

NCWSS • News

North Central Weed Science Society

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www.ncwss.org

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Please send your articles for the Summer NCWSS Newsletter to Harlene Hatterman-Valenti by May 15th
Electronic Submission is preferred, send articles to h.hatterman.valenti@ndsu.edu



*David Johnson
2013 President*

President's Message — David Johnson

It is hard to believe our annual meeting in St. Louis was more than three months ago already! Total attendance was 418, the highest we have had for ten years (not including the joint meetings with invasive plants groups), and our total membership of 493 has also increased. We have 83 student members, including 8 undergraduates who participated in the Undergraduate Poster Contest, showing strong interest and support for our profession and good prospects for having highly qualified professionals entering the job market in the near future. Our students are our future, so

please take some time to recruit and mentor them in weed science. It is an honor to serve as your president for 2013. I remember when I attended my first weed science meeting (SWSS in 1985) that the leadership was a bunch of old guys with gray hair. Now I'm one of those old guys with gray hair! My work with the Executive Board, Program and Local Arrangements Committees, and all of the other committees over the past couple of years has given me a great appreciation for the talent, skills, and passion that our members have.

2012 meeting reflections

The St. Louis Local Arrangements Committee, lead by Emilio Oyarzabal, and the Hyatt staff provided an excellent facility for the meeting. This was our first NCWSS meeting at this hotel, and I thank Charlie Slack for finding this site. Thanks also to Executive Secretary Phil Banks and Ed Morris for all of their work with the hotel contract and to make sure registration ran smoothly. The program committee, symposia organizers, and moderators did a great job with the program and things went off without a hitch (okay, a few minor hitches, but hopefully these were not noticed by the attendees). We instituted voluntary recording and posting of oral and poster presentations to our web site, and I thank Brian Jenks and Bruce Ackley of the Strategic Planning Committee, with assistance from Tiffany Walter and the section moderators, for all of the work they did to pull that off. You can view the presentations on the NCWSS website. Log in to your account and click on "view presentations" under "Meeting" on the left panel to view them.

Continued on Next Page

The meeting kicked off on Monday with a student tour of Monsanto's biotechnology center and a behind the scenes look at the Missouri Botanical Garden. Over 50 students took advantage of this opportunity and I heard great things from them about it. Many thanks to Emilio Oyarzabal and Monsanto for organizing this event, and for covering the cost of the extra room night required. That evening at the BASF mixer we instituted a weed science Quiz Bowl contest. M.C. Bill Simmons' humor kept it moving and a fun time was had by all. Thanks to BASF for allowing us to use this venue for the event.

The General Session included talks by Bill Iseminger of Cahokia Mounds State Historic Site, who told us about a pre-Columbian society near St. Louis that used many plants that we consider to be problem weeds as a food source; Dale Shaner of USDA-ARS, who gave his perspectives on where weed science has been and what the future for weed science holds; Lee Van Wychen, Washington Liaison, and Duane Rathmann, out-going CAST representative, who gave us updates on their activities in Washington and with CAST; and the Presidential Address by 2012 President Bryan Young, who reviewed NCWSS activities for the year. We also took time to honor and remember those NCWSS members and significant contributors who passed away during the previous year.

Tuesday was also when the poster and paper judging occurred. Thanks to all of the students for preparing excellent presentations and to the Resident Education Committee and all of the judges who help with these contests. This would not be possible without generous donations of time by the judges.

Two symposia, Invasive Potential of Biofuel Crops and Finding a Career in Weed Science, along with the always popular What's New in Industry, were well-attended and a great success. I thank organizers Scott Flynn, Connor Ferguson, Ashley Schlichenmayer, and Dawn Refsell for all of their efforts.

At the Awards Luncheon we recognized our Distinguished Achievement Award Winners, new Fellows, and the student paper and poster contest winners. Congratulations to all winners! We also thanked our outgoing officers (Past President Mark Wrucke, Secretary-Treasurer Christy Sprague, and

CAST Representative Duane Rathmann) for their long service to NCWSS, and welcomed our new officers to the board: John Hinz (Vice President), David Simpson (Secretary-Treasurer), and Curtis Thompson (CAST Representative).

Last but not least, I must recognize our Sustaining Members. It is through their generous support that we are able to bring you many of the activities that NCWSS supports at reasonable cost to the membership.

2013 activities

I am in the process of making committee assignments, and if you are interested in serving on a committee please contact me (515-535-7234 or david.h.johnson@pioneer.com). Service to the society has been one of the most rewarding parts of my career, and I think you will find that is so, too.

Monsanto will be hosting the 2013 Summer Contest on July 24 and 25 at their Monmouth, IL facility. Doug Nord and his crew at Diamond Ag put on a great contest in 2012 and we look forward to another great contest and student experience in 2013. More information about rules and registration will be forthcoming from the Resident Education Committee and Monsanto hosts.

In closing, I want to thank Bryan Young for his excellent leadership and contributions to NCWSS as 2012 President, and remind you that our 2013 Annual Meeting will be upon us sooner than we think. It will be held December 9-12 at the Hyatt Regency in Columbus, OH. Program Chair JD Green is already considering program ideas and working with Local Arrangements Chair Mark Loux to develop an excellent meeting. At this time we are in discussions with the Midwest Invasive Plants Network (MIPN), one of the groups we met with at our 2011 meeting in Milwaukee, to hold a joint meeting with them in Columbus.

Have a safe and productive 2013! I hope to see you at the Summer Contest in Monmouth and the annual meeting in Columbus. ♦

Past President Bryan Young

I was honored to serve the North Central Weed Science Society as your president in 2012. We continue to enjoy healthy attendance levels at our annual meeting with over 400 registered attendees this past December and total membership over 600. Although I haven't conducted any official analysis of the current membership I would be hard-pressed to suggest that our robust attendance and membership as of late has been from the academic sector since we continue to have more retirements than new hires. Rather, my observations would indicate we have gained attendance from our industry sector driven by the opportunity to learn about our growing weed management challenges and to bring new technologies to market. In particular, I've noted much greater attendance by individuals in the adjuvants, formulations, and application technologies sector in anticipation of optimizing the forthcoming herbicide technologies.

The success of our 2012 annual meeting was a product of the leadership and vision of the Program Chair Dave Johnson, the Local Arrangements committee led by Emilio Oyarzabal, the many program section and symposia chairs, and the numerous volunteers who donated their time to the NCWSS to serve on committees and other activities. I would like to extend my sincere appreciation to all of those who worked to make our meeting an enjoyable venue with an informative program of presentations, posters, symposia, and special events. Of course, it's not just individual effort that translates to the success of the NCWSS. The financial contributions from our NCWSS Sustaining Members and sponsors for the

annual summer weed contest, student mixer, graduate student luncheon, and society social are vital to our organization and I thank them for their continued support.

My duties have now shifted to the role of Past President which includes the solicitation of nominations for the Distinguished Achievement Awards and Fellows as well as the Graduate Student Award. Every year we strive to receive a bounty of nominations for these awards as we have a host of well-deserving individual members that contribute to the discipline of weed science within our society and as a part of their professional careers. As members of the NCWSS I charge you with the responsibility of identifying qualified candidates and start the nomination process for at least one individual in 2013.

The passion, effort, and skill of the NCWSS membership make this society a vibrant organization to deliver on our mission to deliver research, education, and training to persons responsible for weeds and their management in land use systems. For this, I'm grateful to have been given the privilege to serve as your President in 2012. We should continue to seek out opportunities that help us realize our mission statement and place us at the forefront of weed management issues in our geography and beyond. I'm confident that Dave Johnson will effectively lead us down this path in his term as President of the NCWSS. Please have a productive and safe field season and I look forward to seeing you at our annual meeting this December in Columbus.

2013 NCWSS Board of Directors

Top Row: Robert Hartzler, David Simpson, Harlene Hatterman-Valenti, Mark Bernards

Bottom Row: John Hinz, J.D. Green, David Johnson, Bryan Young, Phil Banks, and Curtis Thompson

Not Present: Lee Van Wychen



Distinguished Achievement Awards

Industry Award: These individuals have made significant contributions to weed science within the industry and or the private sector. Examples might be: patents, development of unique formulations, development of research techniques, the discovery of unique uses for a product, or service to NCWSS or to agriculture in general.



Dain Bruns

was raised on a cereal grain farm in Eastern North Dakota. His earliest recollection of problematic weeds was a combine plugged by kochia and the ensuing joy of removing the tangled mess on what always seemed like the hottest day of the summer. Dain attended North Dakota

State University for his B.S., M.S. and Ph.D. degrees, completing the latter under Dr. John Nalewaja in 1997. During this time, he honed his weed science skills through dialog with professors and fellow graduate students, pushing the infamous bike sprayer and by participating in the NCWSS sponsored summer weed and graduate student paper contests.

Following graduate school, Dain was employed by Novartis to develop and introduce Peak, Discover, and Axial herbicides into the cereal market of the upper Midwest. Since moving to Ohio with Syngenta in 2001, Dain has assisted with developing the directions for use of several herbicides, including Callisto®, Flexstar® GT, Halex™ GT, Lumax®, Lexar® and Prefix™, as well as contributing to the development of seed care and disease and insect control technologies.

Aside from conducting his annual Syngenta field research program, Dain enjoys the interactions with University researchers, crop consultants and other production agricultural professionals in Ohio. Each of these groups has unique goals and working constraints, but in the end, the common goal is to

keep American agriculture safe, efficient and productive. Dain, his wife NataSha and sons Dalen and Owen, enjoy visits from grandparents, 4-H, the farmers market and camping.

Professional Staff Award: This award recognizes outstanding and sustained contributions in support of weed science activities in the North Central region.



Erin Taylor-

Hill is a research assistant at Michigan State University working with Drs. Karen Renner and Christy Sprague on projects involving weed ecology and biology, organic weed management, and herbicide resistance. Erin received her B.S. from the University of

Michigan in plant biology, M.S. from MSU in horticulture, and is currently pursuing a Ph.D. at MSU in crop and soil sciences.

Since joining the MSU weed science team in 2006, Erin has been presented at over 35 professional and extension meetings and has been involved in securing eight competitive grants focused on weed biology and management. She has published several peer-reviewed articles and was the lead author on the 132-page MSU Extension bulletin "Integrated weed management: Fine tuning the system." Erin manages the group website MSUweeds.com and regularly writes and posts photos for the blog associated with the site. She has also enjoyed training and overseeing over 20 undergraduate students and working with eight graduate students.

Erin has enjoyed the camaraderie of the North Central Weed Science Society since 2004. During this time she has presented several oral papers and posters and served as a section chair (Weed Biology,

Distinguished Achievement Awards - Continued

Ecology, and Management), symposia chair, and moderator. Erin is currently serving as the state director for Michigan.



Fritz Breitenbach

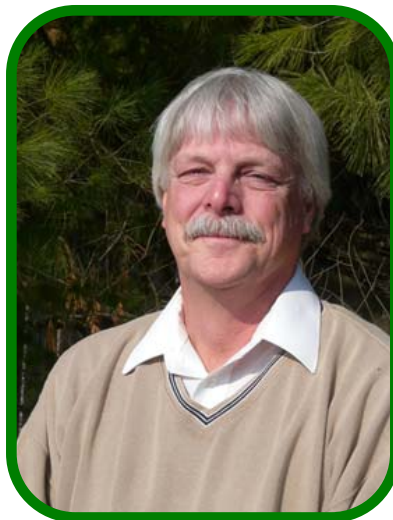
grew up in Columbia, Missouri (a Wisconsin transplant). His father, a Zoology professor at Mizzou, kept him busy hunting and fishing and out of trouble by working on a 26 acre

cut and choose Christmas tree farm. He attended the University of Missouri where he received his BS degree in Integrated Pest Management and his MS degree in Entomology in 1981. Fritz worked for Texas A&M Extension Service as a County Entomologist in west Texas where he became acquainted with silver nightshade. He accepted his current position as an Integrated Pest Management Specialist with the University of Minnesota Extension in 1985.

Fritz is part of a close knit weed science team at the University of Minnesota who conduct research trials in SE Minnesota. Resistance management has been the dominate theme for the last decade and a half. Fritz and the team have focused on herbicide timing, the importance of a soil applied component, and dispelling the myth that there is no single product to be added to glyphosate and maintain a sustainable system.

Fritz has been a member of NCWSS since 1988. At NCWSS, Fritz has served as state director and as a judge for the graduate poster contest several times.

Fritz has a new found perspective on life and is a three year pancreatic cancer survivor. He and his wife Janet are active advocates working with the Pancreatic Cancer Action Network and the Mayo Clinic SPORE for pancreatic cancer.



Timothy

Trower was raised in Lovington, a small farming community in central Illinois. His first experience in weed control was at an early age, "walking beans" to manually remove weed escapes which eventually developed into a personal grudge against all weeds. He

received his B.S. in Agronomy from the University of Illinois in 1979. Tim joined ICI Americas at the Seymour, IL. Research Station in 1979 and over a ten year period conducted research in PGR's, entomology, plant pathology, weed science and regulatory studies. He moved to Wisconsin in 1989 as a Field Development

Representative for Zeneca Ag Products, a position he held until 1999. His duties included conducting multi-discipline trials in Wisconsin and Illinois on a wide range of crops, providing technical advice in product label development and disseminating information to growers. Tim joined Dr. Chris Boerboom's program at the University of Wisconsin in 2000 as a Senior Outreach Specialist. Over the next ten years he developed and provided weed management information to Wisconsin growers, trained graduate students in field research techniques and managed the Herbicide Evaluation Program; a program that has experienced steady growth since inception in 2003. His current duties include responsibility for the Herbicide Evaluation Program and providing research support for Dr. Dave Stoltenberg and Dr. Vince Davis.

Tim has been an active member of the NCWSS since joining in the early 1980's. He is particularly proud to have been a part of three Local Arraignment Committees that coordinated the successful

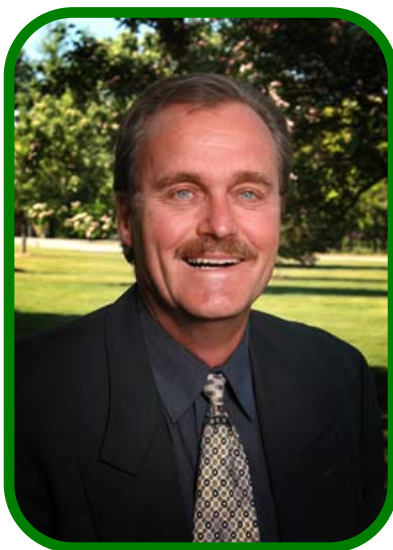
The NCWSS Newsletter is filled by its members
Edited by Harlene Hatterman-Valenti
and arranged put together Glenn Nice

Distinguished Achievement Awards - Continued

Milwaukee meetings. Tim has authored and presented numerous papers and posters and served as a judge for both the paper and poster contests at the annual meetings. He and Dr. Boerboom submitted numerous trial summaries for the NCWSS Research Report from 2000 through 2004. Tim has served on various committees, served as a session moderator, and has participated in the Summer Contest.

Tim and his wife Sandy live in the beautiful Baraboo Bluffs where they enjoy farming their small acreage with restored antique IH tractors and raising beef cattle. They have two grown sons.

FELLOW AWARDS: Fellow is the highest honor that the Society can confer to an individual member. Only individuals who have made outstanding contributions to weed science (no more than 0.5% of the membership) receive the award each year. Fellows are considered life-time members of the NCWSS.



Peter H. Sikkema grew up on a dairy and hog farm in south central Ontario. He attended the University of Guelph where he received a B.Sc. (Agr) in 1981 and a M.Sc. (Weed Physiology) in 1983. Upon graduation with his M.Sc. degree, Peter accepted a position as Field Development Representative for

Eastern Canada with Union Carbide. In 1986, he was promoted to the position of Product Development Manager for Canada with Rhone Poulenc. Peter accepted the position as Lecturer III at Ridgetown College in 1988 and taught courses in fruit and vegetable production and conducted cultural management studies in fruit and vegetables. In 1997, Peter joined the University of Guelph as a College Professor with responsibility for weed management in field and horticultural crops. During this time Peter enrolled as a part-time student at the University of

Western Ontario where he completed his Ph.D. in Environmental Sciences in 2003. Peter joined the Department of Plant Agriculture of the University of Guelph in 2003 as an Assistant Professor. In 2007, Peter was promoted to Associate Professor and in 2009 he became a full Professor in the department. Peter is responsible for weed management in field crops and teaches “Applied Weed Science” and “Crop Diagnostics and Recommendations” at the diploma level. During his career, Peter has published 162 peer-reviewed manuscripts and was an author/co-author of 72 oral and 93 poster presentations at scientific conferences. Peter has supervised 11 graduate students. He has served on the board of the NCWSS for 6 years and on the Membership, Long Range Planning and Nominating committees. He has been active in the Canadian Weed Science Society serving as President and in the WSSA where he was the Canadian delegate on the Board of Directors. Peter has received the following awards: The “Excellence in Weed Science” award from the Canadian Weed Science Society; the “Teaching Award of Merit” certificate from the North American Colleges and Teachers of Agriculture; the “Fellow” award from the Canadian Society of Agronomy; and the “T. R. Hilliard Distinguished Agricultural Extension” award from the Ontario Agricultural College Alumni Foundation; the Distinguished Achievement Award – Research from the NCWSS; and the “Fellow” award from the Canadian Weed Science Society.



Bob Hartzler

was born and raised in Fort Wayne, Indiana. He received a B.S. in Plant Protection from Purdue University, and M.S. in Plant Physiology at Virginia Polytechnic Institute and State University. In 1982 he began his career in Extension as a

Pre-doctoral Extension Associate at Iowa State University. Bob earned a Ph.D. in Crop Physiology and Production in 1987. He assumed the role of Assistant Professor/Extension Weed Scientist at Pennsylvania State University in 1987. In 1989 he

Distinguished Achievement Awards - Continued

returned to Iowa State University, and is now Professor of Weed Science.

Similar to the weeds he studies, Bob's responsibilities have evolved during the course of his career. Initially his appointment was an extension/research split. His research focused on identifying the biological traits of weeds that allow them to survive in spite of the intensive efforts of farmers. Extension programming targeted the development and implementation of integrated weed management systems. He serves as leader of the Crops Extension team at Iowa State, a group consisting of faculty in four departments and 11 area field agronomists. In 2002 he began co-teaching the introductory Weed Science course, and now is fully responsible for this class and developed a new course on Weed Identification in 2009. In 2006 he became an undergraduate academic advisor, and currently serves as advisor for 30 Agronomy students.

Bob has served as Associate Editor for Weed Science and Weed Technology, and reviews several articles annually for these and other journals. He currently serves on the Board of Directors of the Iowa Certified Crop Advisors and the Midwest Invasive Plant Network. Bob received the NCWSS Distinguished Achievement Award, Education in 1993, the Raymond and Mary Baker Award for Agronomic Excellence in 1994, and the WSSA Outstanding Extension Award in 2003.

Bob first joined the North Central Weed Science Society in 1982, and has been actively involved in the society since joining. He has served as editor of the Annual Meeting Proceedings and on the Board of Directors since 2000.

involved in extension later in his career. After receiving his B.S. (1976) in Agronomy from Iowa State University, as he put it, he 'ran out of farm before he ran out of older brothers' and hired on with Monsanto to conduct experimental soybean growth regulator trials working with Monsanto Product Development Representative in Iowa, Louie Meyers. Louie introduced Roger to Dr. David Staniforth, and his career in weed science began. He received his M.S. (1978) in Plant Physiology and then accepted a Pre-doctoral Extension Associate position at ISU with Drs. Dick Fawcett and Vivian Jennings while completing his Ph.D. (1982) in Crop Physiology. Roger worked in Product Development with Monsanto from 1982 to 1987 in Davenport, IA, after which he took his current position as a State Specialist in Weed Science at the University of Minnesota.

Roger has always been active in the NCWSS, attending his first meeting in St. Paul, MN in 1978 as a graduate student. He often is seen lurking in the crowds as a paper or poster judge, has chaired the Extension and the Forage and Range Sections, and more recently has been active in organizing joint meetings with the Midwest Invasive Species Network and NCWSS. He has been a member on, or chaired the Local Arrangements, Newsletter, Placement, Resident Education, Nominating, Program, and the Distinguished Achievement Committees. He has served on the NCWSS Board of Directors as WSSA Liaison for NCWSS, as Director for Minnesota, and as Director at Large, Extension. He received the NCWSS Distinguished Achievement Award in Education in 1998. Roger's work includes research, extension education, and public policy in biological control of weeds, water quality, and invasive or noxious weed designation and management. Current specific efforts include weed management in processing sweet corn and peas, Canada thistle management in native prairies, pastures and right-of-ways, weed management in forages, and management and biological control of purple loosestrife, leafy spurge, common buckthorn, and garlic mustard.

Roger enjoys seeing Weed Science evolve and adapt, yet most enjoys working with the public in his Extension Specialist capacity, striving to make a difference in people's lives.



Roger L. Becker grew up on a diversified crop and livestock farm near Cumberland, IA. As a youth, he was inspired by the Iowa State University Extension program in Cass County, influencing his decisions to become

Distinguished Achievement Awards - Continued

NCWSS Outstanding Graduate Student

Award: The NCWSS Outstanding Graduate Student Award recognizes one outstanding graduate student who is a NCWSS student member. The award is given to a graduate student who is actively involved in the Society, as well as a contributor to the field of weed science through extension, research and teaching.



Paul T. Marquardt is a Ph.D. student with Dr. Bill Johnson and Dr. Christian Krupke at Purdue University. Paul received his Bachelor of Science degree from Pacific Lutheran University in Biology and then received a Master of Science degree from

Purdue University in Entomology. His Master's thesis was titled "Dispersal and mating behavior of the western corn rootworm in transgenic corn fields". His Ph.D. program is connected to his Master's work and is titled "Herbicide-resistant volunteer corn and the

impact on weed management and insect resistance management". Paul will complete his Ph.D. in May of 2013.

Paul has worked as a Research Associate in the Purdue Department of Botany and Plant Pathology and also as a Graduate Teaching Assistant. He has authored 8 peer-reviewed papers and presented at 7 regional/national meetings of professional societies. Paul has authored one extension publication and made 22 extension and professional presentations during his graduate career. In addition, he has successfully authored a grant proposal from the Indiana Corn Marketing Council.

Paul is an active member of four professional societies and has been particularly active in the NCWSS. He was awarded 1st place in the Graduate Student Poster Competition at the NCWSS in 2010 and won 1st place in the Graduate Student Paper Competition at the NCWSS in 2009. Paul was a member of the 1st place Graduate Team at the 2011 Weed Olympics. He has also served as section chair of the Herbicide Physiology Paper Section of the NCWSS from 2009–2011. Congratulations to Paul on his significant accomplishments. ♦



NCWSS Annual Conference

NCWSS Student Contest

Graduate Student Poster Contest

This year there were 24 participants in the Graduate Student Poster Contest which were divided into 4 sections. Five Judges evaluated each poster based on Appearance, Development, Analysis of results, and Presentation of the poster.

Section 1—Cereals, Corn, Equipment and Application Methods and Extension



1st Place

The Influence of 2,4-D and Drift Reduction Technologies on the Efficacy of Glyphosate or Glufosinate on Fall Panicum

Lucas Harre, Bryan Young, Joesph Matthews and Julie Young
Southern Illinois University.

2nd Place

Droplet Size Analysis of Glyphosate Solution as Influenced by Carrier Volume, Nozzle and Pressure

Cody Creech, Annah Geyer, Ryan Henry, Lowell Sandell and Greg Kruger,
University of Nebraska.

*No Image
Available*

Section 2—Turf + Herbicide Physiology



1st Place

Fitness of Glyphosate Resistant Giant Ragweed (*Ambrosia trifida* L.)

Kabelo Segobye, Burkhard Schulz, William Johnson and Stephen Weller, Purdue University.

2nd Place

Association of ESPS Gene Amplification with Glyphosate in Waterhemp

Laura Chatham¹, Chance Riggins¹, Michael Owan², and Patrick Tranel¹,
1. University of Illinois
2. Iowa State University



Graduate Student Poster Contest - Continued

Section 3—Soybean and Legume



1st Place
**A Rapid, High Through-put
Molecular Assay for the Robust
Genotypic Determination of
Waterhemp Resistant to (PPO)
Inhibiting Herbicides**
R. Joseph Wuerffel¹, Bryan
Young¹, David Lightfoot¹, Patrick
Tranel², Ahmad Fakhoury¹,
1. Southern Illinois University.
2. University of Illinois



2nd Place
**Efficacy of PRE and POST
Herbicides for Controlling
Multiple Resistant Palmer
Amaranth in Michigan**
David Powell and Christy Sprague,
Michigan State University.

NEWSS Poster Contest

Section 4—Weed Biology, Ecology and Management



1st Place
**Should Atrazine at Reduced Rate
be Applied PRE or POST in Tank
-Mix Combinations to improve
Giant Ragweed Control in Corn**
Ross Recker and Vince Davis,
University of Wisconsin.



2nd Place
**Crop Canopy Effects on Kochia
Seed Production**
Rutendo Nyamusamba, Michael
Moechnig, David Vos, Jill Alms and
Darrell Deneke, South Dakota State
University.

Graduate Student Paper Contest

There were 32 participants in this year's Graduate Student Poster Contest divided into four sections. All papers were evaluated based on content, which includes introduction, methods and results and presentation, which includes visuals, oration and length of time of the paper. The quality of the papers was excellent in all four sections with the difference between first and second place usually being less than one point! Winners for each section are listed below, second place followed by first place.

Section 1. Weed Ecology, Biology and Management



1st Place
Allelopathy of Sudangrass Cover Crop on Green Foxtail
Jared J. Schmidt¹, Sam E. Wortman¹ and John L. Lindquist².
1. University of Nebraska.
2. University of Illinois



2nd Place
Pollen Viability of Amaranthus Species in Vitro
Tye C. Shauck and Reid J. Smeda,
University of Missouri

Section 2. Soybean and Legumes



1st Place
Fall Weed Management to Limit SCN Population Build-up
Rodrigo Werle¹, Mark L. Bernards², Loren J Giesler¹ and John L. Lindquist¹.
1. University of Nebraska
2. Western Illinois University



2nd Place
Can Soil-Residual Protoporphyrinogen Oxidase (PPO)-Inhibiting Herbicides Influence the Frequency of PPO-Resistant Waterhemp?
R. Joseph Wuerffel, Bryan G. Young, Julie M. Young, Joesph L. Matthews, Southern Illinois University

Graduate Student Paper Contest - Continued

Section 3—Herbicide Physiology and Mixed Contest Papers



1st Place
Influence of Nitrogen Application Timing on the Activity of Mesotrione Applied for Large Crabgrass Control.
Quincy D. Law, Dan V. Weisenberger and Aaron J. Patton, Purdue University



2nd Place
Effects of Herbicide Application Timing and Overseeding on Dallisgrass (*Paspalum dilatatum*) Control in Tall Fescue (*Festuca arundinacea*).
Matthew T. Elmore, James Brosnan and Gregory K. Breeden; University of Tennessee,

NEWSS Paper Contest

Section 4 — Corn, Sorghum and Mixed Contest Papers



1st Place
Effect of Application Carrier Volume on Herbicide Efficacy with Ten Herbicides Using a Conventional Sprayer and an Ultra-Low Volume Sprayer.
J Connor Ferguson¹ Roch E. Gaussoin², John A. Eastin¹, Greg R. Kruger¹
1. University of Nebraska
2. Kamterter LLC, Waverly



2nd Place
Evaluation of Tolerance and Root Quality on Azalea and Hydrangea Treated with Dimethenamid-P and Pendimethalin Alone and in Mixtures.
Jose J. Vargas and James Brosnan, The University of Tennessee

Undergraduate Student Poster Award

There were 7 participants in this year's under graduate Student Poster Contest. All posters were evaluated based on Appearance, Development, Analysis of Results, and Presentation of the poster.



1st Place

Efficacy of Preemergence versus postemergence herbicides on glyphosate- resistant horseweed (*Conyza Canadensis*) in soybean. Cody D Cornelius, Reid J. Smeda, and Carey F Page, University of Missouri



2nd Place

Tolerance of seed corn inbreds to postemergence applications of rimsulfuron + mesotrione + isoxadifen-ethyl or nicosulfuron + isoxadifen-ethyl

Nicholas R. Steppig¹, Larry H. Hageman¹, Helen A. Flanigan¹ and Patrick M. McMullan²;

1. DuPont Crop Protection

2. DuPont Pioneer

Poster and Paper Presentations Now Available on the NCWSS Website

Several presenters at the 2012 meeting agreed to allow posting of their presentations or posters on the NCWSS website for viewing by NCWSS members. To view these presentations, access the NCWSS website (www.ncwss.org), click on "login to your account", enter your username and password, and then click on "view presentations" in the left panel. A list of pdf or mp4 files will appear and you can click on them to view. The presentations will be available for viewing for one year following the annual meeting.

This service is the result of a lot of work by the Strategic Planning Committee, lead by Brian Jenks and Bruce Ackley, to obtain the necessary equipment and software, and, along with Tiffany Walter, training and working with the section moderators to ensure which presentations were to be recorded, and then processing the files for posting. All presentations were posted with the permission of the presenters. *It is the intent of the NCWSS that recorded presentations are provided solely for personal viewing by NCWSS members. If anyone wants to use the information for other purposes, they must request permission from the author.* Authors may request that their presentation be removed from the website at any time. We encourage authors to consider allowing posting of their presentations at future meetings.

Washington Report, March 10, 2013— Lee Van Wychen

New Ag Appropriations Committee Chairman

With the new Congress, comes new chairman of both the House and Senate Agriculture Appropriations Subcommittees. On the House side, Rep. Bob Aderholt from Alabama's 4th Congressional District will take over as chair from Jack Kingston of Georgia. Rep. Aderholt will be serving in his 9th term from northern Alabama and served as chair of Homeland Security Approps in the 112th Congress. Prior to his election to Congress, Aderholt served as an aide to Governor Fob James and as a Municipal Judge in Haleyville, Alabama. Educated through Alabama's public school system, Aderholt went on to graduate from Birmingham Southern College and from the Cumberland School of Law at Samford University.

On the Senate side, Sen. Herb Kohl from Wisconsin has retired from Congress after 24 years in office. Senator Mark Pryor from Arkansas will take over as the new chair of the Senate Ag Approps Subcommittee, with Sen. Roy Blunt from Missouri serving as the ranking member. Pryor grew up in both Arkansas and the Washington D.C. area. He received a B.A. in History and his law degree from the University of Arkansas and worked in private legal practice for over ten years. Pryor was first elected to public office in 1990 as a member of the Arkansas State House of Representatives. In 1998 he was elected Arkansas' Attorney General. He was first elected to the U.S. Senate in 2002 and was re-elected in 2008, where he received more votes than any statewide elected official in Arkansas history.

Vilsack Stays, but EPA and Interior Will Get New Leaders

USDA Secretary of Agriculture Tom Vilsack will remain Secretary of Agriculture during the second term of the Obama Administration. There was speculation that the former Iowa governor would run for the U.S. Senate seat in Iowa being vacated by the Sen. Tom Harkin in 2014.

At EPA, Administrator Lisa P. Jackson announced she was leaving about a month after it was revealed she was using an alias email account to conduct official business. Jackson used a private email under the alias "Richard Windsor" to correspond with EPA colleagues, a decision her staff defended by saying that her official email account received too many messages for her to use it efficiently. Jackson spearheaded efforts to begin regulating greenhouse gas emissions, including setting new standards to clean up mercury and other toxic emissions from coal power plants, and established new fuel economy standards for motor vehicles. Many of those initiatives occurred under Gina McCarthy, the agency's assistant administrator for air and radiation, who was nominated in February to take over the EPA reign's from Jackson.

McCarthy has worked for Democrats and Republicans alike in state governments. However, her role as the point person in developing rules limiting emissions from industrial sources like power plants and boilers is likely to make her a proxy during the confirmation process for the administration's broader efforts to address climate change.

Secretary of the Interior, Ken Salazar also announced he will be leaving the administration this

spring. In his place, President Obama nominated Sally Jewell, head of the outdoor recreation equipment cooperative REI. The nomination of Jewell, a high-profile business executive with strong support among conservation groups, marks a departure from the recent tradition of naming Western political figures to lead the Department of Interior, which manages millions of acres of public land. Jewell is president and CEO of Recreational Equipment Inc., a retailer with \$2 billion in annual sales based in Kent, Washington. She spent 19 years in the commercial banking industry before joining REI, the nation's largest consumer cooperative, with more than 100 stores.

EPA Excludes Arundo and Pennisetum From Biofuel Rule

For the past year, EPA had been working to finalize a federal rule which would allow fuel made from two known noxious weeds, *Arundo donax* (giant reed) and *Pennisetum purpureum* (napier grass or elephant grass), to count toward federally-mandated renewable fuels targets. The WSSA was opposed to the rule as originally written and worked with other stakeholder groups to prevent parts of the rule from becoming law.

On February 22, EPA announced that it excluded *Arundo donax* and *Pennisetum purpureum* from its final rule, while approving biofuel feedstocks produced from camelina and energy cane.

EPA said they would continue to consider determinations on biofuels produced from *Arundo donax* and *Pennisetum purpureum* and make a final decision at a later time.

Washington Report - Continued

The final rule is at: <http://www.epa.gov/otaq/fuels/renewablefuels/documents/new-fuel-pathways-under-rfs-fr.pdf>

EPA definitely made the right decision at this time, but I have no doubt that EPA will continue to look at *Arundo* and *Pennisetum* going forward. In our meetings with EPA, we have stressed that if EPA approves *Arundo donax* and similarly high risk feedstocks, we believe that the a federal rule must include – at the very minimum—guidelines or a permit process that requires stringent best management practices to reduce the risk of escape. These guidelines should be written with the guidance of the National Invasive Species Council and relevant federal agencies.

Federal Court Says NOAA Must Use “Sound Science” for Endangered Species Rules

The U.S. 4th District Court of Appeals out of Richmond, Virginia threw the book at NOAA’s National Marine Fisheries Service (NMFS) for not using sound science in their decisions on endangered species protections. Quite frankly, NMFS has had a terrible activist driven track record. Basically, the court ruled that NMFS lied in its 2008 biological opinion claiming twenty-seven species of salmon were jeopardized by agricultural practices, when they were not. And that significant data and standards used in the biological opinions were not logical or even rational.

The Chair and Ranking Member of the House Ag Committee have a great summary of the court case, as well as background information, that you find here:

<http://agriculture.house.gov/press-release/hastings-lucas-peterson-praise-federal-court-ruling-noaa%E2%80%99s-salmon-opinion>

President’s Science Advisors Recognize the Importance of 21st Century Pest Management Challenges

The President’s Council of Advisors for Science and Technology (PCAST) recommended to the President that the U.S. increase its investment in agricultural research by a total of \$700 million per year. This report has been in the making for a couple years and is really the first significant report on agriculture ever done by PCAST. The link to the report is at: http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast_agriculture_20121207.pdf

The \$700 million per year recommendation is broken down as follows:

- i. \$180 million for new graduate and post-doctoral fellowships;
- ii. \$235 million for new competitively funded research at USDA AFRI;
- iii. \$130 million for basic research at NSF; and
- iv. \$150 million for new public-private institutes.

The most positive aspect of the report is the challenges they listed for 21st century agriculture:

- i. **Managing new pests, pathogens, and invasive plants.**
- ii. Increasing the efficiency of water use.
- iii. Reducing the environmental footprint of agriculture.
- iv. Growing food in a changing climate.
- v. Managing the production of bioenergy.
- vi. Producing safe and nutritious food.
- vii. Assisting with global food security and maintaining abundant yields

As you can see, weed science pretty

much fits into all those challenges, especially their #1 challenge. However, it’s not all peaches and cream as the report “recommends that the focus of USDA research funding shift toward competitive grants, gradually rebalancing the research portfolio for intramural funding and funding for land grant institutions to incorporate incentives for innovation consistent with other research agencies across the Federal Government.” In other words, they don’t like capacity funds that support the Ag Experiment Stations and Cooperative Extension, or USDA-ARS funding.

The National and Regional Weed Science Societies are opposed to any shifts in funding towards competitive grants that results in cuts or reductions in capacity funds. Our position has been to support funding for both intra-and inter-mural USDA research, extension, and education. There seems to be a bias in the report that competitively funded research in other federal agencies somehow produces more innovation and that USDA’s research funds allocated through non-competitive means is somehow inferior. Yet few would argue that USDA’s funding for research, education and extension has been an unparalleled success for food and ag production. If you are aware of any peer-reviewed, credible studies that have actually demonstrated otherwise, please let me know.

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NECROLOGY



Dr. Marshal D. McGlamery, Professor Emeritus of Weed Science at the University of Illinois passed away January 25, 2013 in Suffolk, Virginia. Dr.

McGlamery was world renowned for his knowledge and expertise in weed management. His unique talents for communicating his extensive knowledge with individuals and audiences were equally renowned. During his 35-year career in the professorial ranks at the University of Illinois, untold numbers of students, farmers and agricultural professionals benefitted from Dr. McGlamery's undaunted passion for helping others better understand and manage unwanted vegetation.

Marshal (Mac) was born July 29, 1932 in the small town of Moorland, Oklahoma to Walter and Bernice McGlamery. He married his hometown sweetheart, Marilyn Hudson, on June 2, 1957, and together they enjoyed 56 years of blissful marriage. Their love and commitment to one another was further blessed with two sons, Steve and Paul, who currently reside with their families in Virginia. Mac held a special place in his heart for children and realized some of his greatest enjoyment lavishing his four grandchildren with the love and attention unique to a grandfather.

Marshal's interest in agriculture began when he spent the summers of his youth working on his uncle's farm. He cultivated his growing love of agriculture by enrolling at Oklahoma A&M College (now Oklahoma State University) in 1950 to study crop production. A 2-year stint with the United States Army interrupted his undergraduate studies during his junior year, but following his military service Mac returned to Oklahoma A&M where he earned a B.S. in crops in 1956 and a M.S. in soil

University of Illinois
College of Agricultural, Consumer and Environmental Sciences

Memorial to
Marshal D. McGlamery
July 29, 1932–January 25, 2013

fertility in 1958.

Following completion of his M.S. degree, Mac became an instructor at Panhandle A&M College, teaching courses in soil management and fertility from 1958–1960. He then became an agronomist at a local agribusiness in Lawrence, Kansas where he made soil testing and fertilizer recommendations to local farmers. After a year in retail business, Mac made the decision to return to academia and pursue a Ph.D. in soils. He enrolled at the University of Illinois in 1961 to begin his Ph.D. program. However, he soon changed the focus of his research to weed science following a chance encounter with Dr. Fred Slife, who was looking for a graduate research assistant with soils experience to study the new phenomenon of atrazine carryover. Mac completed his Ph.D. in weed science in 1965, and later that year joined the faculty ranks as a weed science extension specialist with responsibilities in research and extension. Dr. McGlamery advanced through the professorial ranks and became a full professor in 1975. He held a joint extension/teaching appointment for the 27 years preceding his retirement on February 29, 2000.

Dr. McGlamery held a research appointment during only the early years of his tenure at the University of Illinois, but he maintained an active role in various field and greenhouse research projects throughout his career. Mac collaborated with other weed science researchers to develop the best weed management systems for the agronomic crops grown in Illinois. He believed the most valuable weed management information he could share with his clientele was derived from in-state research. With his dedicated leadership, research results were transposed into practical programs readily adopted by Illinois weed management practitioners. He participated in three sabbatical leaves to learn additional research skills and techniques to better address the most daunting weed management challenges of the day. He spent

two summers in India endeavoring to establish soybean as a viable source of dietary vegetable protein. Dr. McGlamery served on dozens of graduate student research committees and volunteered countless hours of consultation to graduate students from virtually every subject-matter discipline within the college.

Mac began to build his teaching skills while teaching a soils laboratory at Oklahoma State University. In 1968 he was provided with the opportunity to teach the weed science course at the University of Illinois, which at that time was an introductory course in a developing science. It was during the early years of teaching this course that Mac learned the essential value for a teacher to teach from experience and not simply from a textbook. Ultimately, Dr. McGlamery taught this course for over 30 years. Enrollment in his course averaged at least 50 students for 24 consecutive years, a true testament of his teaching prowess. He also taught an extramural weed science course at different locations around the state for many years, and tailored the course content to better address the educational needs of the students at each location. When asked to describe his philosophy of teaching, Mac stated: "I believe that each student is an individual and that they must be challenged to achieve their best. I want the students to know that I am not just interested in numbers or grades, but that I want each of them to accept the challenge to improve so that they can be a better member of society." His students referred to him not as an instructor, but as a teacher.

Dr. McGlamery was perhaps best known for his communication skills and captivating presentations as an extension weed scientist. He possessed an innate ability to take the most basic and technical information and translate it into a format understandable to all. His attire was analogous to his trademark: a fluorescent orange shirt with rainbow-color suspenders provided the canvas onto which a marshal's badge was pinned, and a bolo tie hung around his neck. He used humor to keep the audience alert because he believed humor helped the listener retain what they heard. The standing-room-only crowds he attracted were as much a reflection of respect for his knowledge as his ability to entertain. He safeguarded his well-earned reputation for being an unbiased source of weed management information. His audiences grew to depend upon him to remove the promotional hype surrounding the commercialization of new

herbicides and provide a frank account of each new product. Mac was instrumental in the formation of the Pesticide Applicator Program at the University of Illinois, an extension program that trained thousands in the safe and proper handling and application of pesticides. The hours of work he devoted to the University of Illinois Plant Clinic cannot be tabulated, nor can the miles he traveled across the state to visit fields, speak to individuals or groups, or in some other manner serve as an emissary of weed science and the University of Illinois.

Throughout his career, Mac maintained an active role in the North Central Weed Science Society and Weed Science Society of America, serving on numerous committees in each society. His presentations at annual society meetings were eagerly anticipated and the room in which he spoke was usually filled to capacity. As a tribute to his career, his final presentation at the North Central Weed Science Society's annual meeting was allocated twice the amount of time normally allocated for individual presentations. In further tribute, no concurrent presentations were scheduled during his presentation so everyone had the opportunity to hear Mac regale the standing-room-only crowd with the history of weed science in the north central region. He received numerous awards from scientific societies, governmental agencies and the University of Illinois for his dedication to teaching and extension.

Throughout his career, Mac believed he was privileged to serve agriculture and the people of Illinois. He believed the purpose of both his professional position and his life was to assist others and thereby accomplish something that outlived him. His dedication and compassion for weed science was surpassed by his dedication and compassion for his fellow human beings. With uninterrupted meekness and humility, Marshal McGlamery personified the role of a servant. When asked during an interview to describe what he hoped his legacy would be, Mac replied: "I hope people will say I was a person who literally took the term "service" to heart. I tell people that I'm a public servant. I know your taxes pay my salary. I hope you've got your money's worth." Perhaps the most fitting tribute to this extraordinary individual is to emulate his service to others. Marshal McGlamery realized that one consummate accomplishment toward which so many strive; *he made a difference.*



Course Overview

The NAIPSC is an opportunity for land managers (public and private), landowners, policymakers, researchers, and graduate students to receive training in the basics of invasive plant ecology and management. The three-day course provides in-depth learning on the principles of integrated weed management, herbicide modes of action, plant identification, biological control, GPS and remote sensing applications, and spatial distribution analysis of invasive plant species populations. Also included will be instruction on the use of restoration practices designed specifically for managing invasive plant species.

The NAIPSC material reinforces proven methods and presents relevant hypotheses and practices related to invasive plant ecology and management. This approach will stimulate thoughtful discussion, provide problem-solving applications, and encourage retention of the main themes presented throughout the course. Participants with limited understanding of integrated control methodology, mapping and monitoring technology, restoration ecology, and plant taxonomy will learn the basic principles of invasive plant ecology and the latest techniques for managing infested areas.

Credits

Continuing education units will be available from the Society for Range Management and other sponsoring organizations. In addition, participants (e.g., graduate students) can earn up to two academic credits by completing online assignments following the NAIPSC. The NAIPSC Online Community is open to all NAIPSC participants to provide continued communication among past and current participants and instructors following completion of the NAIPSC field course.



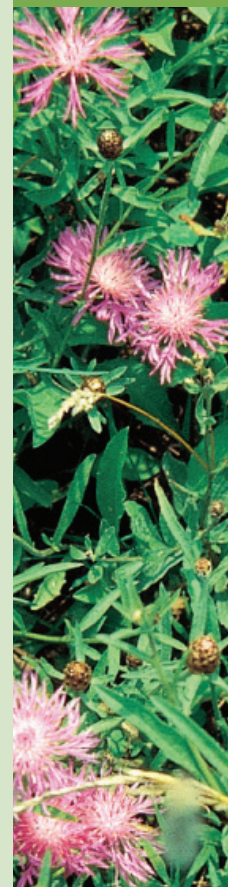
Extension is a Division of the Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln cooperating with the Counties and the United States Department of Agriculture.

University of Nebraska-Lincoln Extension educational programs abide with the nondiscrimination policies of the University of Nebraska-Lincoln and the United States Department of Agriculture.

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West Central Research and Extension Center
402 West State Farm Road
North Platte, NE 69101

North American Invasive Plant Ecology and Management Short Course

Nebraska UNIVERSITY OF
Lincoln | EXTENSION



**Special
Session
on
Biocontrol**

2013

Landowners
Land Managers

Researchers

Teachers

Policymakers

Students

Day 1

Introduction to Invasive Plant Management
Plant Identification Workshops
Herbicides and Use in Natural Areas
Special Session on Biocontrol

Day 2

Integrated Management in Riparian Areas
Integrated Management in Rangelands
Technology Workshops (GPS and Spatial Analysis)

Site Visits

- Riparian Area
- Wild Land Area
- Rangeland Area

Day 3

Q & A Breakout Sessions with Instructors

- Ecological Invasive Plant Management
- Invasive Plant Management Issues
- Data Interpretation and Application
- Invasive Plant Species Identification

Open Forum: Problem Sets

What's New Session: Risk Maps for Invasive Plants

For a complete biography on each instructor go to:
<http://westcentral.unl.edu/invasiveplantcourseinstructors>

George Beck, Colorado State University
Eric Coombs, Oregon Department of Agriculture
Anita Dille, Kansas State University
Richard Hansen, USDA APHIS, Colorado
Ellen Jacquart, The Nature Conservancy
Chad Jones, Connecticut College
John Kartesz, BONAP, North Carolina
Andrew Kniss, University of Wyoming
Jane Mangold, Montana State University
Joe Milan, US BLM, Idaho
Tim Prather, University of Idaho
Tom Stohlgren, USGS, Colorado
Jerry Volesky, University of Nebraska-Lincoln
Steve Young, University of Nebraska-Lincoln (Course Moderator)

What is the North American Invasive Plant Ecology and Management Short Course?

The NAIISC is three days of intense instruction and learning for those interested in the basics of invasive plant ecology and management. The course combines hands on workshops, site visits and instructor-led discussion sessions to provide the most in-depth, comprehensive education on a variety of principles and topics related to invasive plant ecology and management.

Registration & Cost Course Location

This course is being held June 25-27, 2013 at the University of Nebraska-Lincoln West Central Research and Extension Center in North Platte, NE. WCREC is ideally located in the west central region of Nebraska and is host to many of the same invasive plants species found throughout North America.

The registration fee is \$650 per person and includes the NAIISC course notebook, weed identification books (2) and interactive CD, biocontrol reference book, lunches, refreshment breaks, transportation to off-site locations, and a BBQ dinner at the historic Buffalo Bill State Park. Also, membership in the NAIISC Online Community is included with registration in the NAIISC Field Course.

Registration is limited to 40 participants and is due by May 1, 2013. See form for details.

For information on lodging and travel, visit the Website at <http://westcentral.unl.edu>.



Registration

North American Invasive Plant Ecology and Management Short Course

June 25-27, 2013

Name _____

Address _____

City _____

State _____

Zip _____

E-mail _____

Phone _____

Please check one:

- ☐ Land Manager
☐ Landowner
☐ Researcher
☐ Policymaker
☐ Researcher
☐ Graduate Student
☐ Other _____

Registration Fee: \$650

Registration Deadline: May 1, 2013

Registration Options

Mail to:

West Central Research and Extension Center
ATTN: Steve Young
402 West State Farm Road
North Platte, NE 69101-7751

Online:

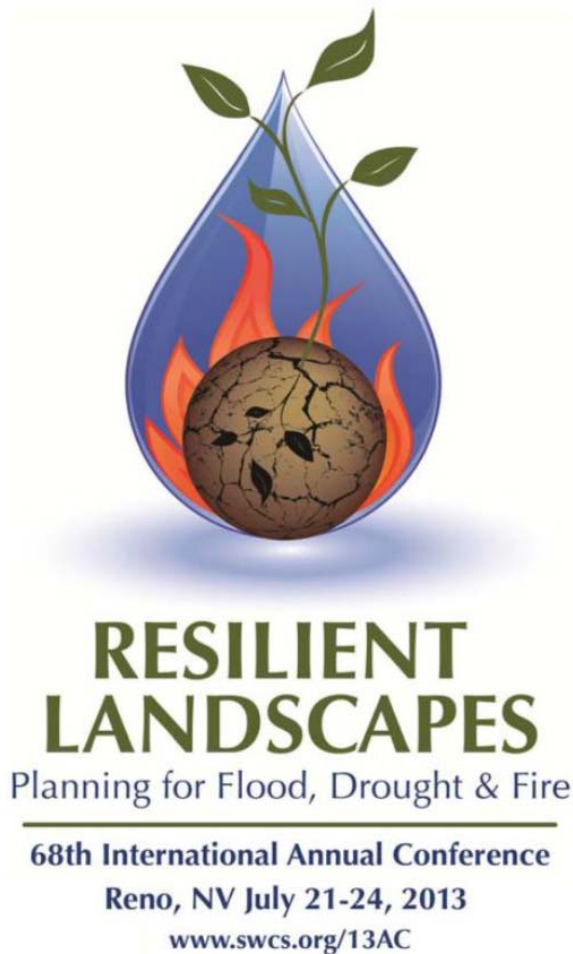
Tickets for NAIISC <https://tikly.co/-/1154>

Email: steve.young@unl.edu

Phone: 308-696-6712

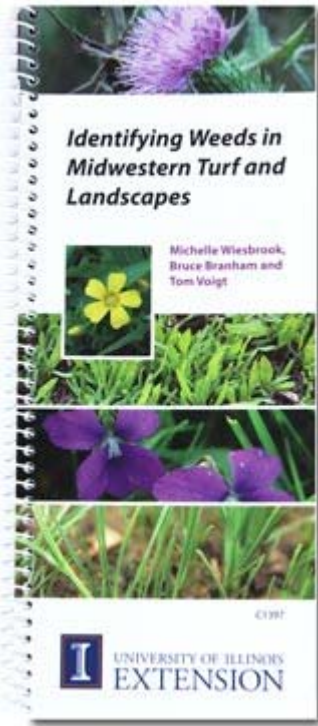
Website: <http://ipscourse.unl.edu>

Soil and Water Conservation Society (SWCS)
“Invasive Plants: Managing Controversy, Creativity, and Conservation”
July 21, 2013



A 1-day special session entitled, “Invasive Plants: Managing Controversy, Creativity, and Conservation”, will focus on the challenges and issues associated with invasive plant species. In all parts of the world, invasive plants are establishing in natural areas and wild lands and are changing many of the cycles (e.g., fire, hydrological) and affecting many of the processes (e.g., succession, nutrient turnover) that once supported biologically diverse communities. There are many unknowns on the long-term impacts of invasive plant species and this has spurred numerous debates related to management approaches and even the necessity of human intervention. Alternatively, the short-term effects of invasive plants can be seen at small and large scales and has resulted in much thought by researchers, land managers, and policymakers on how to develop and find

innovative/alternative approaches to address what should be done and how best to do it. Ultimately, a price will be paid if dialogue does not continue and new ways are not developed to preserve our current landscapes and at the same time allow for dynamic change in these systems, which includes invasive plant species. It is with this focus that this 1-day special session is taking place at the 2013 SWCS annual meetings in Reno, NV. The intent is to create an environment with a diverse audience that through discussion and presentation will continue to advance what is best for the environment and its constituents in relation to invasive plants species both now and into the future. Make plans to attend this special session in July 2013. Symposia organizers are seeking contributed oral and poster presentation to complement three invited plenary speakers. For registration details, go to www.swcs.org/13AC.



Identifying Weeds in Midwestern Turf and Landscapes

Need help to identify weeds in your lawn or garden? Whether you're a home gardener or a turfgrass or landscape professional, in order to manage weeds effectively you need to know what they are.

This easy-to-use guide identifies 37 common weeds in lawns across the Midwest. Each weed is identified with several color photos and brief descriptions of leaves, flowers, stems and more. Look-alikes are also listed so you can learn to spot the differences.

Handy 3.5" x 8.5" format, laminated cover, and spiral binding make it easy to bring this book along when you work in your garden or lawn. Do you need multiple copies? Buy the [*Identifying Weeds in Midwestern Turf and Landscapes: Value Pack*](#) of 10 books and save \$10.00 over individual prices.

If you are a member of the NCWSS and have material you would like to submit to the Newsletter, please send it to:
Harlene Hatterman-Valenti at H.Hatterman.Valenti@ndsu.edu

Positions Available - Virginia Tech

Assistant Professor\Extension Weed Specialist: Agronomic Crops

The Department of Plant Pathology, Physiology and Weed Science at Virginia Tech

The Department of Plant Pathology, Physiology and Weed Science at Virginia Tech is offering a tenure-track position with 70% Extension & 30% Research responsibility. The successful candidate will work at Virginia Tech's main campus in Blacksburg, VA and will provide state-wide leadership in the development of weed control programs for agronomic crops, disseminate research results to Virginia stakeholders, train graduate students, and assist in weed diagnostic clinic and various teaching activities.

Emphasis is placed on development of recommendations and other weed control information pertinent to current problems of Virginia farmers in soybean, corn, small grains, forages, and other crops. The incumbent will be expected to conduct an innovative and nationally recognized research and Extension program that addresses development of cost-effective, environmentally sustainable strategies to prevent, manage and control weeds in these economically important crops. The scientist will be expected to secure extramural funding, and will recruit, support, and advise graduate students. Scholarship will be demonstrated through publication of peer-reviewed journal articles, Extension articles, websites, and other appropriate media. The incumbent will develop and deliver educational programs to producers, Extension Agents, farm consultants, agribusiness

Positions Available - Continued

personnel, and government agencies, and will work cooperatively with other specialists, Extension Agents, and industry groups. Opportunities for collaborative, multi-disciplinary work with campus and AREC based faculty are significant and encouraged.

Required Qualifications: An earned Ph.D. in Weed Science or closely related field with major emphasis on weed management in row crops and/or small grains. Evidence of ability to communicate orally and in writing. Ability to work effectively in a team environment with Extension and agribusiness personnel. Ability to develop proposals to seek outside funding for program support. Ability to effectively instruct undergraduate and graduate students. Effective use of electronic media in education and communication of technical information.

Preferred qualifications: Previous experience in Extension and/or outreach activities. Prior instructional experience. Evidence of the ability to publish and secure extramural funding.

Application Process: Apply at <http://listings.jobs.vt.edu:80/postings/26509>, Posting #0122469. Provide cover letter, resume, official transcripts, statement of professional interests, and three letters of recommendation. In addition, send a list of contact information for three references for whom you have requested letters of recommendation to Dr. Shawn Askew, Associate Professor & Extension Program Leader for PPWS, Virginia Tech Glade Road Facility, 435 Old Glade Road, Blacksburg, VA 24061 (saskew@vt.edu).

Positions Available - Purdue University

Graduate Research Assistant

Department of Agronomy, Purdue University, West Lafayette IN

Job Duties: The Department of Agronomy at Purdue University is seeking a qualified and highly motivated individual interested in obtaining a M.S. or Ph.D. degree in Turfgrass Science and/or Turf Weed Science with preference for Ph.D. students. A student will have the opportunity to conduct applied field and laboratory research in turf science with a project focused on weed control in turf systems, general turf management, warm-season grasses, or turf physiology based on the interest of the student and funding. Students will interact with a team of Purdue Turf Scientists and collaborate with other faculty in the department and college.

Salary: The Ph.D. assistantship provides a salary of \$1,642/month (\$19,704/year) along with a remission of all but a nominal portion of tuition and fees (For 2011-2012 it will be \$361.50 per semester during the academic year and \$180.75 for the summer session). M.S. assistantships provide a salary of \$1,594/month (\$19,128/year).

Minimum Requirements: A B.S. degree with a major emphasis in Weed Science, Turfgrass Science, Agronomy, Horticulture, Plant Sciences or closely related field is required. Experience and/or knowledge of field plot techniques, experimental design and familiarity with turfgrass management or weed science is a plus. Strong written and oral communication skills are essential.

Positions Available - Continued

Where to Apply: Interested applicants should apply online at: <http://www.gradschool.purdue.edu/admissions/>

For more information about the position or the Purdue turf program, contact Dr. Aaron Patton, (765) 494-9737, ajpatton@purdue.edu. For more information about Purdue Agronomy and the Turf Science Program, visit our Web site at <http://www.agry.purdue.edu/turf>.

Additional information for prospective students is available from the Department of Agronomy at <https://ag.purdue.edu/agry/GraduateProgram>

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