. Nicosulfuron	Accent 75WG	sulfonylurea	ALS inhibitor (2)	POST	35 g ai/ha + COC 1%
23. Paraquat	Gramoxone	bipyridylum	Photosystem I electron diverter (22)	POST	560 g ai/ha + NIS 0.25%
24. Pendimethalin	Prowl H ₂ O	dinitroaniline	Microtubule Inhibitor (3)	PRE	1596 g ai/ha
25. Quinclorac	Drive	quinoline carboxylic acid	T1R1 Auxin Receptors (4)	POST	840 g ai/ha + MSO 1%
26. Saflufenacil	Sharpen	pyrimidinedione	PPO inhibitor (14)	PRE	62 g ai/ha
27. Clethodim	Select Max	cyclohexanedione	ACCASE inhibitor (1)	POST	210 g ai/ha + COC 1%

28. S-Metolachlor	Dual II Magnum	chloroacetamide	Long-chain fatty acid inhibitor (15)	PRE	1423 g ai/ha
29. Tembotrione	Laudis	triketone	HPPD Inhibitors (27)	POST	92 g ai/ha + MSO 1%
30. Trifloxysulfuron	Envoke	sulfonylurea	ALS inhibitor (2)	POST	5 g ai/ha + NIS 0.25%

* A specific site of action is provided when known, while a general mode of action is provided for all other herbicides.

Crops list for the herbicide identification plots.

Alfalfa
Canola
Corn, field
Cotton
Pea, field
Pumpkins
Peas and/or snap beans
Rice (dry land)
Snapbeans
Soybean
Sunflower
Wheat
Grain sorghum

Weed list for herbicide identification plots.

Barnyardgrass
Broadleaf signalgrass
Common cocklebur
Common lambsquarters
Common ragweed
Crabgrass, large
Downy brome
Field bindweed
Foxtail, Yellow
Kochia
Morningglory, Ivy leaf
Pigweed, redroot
Ryegrass, Italian
Velvetleaf
White Clover
Wild mustard
Wild oat
Yellow nutsedge

4) PROBLEM SOLVING AND RECOMMENDATION

Students will be required to evaluate a crop production problem in weed management or general aquatic, non-crop, horticultural, or agronomic situations and recommend an effective solution to that problem. Recommendations must comply with accepted practices. Students should consider all factors which influence crop growth and development or all aspects of managing non-crop or aquatic environments. Although several possible answers may be correct, the best answer considering all alternatives will be determined by a designated advisory panel. This event is to be presented and handled in a "role-playing" situation. The student will be asked to assume the role of an extension, sales, or research person when dealing with the client. Any commodity (such as corn, cotton, soybean, wheat, vegetable crop, etc.) or scenario (such as herbicide injury, weed resistance, agronomic errors, etc.) is eligible to be the focus of the problem solving and recommendation section.

Each student will handle only one situation, for a total possible score of 100 points. This will allow for a possible team score of 300 points. Students will be selected randomly for each possible situation. Each team member will evaluate a different situation. Scores will be normalized and winners of this portion of the contest will be verbally recognized. Each problem will be scored by the following point structure.

- 25 points - How the student approached the client
- 45 points - Assessment of situation; determine the problem
- 15 points - Recommendation - now
- 15 points - Recommendation - next year



2015 National Weed Contest July 20-22

OARDC Western Ag Research Station

7721 S. Charleston Pike, South Charleston, OH 45368

Please return by June 19, 2015

Volunteer Registration

Name	
Company/Organization	
Phone	
E-Mail	
Shirt size	

Please rank your interests from 1 to 3 (1 most interested)

___ Grader

___ Problem Solving: Farmer

___ Problem Solving: Judge

___ Sprayer Calibration

___ Unknown Herbicide

___ Weed ID

Please email form to:

Bruce Ackley at ackley.19@osu.edu