

# NCWSS • News

North Central Weed Science Society

Vol 31, Number 1, Spring 2014

[www.ncwss.org](http://www.ncwss.org)

► J.D Green President 2014.....	1
► Past President .....	3
► The NCWSS Distinguished Awards .....	4
► NCWSS Student Awards.....	8
► CAST Report.....	14
► Washington Report.....	14
► Necrology .....	17
► People and Places .....	18



## J.D. Green President 2014

Since our annual meeting many of us have experienced a cold, snowy winter across the North Central region. In fact, for some it has been somewhat challenging. As we begin to plan for the upcoming season I suspect many of you, like me, are anxiously awaiting the warmer weather of spring. I guess we will have to wait and see how the past weather conditions impact weed

populations the coming year.

The total attendance for our annual meeting was 504 participants which included 125 individuals affiliated with the Midwest Invasive Plant Network (MIPN) and the Ohio Invasive Plant Council (OIPC). We had 90 student attendees, including 6 undergraduates who participated in the poster contest. As Dave Johnson reminded us last year our students are our future which we need to continue to encourage and cultivate. Certainly, we are at a time when the demand for highly qualified professionals with training in weed science are needed. Several job opportunities are currently available within academia and industry and are anticipated to be available into the foreseeable future.

I look forward to serving as your president for 2014. This organization works efficiently because of the dedication of numerous individuals who serve on the Executive Board, Strategic Planning Committee, Program Committee, and various other committees. If you are not involved I would encourage you to become more active in your professional society. Let someone on the board know of your particular interest.

## 2013 meeting reflections

The facilities with the Hyatt Regency Columbus were excellent for our joint meeting with the Midwest Invasive Plant Network. This is the second time within the past 10 years me have met at this facility in downtown Columbus, Ohio. Our local arrangements committee, led by Mark Loux, and the Hyatt staff did a tremendous job of preparing and hosting our meeting. Our special thanks to Executive Secretary Phil Banks for all his work in preparing for the meeting and making sure registration ran smoothly. Thanks also to Mark Renz for chairing the *Invasive Plants* Symposium and along with Katherine Howe who organized our joint meeting on behalf of MIPN and OIPC. The other



If you are a member of the NCWSS and have material you would like to submit to the Newsletter, please send it to:

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[H.Hatterman.Valenti@ndsu.edu](mailto:H.Hatterman.Valenti@ndsu.edu)

*Continued on Next Page*

## J.D Green, President - Continued

symposium chaired by Vince Davis was on *Technology Tools and Communication Trends for Weed Scientists* which was also timely and well attended. My appreciation also to the Program Committee and moderators for the other regular sessions that helped make the overall program run smoothly. The opportunity for oral and poster presentations to be recorded was available again this year. Thanks to Brian Jenks, Bruce Ackley, and their committee for again leading this effort. Presentations recorded can be viewed on the NCWSS website after you Login to your account.

On Monday Scotts Miracle-Gro Company sponsored a student tour of their facilities in Maryville, OH. Our thanks are extended to Robert Baker for being the local host for this activity and Lacy Valentine for coordinating the group of graduate students who participated. Monday evening BASF again sponsored the annual student mixer. During this event our second weed science quiz bowl was held, which was organized by Dave Johnson and Bill Simmons as M.C.

The General Session opened with a welcome from Thomas Lennox, representative with Pelotonia, an annual charitable event held in Columbus. Phil Stahlman, immediate Past President of CAST, gave us both a historical perspective of CAST and its current activities and future endeavors; Michael Barrett, WSSA EPA Subject Matter Expert, provided his first year impressions and insights working with the EPA. The Presidential Address was given by 2013 President Dave Johnson. We also took time to honor and remember past NCWSS members Drs. Marshal McGlamery and Bill O'Neal who passed during the previous year.

The student paper and poster contest was held on Tuesday; the presentations were excellent as usual. Thanks to the Resident Education Committee and all the judges who helped with this contest. Without the generous donation of time by the judges and the committee this activity would not be possible. Dow AgroSciences sponsored the annual student luncheon and another society social sponsored by Syngenta was held in conjunction with the second poster session on Tuesday. On Wednesday afternoon the *What's New in Industry* was again a popular session. Thanks to Chris Kamienski for organizing this session and the Industry breakfast on Thursday morning.

At the Awards Luncheon we recognized and congratulated our Distinguished Achievement Award winners, new Fellows, and winners of the student paper and poster contests. We also recognized

outgoing Past President Bryan Young and welcomed our new Vice President Anita Dille. I also need to acknowledge the Sustaining Members of our society, who through their generous support helps defray the cost of many of our activities including the annual meeting.

### 2014 activities

The 2014 committee assignments have been made and the contact information for the Executive Board and Directors have been posted on the NCWSS website. I would encourage you to look at the website to see what committees you have been assigned and who else is serving on committees of interest to you.

Since our annual meeting, the NCWSS has joined with WSSA and other regional societies along with the Aquatic Plant Management Society to endorse two letters of interest to the weed science community. One letter was sent to the EPA Office of Pesticide Programs reemphasizing the concern and significance of herbicide resistant weeds. The other letter was forwarded to the USDA-ARS Office of National Programs urging the agency to direct more personnel and financial resources to address critical weed science needs facing the country such as herbicide resistant weeds and invasive plants. This second letter was prompted by a stakeholder webinar meeting to assess the five-year research priorities for the NP304 Crop Production and Protection Program.

DuPont Pioneer will be hosting the 2014 Summer Weeds Contest on July 23-24 at their facility in Johnston, IA. Mark your calendars. More information will be forth coming from Dave Johnson, as local host, and the Resident Education Committee.

Finally, I want to thank Dave Johnson for his contributions and excellent leadership to NCWSS as 2013 President. Along with his Past President duties he will have another active year as the 2014 Summer Contest Chair as mentioned above. Thanks Dave for making this additional commitment to this important event for the students in our society. Vice President John Hinz is already actively preparing the for the 2014 annual meeting as Program Chair along with Local Arrangements Chair Eric Spandl. It will be held December 1-4 at the Hyatt Regency hotel in Minneapolis, MN.

I trust we will experience more typical spring weather soon! I look forward to seeing you at the Summer Contest in Johnston and the annual meeting in Minneapolis. Have a productive 2014 season. ♦



## Past President — Dave Johnson

facilities and staff were outstanding as usual. A special thanks goes out to the Scotts Miracle-Gro company for hosting several students and their advisors in a pre-conference tour of their Marysville location.

We also owe thanks for the continued financial support of our Sustaining Members. Many of these members provided additional support through sponsorship of the student mixer/quiz bowl, student luncheon, and the society breaks and social events. All of these functions provide great opportunities for interaction and networking. A final thanks to all of the committee chairs and members who worked hard this year in their respective functions. Without these efforts the society could simply not operate as effectively as we do.

As Past President, my key priority for 2014 will be to solicit nominations for the Distinguished Achievement, Graduate Student, and Fellow awards. Please start thinking about nominations for these awards. The process is easy, and instructions are listed in the NCWSS Manual of Operating Procedures on page 24 (Distinguished Achievement Award), page 25 (Fellow), and page 26 (Outstanding Graduate Students). It is important that we continue to recognize our outstanding members for their contributions to NCWSS, to weed science, and to agriculture.

In closing, I want to thank you for the opportunity to serve as President of the NCWSS, and I am confident that JD Green will lead us well in 2014. Have a safe and productive year, and I look forward to seeing you all in Minneapolis in December.

It was an honor to serve as NCWSS president in 2013. Attendance at our 68<sup>th</sup> annual meeting in Columbus was strong, with 375 members attending (including 90 students) and an additional 125 registrants (including 43 students) for the invasive plant symposium, which NCWSS co-sponsored along with the Midwest Invasive Plant Network (MIPN) and the Ohio Invasive Plants Council (OIPC). This is at least the 4<sup>th</sup> or 5<sup>th</sup> time that we have held a joint meeting with invasive weeds organizations, which helps to strengthen the program for all groups involved. NCWSS shares many areas of interest with these groups, and we will continue to look for opportunities to have joint meetings in the future.

The Columbus meeting success was thanks to the efforts of many people, including new NCWSS President JD Green and his Program Committee, Mark Loux and his Local Arrangements Committee, and Executive Secretary Phil Banks, and I thank them for all of their efforts. Also, many thanks to Mark Renz and Kate Howe with MIPN and OIPC for working with NCWSS to allow this joint meeting to be such a success. The Hyatt Regency Columbus



## The North Central Weed Science Society Newsletter

is edited by Harlene Hatterman-Valenti, laid out by Glenn Nice and filled by the members.





**Education Award** recognizes outstanding educational achievements in weed science. Principal criteria include innovative or unique approaches that result in learning, ability to clearly communicate ideas, motivation of the intended audience and recognition of accomplishments by peers and the intended audience.



**Kirk Howatt** was raised on a small farm in southeast Minnesota. With primary responsibility for maintaining the family's large garden and many, many hours on a row-crop cultivator in corn fields, he developed a strong interest in crop protection, especially weed control. Involvement in 4-H and FFA activities encouraged not only the development of agronomic training but also fostered commitment to education and service. Kirk completed a B.S. degree in Agronomy from the University of Wisconsin at River Falls and was encouraged by Dr. Steven Carlson to diversify his experience of agriculture during graduate study. Kirk earned M.S. and Ph.D. degrees under the supervision of Drs. Phillip Westra and Scott Nissen at Colorado State University in

Fort Collins. This environment allowed continued development of science investigation and extension activity, as well as exposure to classroom instruction under Dr. Robert Zimdahl.

Interest in continuing formal classroom instruction led Kirk to accept a position with North Dakota State University in Fargo the fall of 1999. The position included weed science research in small grain cereals and oilseed crops and teaching responsibilities for Advanced Weed Science and Herbicide Fate and Action courses. Instruction responsibilities have included Principles of Weed Science, Weed Identification, Professional Development, and Graduate Seminar although not all remain his responsibility. He has served as advisor to the Agronomy Club since beginning with the University and was appointed coordinator of the Crop and Weed Sciences major in 2006. The strength of agriculture has encouraged the program to grow from about 85 to more than 230 students in seven years.

Kirk has been involved with education and service beyond NDSU. Through service in several professional societies, he has encouraged student development and education and provided leadership in committee and board activities. This commitment to service extends into his personal life as well. Kirk is a long-time member of the Community Development Corporation in the small town where he lives, the Summer Recreation Board for the school district, and several duties within his church, including Religious Education instruction with his wife, Mary. She shares his interest in education and service, allowing him to help with her activities in programs that develop problem solving skills in grade school and high school students. They have been blessed with three children who have been exposed to years of training in the organization of education and service opportunities which encompass much of their family group activity.

## Distinguished Awards - Continued



**Mark Renz** was born in the East Bay of California. While he grew up in an urban environment, his interest in weed science was sparked while attending the University of California Davis as an undergraduate (1990-1994). After completing his B.S. in Botany, he worked for two years in Fresno, California for DowElanco at their agricultural research station before returning to UC Davis to for his PhD under the direction of Dr. Joe DiTomaso (1996-2002). Following graduate school Mark worked as a post-doctoral researcher at the USDA-ARS in Reno, NV before obtaining an extension specialist position at New Mexico State University (2003-2006) where he was responsible for weed management in agronomic and vegetable crops as well as natural areas. In

2006 Mark moved to the University of Wisconsin Madison as extension specialist where he currently works. Mark's program is focused on weed management in perennial agronomic crops (alfalfa, pastures) and on invasive plants in natural areas. Efforts include applied research in conjunction with developing educational and outreach material on weed identification and control in these areas. In addition Mark is the current president of the Midwest Invasive Plant Network. Mark has led the development of the Great Lakes Early Detection Network (GLEDN). GLEDN helps share invasive species location information in the Great Lakes region to facilitate rapid response to new invasive species. To date GLEDN has accumulated over 800,000 invasive species location information from collaborating providers. Mark enjoys camping, fishing and cycling, but spends most of his time convincing his family including his wife (Erin) and three kids (Bella, Thomas, and Clara) that they are worthy activities.

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**Research Award** recognizes outstanding research achievements in Weed Science. Principal criteria include demonstrated excellence and creativity in research accomplishments; in conducting research and applying the results to solve problems in weed science; and, in applying unusual creativity to the research effort.



**Patrick Tranel** was raised on his family's crop and livestock farm near Galena, IL. He received a B.S. degree in Agronomy from Iowa State University, an M.S. degree in Agronomy under David Gealy at Washington State University, and a Ph.D. degree in Botany under Kenneth Keegstra at Michigan State University. After a one-year post-doc with Monsanto Company in St. Louis, Pat joined the Department of Crop Sciences at the University of Illinois in 1997. He was hired specifically to incorporate the tools and techniques of molecular biology into weed science, and currently is a Professor of Molecular Weed Science. Analogous to how a weed's occupation of a unique niche provides it the opportunity to flourish, Pat's combination of weed science and molecular biology positioned him in a rich research environment.

Much of Pat's research is focused on genetic diversity within weed species, including mechanisms and evolution of herbicide resistance. *Amaranthus* species, particularly waterhemp, are front and center in his laboratory, but his research group has utilized molecular biology techniques to further our understanding of other species, including cocklebur, ragweeds, foxtails, horseweed, barnyardgrass, nightshade, and kochia. Pat has authored or co-authored over 60 peer-reviewed research papers, 10 review articles, and 5 book chapters, and he is co-inventor on 2 patents.

## Distinguished Awards - Continued

Pat teaches the University of Illinois' introductory weed science course and a course that trains undergraduate and graduate students for the NCWSS weeds contest. Pat also is active in undergraduate advising. Although he does not have an extension appointment, Pat regularly speaks to growers and weed management professionals, and his research on herbicide resistance is often cited in newspaper and farm press articles.

Pat serves as an Associate Editor or on the Editorial Board for four journals, including *Weed Science*. He has served on several committees within NCWSS and WSSA, and regularly leads or assists in the organization of various scientific meetings and symposia on the topics of herbicide resistance and the application of molecular biology and genomics tools in weed science research.

Pat and his wife, Lea, have three sons and two daughters. All of his children of speaking age can recite at least a few weed Latin binomials.



**Stevan Z. Knezevic** grew up in Belgrade, Serbia (Former Yugoslavian republic). He received a B.Sc. degree in Plant Protection from University of Belgrade in 1987. In 1989 he moved to Canada where he received M.Sc. (Weed Science) in 1993 from University of Guelph. Then he moved to USA in 1994 to pursue doctoral studies at Kansas State University where he received PhD (Weed Science) in 1997. Upon graduation he conducted a one year of Post-Doctoral studies at University of Guelph. Stevan joined the University of Nebraska-Lincoln in 1999 as an Assistant Professor. He was promoted to Associate Professor in 2004 and became a full Professor in 2010. He teaches an internet based class on “Integrated Weed Management” to undergraduate and graduate students. During his career, Stevan has published 96 peer-reviewed manuscripts, 5 book chapters, 1 training field manual, and was an author/co-author of 86 oral and 92 poster presentations at scientific conferences in USA and internationally. Stevan also authored and co-authored 11

extension publications, including an annual Guide for Weed Management in Nebraska. Stevan has supervised 2 postdoctoral fellows, 17 graduate and 12 undergraduate students. He also hosted 27 international visiting scientists in his lab. He has served as a co-chair and chair of Weed Biology section of NCWSS. Stevan has received 20 awards for his research, publications, or presentation style. Just to name a few: “Outstanding Young Scientist in Crop Protection” from American Society of Agronomy; “The MOST READ and MOST CITED manuscript in 10 years” in Weed Technology Journal; “Top Cited article in 2009” for Weed Technology journal; “Internet Tool for Weed Control” (Web Version of Nebraska Weed Guide) from American Society of Agronomy; “Innovation Award for Designing Flame Weeding Machine” (shared with Dr. Gogos) from International Propane Association and Research Council; “Excellence in Team Programming” from UNL-IANR; and “Best Extension Publication” (Guide for Weed Management in Nebraska) from American Society of

## The NCWSS Distinguished Service Awards Recognize the Contributions of Outstanding Members in:

Research

Industry

Education

Young  
Scientist

Service

Professional  
Staff



## Distinguished Awards - Continued

**Service Award.** This award is given for exceptional achievement in areas other than education or research. Outstanding, creative contributions in service or leadership in activities that bring significant, important changes in weed science are criteria for this award.



**Christy L. Sprague** is an associate professor and extension specialist at Michigan State University. She completed her M.S. degree at the University of Illinois and her B.S. and Ph.D. degrees at Michigan State University. In 1999, she began her professional career at the University of Illinois. In 2003, Christy accepted her current position at MSU with extension and research weed management responsibilities. During her career, Christy has demonstrated exceptional qualifications based on 1) the high quality and productive research programs that she designed to address applied weed management issues of Midwest agricultural systems, 2) the significant contributions that she has made in creating and disseminating weed management information in her extension role, and 3) the efficient and effective leadership that she has provided to several organizations. She has developed an excellent and highly productive research program while balancing it against the time demands of extension. Christy has published 54 research articles and over 165 abstracts and proceedings. Both within her state and within the region, Christy has established herself as an excellent and highly

credible source of extension information in the North Central region. She has authored several extension bulletins and the requests that she receives to speak at state, regional and national conferences may provide the greatest evidence of the respect that she has earned during her career. She has delivered 77 presentations as an invited speaker and in total reaches ~3,500 extension clientele annually. Christy has always stepped forward and taken an active leadership role in most of the organizations in which she has contributed. Within the NCWSS she served as secretary-treasurer for six years and has also chaired several committees. Nationally, she has served as an Associate Editor for Weed Technology for two terms, currently serves as an Associate Editor for the Journal of Sugar Beet Research, and has served on the Board of Directors for the American Society of Sugar Beet Technologists. Christy has also been an active member of several WSSA committees. Christy was the recipient of the NCWSS Young Scientist Award in 2005 and the WSSA Early Career Weed

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**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.



**Bryan Young** is a native of Michigan and was raised on the family farm where hand-weeding of sugar beets and dry edible beans was common. Bryan obtained his B.S degree in Crop and Soil Science at Michigan State University while working extensively with Dr. Don Penner as an undergraduate worker in his research program. Dr. Penner's support and encouragement resulted in Bryan pursuing a Ph.D. in Weed Science from the University of Illinois under the direction of Dr. Steve Hart. In 1998 Bryan joined Southern Illinois University in the Department of Plant, Soil and Agricultural Systems and is currently a Professor of Weed Science/Agronomy with responsibilities in teaching, research, outreach, and administration. Bryan has taught or co-taught 13 different course offerings at SIU with his primary courses being field crop production, introductory weed science, and principles of herbicide action. Bryan's research focus has been applied research for the development of weed management

## Fellow Awards - Continued

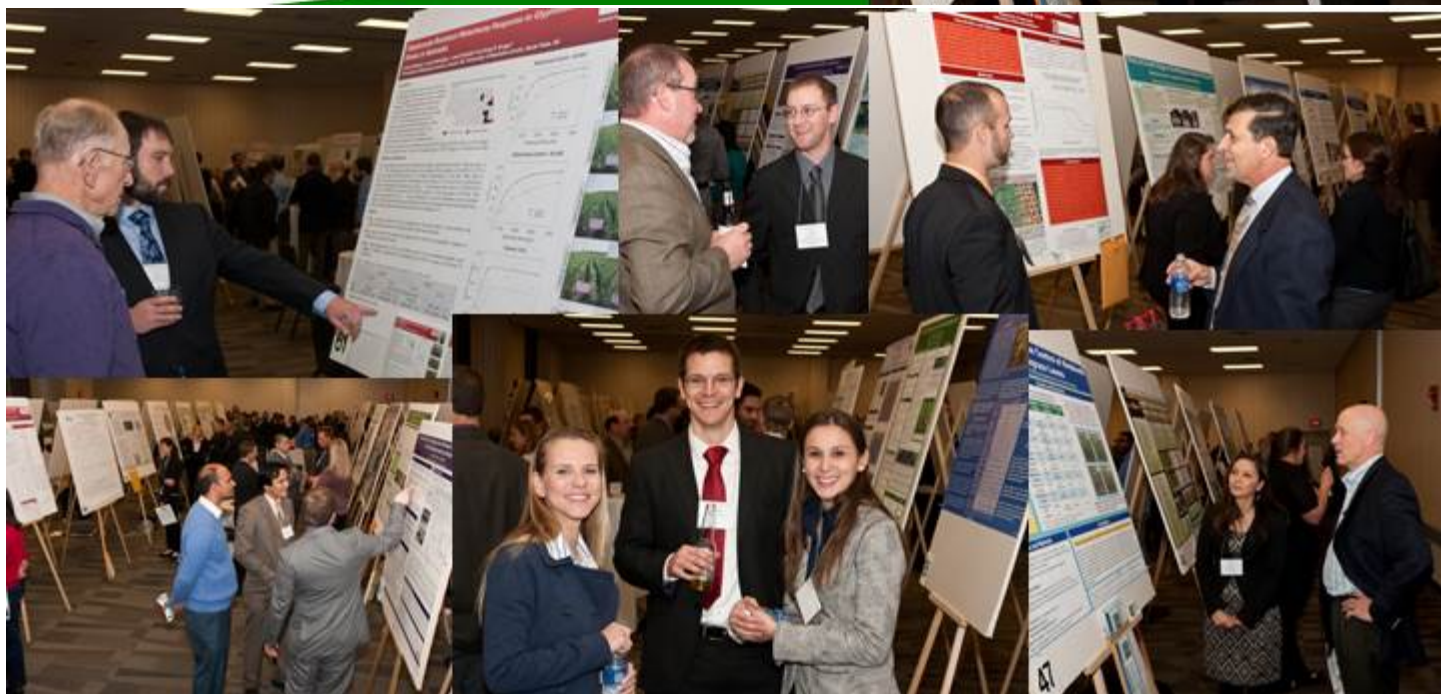
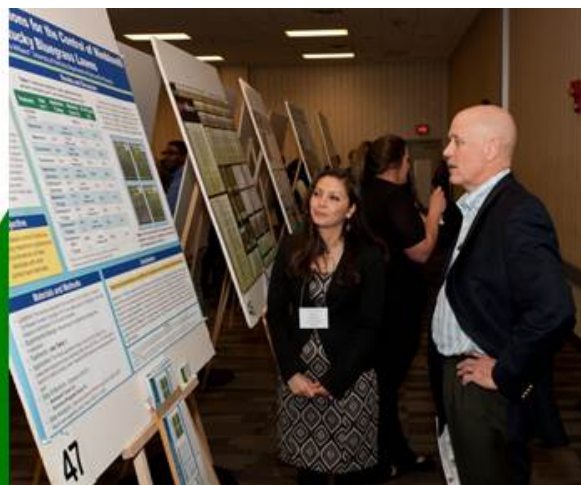
strategies in Illinois crops, herbicide application technologies, and weed biology and ecology. Even though Bryan has no formal extension appointment he annually participates in numerous outreach activities to serve the agricultural community.

Bryan served on the North Central Weed Science Society Board of Directors as the Editor of the annual NCWSS Research Reports from 1998 to 2006. He rejoined the NCWSS Board of Directors in 2007 and has served continuously to present as the Chair of the Strategic Planning committee and then in the Presidential rotation in which he is currently serving as the Past President. Bryan, his research staff, and his students, both undergraduate and graduate, have always been actively engaged within the NCWSS.

Dr. Young has authored over 70 journal articles, two book chapters, and published seven editions of the Compendium of Herbicide Adjuvants. Bryan and his wife Julie, who has her M.S. in Weed Science, have three children whom all have an appreciation for agriculture and a basic hate for weeds. ◇

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

# NCWSS Student Awards





## Graduate Student Paper Contest — Tate Castillo

There were 33 participants in this year's Graduate Student Paper Contest. The entries were separated into 5 groups based on subject matter and scheduling. All papers were evaluated on their content, development, analysis and presentation. Congratulations to the following winners:

### Group 1. Agronomic Crop Papers



**1st. Multiple-resistant Palmer amaranth control with soil-applied herbicides in Michigan.** David Powell, Michigan State Univ.

**2nd. Influence of soybean seeding rate, row spacing and herbicide programs on the control of resistant waterhemp in glufosinate-resistant soybean.** John Shultz, Univ of Missouri.



### Group 2. Equipment and Application / Horticulture, Ornamentals and Turf



**1st. Dose Responses of Silvery-Thread Moss to Applications of Carfentrazone-ethyl.** Zane Raudenbush, Kansas State Univ.

**2nd. Investigating Poa annua Biotypes Collected from Golf Greens: Greenhouse Evaluations.** Alexandra Williams, Univ. of Kentucky



### Group 3. Weed Biology, Ecology, and Management



**1st. Nitrous Oxide Emissions as Influenced by Nitrogen and Weeds Before and After Postemergence Glyphosate Application.** Rebecca Bailey, Univ. of Wisconsin.

**2nd. Effect of Humidity and Humectant on Glufosinate Efficacy.** Carl Coburn, Univ. of Wyoming.



## Graduate Student Paper Contest — Continued

### Group 4. Weed Biology, Ecology and Management



**1st. Concomitant Nutrient Release of Decaying Weed Residues Following Postemergent Weed Control.** Nick Harre, Univ. of Southern Illinois.

**2nd. The Effect of Mob Grazing on Canada thistle Control, Pasture Productivity and Utilization, and Forage Quality.** Anders Gurda, Univ. of Wisconsin.



### Group 5. Herbicide Physiology



**1st. Amaranthus Species: Pollen Expression of EPSP Synthase and In Vitro Pollen Germination.** Tye Shauck, Univ. of Missouri.

**2nd. Uptake, Translocation, and Metabolism of 2,4-D in Enlist Soybeans.** Joshua Skelton, Univ. of Illinois.



## Graduate Student Poster Contest — Doug Nord

We had a very good group of posters presented this year with 39 participants in the Graduate Student Poster Contest. The contest entries were divided into five sections:

1. Agronomic Crops: Corn/ Sorghum/ Cereals, Equipment and Application Methods,
2. Agronomic Crops: Soybeans/ Dry Beans/ Sugarbeets, Horticultural/ Ornamentals/ Turf,
3. Herbicide Physiology, Forages/ Pastures/ Rangeland,
4. Weed Biology/ Ecology/ Management I,
5. Weed Biology/ Ecology/ Management II. Five judges evaluated each poster which meant we utilized 25 judges. It speaks well for our society that we no problem enlisting 25 volunteers for this task.

All posters were evaluated for appearance, rationale and logic in formulating research hypothesis, use of scientific principles and technique, interpretation of results, and oral presentation of the poster.

## Graduate Student Poster Contest — Continued

### Group 1. Agronomic Crops: Corn / Sorghum / Cereals, Equipment and Application Methods



**1st. Weed Height and the Inclusion of Atrazine Influence Control of Multiple-Resistant Palmer Amaranth with HPD-Inhibitors.** Jonathon R. Kohrt, Christy L. Sprague; Michigan State University, East Lansing, MI

**2nd. Effect of Water Temperature and Storage Duration on MON 76757.** Pratap Devkota, William G. Johnson; Purdue University, West Lafayette, IN



### Group 2. Agronomic Crops: Soybeans / Dry Beans / Sugarbeets, Horticulture / Ornamentals / Turf



**1st. Response of Glyphosate-Resistant Horseweed to POST Herbicides.** Joseph D. Bolte, Reid J. Smeda; University of Missouri, Columbia, MO

**2nd. Herbicide Combinations for the Control of Nimblewill in Kentucky Bluegrass Lawns.** Alexandra P. Williams, Michael Barrett; University of Kentucky,



### Group 3. Herbicide Physiology, Forages / Pastures / Rangeland



**1st. Biochemical Basis for Metabolism-Based Atrazine Resistance in *Amaranthus tuberculatus*.** Anton F. Evans, Rong Ma, Jacqueline Janney, Brittany A. Janney, Dean E. Riechers; University of Illinois, Urbana-Champaign, IL

**2nd. Selection Based Improvement for 2,4-D Tolerance in Red Clover (*Trifolium pretense*).** Tara L. Burke, James Roberts, Norman Taylor, Michael Barrett; University of Kentucky, Lexington, KY





## Graduate Student Poster Contest — Continued

### Group 4. Weed Biology / Ecology / Management I



**1st. Differential Responses to Atrazine Preemergence and Postemergence in Two Populations of Atrazine-resistant Waterhemp (*Amaranthus tuberculatus*) from Illinois.** Rong Ma, Anton F. Evans, Shiv S. Kaundun, Brittney A. Janney, Dean E. Riechers; University of Illinois, Urbana-Champaign, IL, Syngenta UK, Berkshire, England



**2nd. Measuring Ecological Fitness in the Absence of Herbicide Selection of Five Herbicide-Resistance Traits in Waterhemp using a Multi-Generation Greenhouse Study.** Chenxi Wu, Adam S. Davis, Patrick Tranel; University of Illinois, Urbana-Champaign, IL, USDA-Agricultural Research Service. Lexington, KY

### Group 5. Weed Biology / Ecology / Management II



**1st. Impact of Weed Management and Nitrogen Rate on Nitrous Oxide Emissions in Corn.** Rebecca R. Bailey, Vince M. Davis; University of Wisconsin-Madison, Madison, WI



**2nd. Winter Annual Weed Suppression with Oilseed Radish.** Leah Sandler, Kelly Nelson; University of Missouri, Columbia, MO

## Undergraduate Student Poster Contest — Cheryl Dunne

There were seven participants in this year's undergraduate student poster contest. All posters were evaluated based on content, appearance, development, results and discussion, physical manner, and knowledge of the subject matter of the poster. The quality of the posters was excellent, and a big thanks to the students for the time and effort spent on creating high quality posters.

Thanks to the judges as well for their time and investment in the contest. This is one of the many things that go on behind the scenes at NCWSS that takes a lot of people to get done and their involvement is appreciated.

## Undergraduate Student Poster Contest — Continued



**1st. Influence of Soil Residual Fomesafen and Dicamba Tank-Mixtures on the Frequency of PPO-Resistant Waterhemp.** Theresa Reinhardt, Southern Illinois University, Carbondale, Illinois



**2nd. Characterization of Illinois Populations of Waterhemp and Palmer Amaranth for Herbicide Mode-of-Action Sensitivity and Soil Residual Activity.** Jamie Long, Southern Illinois University, Carbondale, Illinois



## 2013 NCWSS Outstanding Graduate Student

Rodrigo Werle, University of Nebraska—Lincoln

## NCWSS Board of Directors 2014



### Top from left to right:

Curtis Thompson—CAST Representative

Harlene Hatterman-Valenti - Editor, NCWSS Communications

David Simpson—Treasurer

David Johnson—Past President

Phil Banks—Executive Secretary

**Bottom from left to right:** John Hinz—President

Elect; J.D. Green—President; Anita Dille—Vice-President; Mark Bernards—WSSA Representative.

## CAST Report — Curtis Thompson

The Council for Agricultural Science and Technology (CAST) has been communicating agricultural science for 42 years to the public and policy makers. This past NCWSS meeting, Dr. Phil Stahlman provided an excellent presentation which provided some history of CAST and discussed the value CAST provides to Agricultural Science and our Weed Science Society. NCWSS has been a long standing member of CAST, however, CAST would much appreciate individual memberships as well. The following are some benefits of CAST membership.

Your generous support will help strengthen CAST's position at the international forefront of science communication.

**Friday Notes—CAST's weekly signature electronic newsletters.** Each issue features lead articles on timely ag topics; dozens of live links to current ag news items; congressional updates from Meyers and Associates; advance notices on CAST's publications and activities; and more.

**Publications.** With every publication release, you may request one free printed copy of new Issue Papers, Special Publications, and Task Force Reports. Commentaries and Ag quickCASTs are available as free downloads from the CAST website.

**"Members Only" web access.** This gives you the ability to download the full text of all CAST publications for free and also access archived issues of past *Friday Notes*.

**Recognition of your support.** Your membership is recognized in the CAST Annual Report and on the website.

**CAST is a qualified 501(c)(3) tax-exempt organization.** Therefore, your membership contribution may qualify as a charitable contribution under IRS guidelines.

Go to the following URL <http://www.cast-science.org/> to view CAST activity and publications. If you would like to become a member, simply click on Membership, then Individual membership, and the online form and you are one you way. Watch for a timely series of Issue Papers titled "Agricultural Innovation to Sustainably Feed the World by 2050". Papers will come out of the three work groups: Plant Science Work Group, Animal Science Work Group, and the Food Science Work Group.

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## Washington Report Lee Van Wychen

### 2014 Farm Bill Becomes Law

After more than two years of negotiating and two extensions of the 2008 Farm Bill, the President signed a new Farm Bill into law on Feb. 7. Led by the "Four Principals" - Agriculture Committee Chairs Senator Debbie Stabenow (MI) and Congressman Frank Lucas (OK), and Ranking Members Senator Thad Cochran (MS) and Congressman Collin Peterson (MN), the new law is largely seen as a victory for research, education, and extension. Most notably, the Research Title of the Farm Bill creates a new nonprofit foundation, the Foundation for Food and Agriculture Research (FFAR), that is intended to complement--not replace--USDA's research, education, extension, and economics activities

conducted  
mainly by the  
National  
Institute of Food

and Agriculture (NIFA), the Agricultural Research Service (ARS), and the Economic Research Service (ERS).

FFAR is modeled after existing Foundations that were established to leverage private funding such as the Foundation for the National Institutes of Health and the National Fish and Wildlife Foundation. FFAR will have \$200 million in mandatory funding as a match to solicit private donations for additional research on plant health; animal health; food safety and nutrition; renewable energy, natural resources





## Washington Report - Continued

and environment; agricultural and food security; technology; and agricultural economics and rural communities. FFAR will be led by a Board of Directors comprised of 15 members, of which 8 will be recommended by the National Science Foundation and 7 by industry. All 15 members will be appointed by the Secretary of Agriculture and 4 other ex-officio Agency scientists. This public-private partnership represented by FFAR could be very beneficial for advancing weed management research and innovation.

Another highlight from the Research Title in the new farm bill is that it provides \$80 million per year for the Specialty Crop Research Initiative (SCRI) and \$20 million per year for the Organic Agriculture Research and Extension Initiative (OREI). These programs have been stranded without funding since 2012. The new funding levels are significant increases for both programs compared to the 2008 Farm Bill levels. In addition, the new funding that is authorized for SCRI is permanent funding.

Unfortunately, there were a couple issues that didn't go quite the way we would have liked them too. One was a House provision that will require non-governmental organizations and private research institutions to provide a 100% match on all competitive research grants. However, the land grant universities are exempt from this matching funds requirement.

The biggest disappointment is that Sen. Stabenow did not allow inclusion of the National Pollutant Discharge Elimination System (NPDES) fix language that was in the House version of the Farm Bill. There was strong bipartisan support for this language in both houses of Congress that would have clarified Congress's intent for the regulation of pesticides applied to or near water. As you know, pesticides are regulated through FIFRA, including sites to which pesticides can be applied. However in 2009, a three judge U.S. Circuit Court panel ruled that pesticide applications to or near waters required additional processing under the Clean Water Act, NPDES permits. These permits impose additional resource and liability burdens on small businesses, farms, municipalities, state agencies, and federal agencies. The National and Regional Weed Science Societies have supported a legislative fix for this issue since the Circuit Court ruling and will continue to support efforts to resolve this issue going forward.

Last but not least, I wanted to put in a reminder about the noxious weed control provision in the Commodity Title that has been in effect since the 2002 Farm Bill. In order for farmers to receive payments under the Commodity Title, the farmers shall agree ---- "to effectively control noxious weeds and otherwise maintain the land in accordance with sound agricultural practices, as determined by the Secretary." The provision is part of the "Producer Agreements" section that also discusses conservation compliance for Highly Erodible Land and Wetland Conservation. The Farm Service Agency (FSA) and the Natural Resources Conservation Service (NRCS) have primary responsibility for enforcing these requirements. Having to "effectively control noxious weeds" and maintain conservation compliance is a pretty fair tradeoff, in my opinion, for the taxpayer subsidies that cover about 60 percent of the cost of each crop insurance premium.



### **Jacobs-Young Named New ARS-Administrator**

On Feb. 24, Dr. Chavonda Jacobs-Young was named Administrator for the USDA Agricultural Research Service (ARS) by USDA's Chief

Scientist, Dr. Cathy Woteki. Dr. Jacobs-Young recently served as ARS Associate Administrator for National Programs, where she led the Office of National Programs which manages the research objectives of the Agency. Prior to moving into her role at ARS, she served as the Director of the Office of the Chief Scientist at USDA as well serving as the Acting Director for USDA-NIFA.

Dr. Jacobs-Young is a native of Georgia. She holds M.S. and Ph.D. degrees in Wood and Paper Science and a B.S. degree in Pulp and Paper Science and Technology from North Carolina State University. She also is a graduate of American University's Executive Leadership in Public Policy Implementation Program.

### **EPA Seeks Comments on Draft Guidance Documents for Evaluating Spray Drift**

EPA announced the availability of two draft guidance documents for public comment. These documents describe how off-site spray drift will be evaluated for ecological and human health risk assessments for pesticides. The January 29, 2014, Federal Register Notice specifically seeks public input on approaches that include:

## Washington Report - Continued

- a policy for conducting human health risk assessments associated with the potential for exposure from off-site drift during pesticide applications and
- an updated method for estimating environmental exposures associated with spray drift.

The 60-day public comment period will close on March 31, 2014. For details and to submit comments, please go to: <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPP-2013-0676-0001>

### **EPA Seeks Comments on New Worker Protection Standards**

New proposed rules meant to safeguard farm workers from pesticide exposure were announced Feb. 20 by EPA. The proposed regulations are the first updating of its Worker Protection Standard (WPS) in 20 years. Proposed changes to the WPS include:

- Increased frequency of mandatory trainings (from once every five years to annually) to inform farm workers about the protections they are afforded under the law, including restrictions on entering pesticide-treated fields and surrounding areas, decontamination supplies, access to information and use of personal protective equipment. Expanded trainings will include instructions to reduce take-home exposure from pesticides on work clothing and other safety topics.
- Expanded mandatory posting of no-entry signs for the most hazardous pesticides; the signs prohibit entry into pesticide-treated fields until residues decline to a safe level.
- First time-ever minimum age requirement: Children under 16 will be prohibited from handling pesticides, with an exemption for family farms.
- No-entry buffer areas surrounding pesticide-treated fields will protect workers and others from exposure from pesticide overspray and fumes.
- Measures to improve the states' ability to enforce compliance including requiring employers to keep records of application-specific pesticide information as well as farm worker training and early-entry notification for two years.
- Personal Protection Equipment (respirator use)

must be consistent with the Occupational Safety & Health Administration standards for ensuring respirators are providing protection, including fit test, medical evaluation, and training.

- Make available to farm workers or their advocates (including medical personnel) information specific to the pesticide application, including the pesticide label and Safety Data Sheets.
- Additional changes make the rule more practical and easier to comply with for farmers.

Continues the exemptions for family farms. For details and to submit comments, please go to: <http://www.epa.gov/oppfead1/safety/workers/proposed/index.html>

### **Drought Forecasting Program Reauthorized**

The House and Senate expeditiously passed legislation and the President signed into law (P.L. 113-86) a measure that reauthorizes the National Oceanic and Atmospheric Administration's system for monitoring and forecasting droughts nationwide. P.L. 113-86 authorizes \$13.5 million for the National Integrated Drought Information System each year from fiscal 2014 through 2018. The program was authorized at \$16 million in fiscal 2012, which is when its funding expired. The measure specifies which agencies should be consulted for the National Integrated Drought Information System's forecasts. It also would require the system to monitor the effects of droughts, including on water supplies and soil moisture, and to coordinate federal, state, regional, public, private and academic early-warning research.

### **Secretary Vilsack Announces Seven Regional Climate Hubs**

On Feb. 5, USDA Secretary Vilsack announced the creation of the first ever Regional Hubs for Risk Adaptation and Mitigation to Climate Change at seven locations around the country. "Climate Hubs" will address increasing risks such as fires, invasive pests, devastating floods, and crippling droughts on a regional basis, aiming to translate science and research into information to farmers, ranchers, and forest landowners on ways to adapt and adjust their resource management. Vilsack said "USDA's Climate Hubs are part of our broad commitment to developing the next generation of climate solutions, so that our agricultural leaders have the modern technologies and tools they need to adapt and succeed in the face of a changing climate."

## Washington Report - Continued

The Hubs will provide outreach and information to producers on ways to mitigate risks; public education about the risks climate change poses to agriculture, ranchlands and forests; regional climate risk and vulnerability assessments; and centers of climate forecast data and information. They will also link a broad network of partners participating in climate risk adaptation and mitigation, including universities; non-governmental organizations; federal agencies such as the Department of Interior and the National Oceanic and Atmospheric Administration; Native Nations and organizations; state departments of environment and agriculture; research centers; farm groups and more.

The Hubs were chosen through a competitive process among USDA facilities. In addition to the seven Hubs, USDA is designating three Subsidiary Hubs ("Sub Hubs") that will function within the Southeast, Midwest, and Southwest. The Sub Hubs will support the Hub within their region and focus on a narrow and unique set of issues relative to what will be going on in the rest of the Hub. The Southwest Sub Hub, located in Davis, California, will focus on specialty crops and Southwest forests, the Southeast Sub Hub will address issues important to

the Caribbean, and the Midwest Sub Hub will address climate change and Lake State forests.

The following locations have been selected to serve as their region's center of climate change information and outreach to mitigate risks to the agricultural sector:

- **Midwest:** National Laboratory for Agriculture and the Environment, Agricultural Research Service, Ames, Iowa
- Midwest Sub-Hub in Houghton, Mich.
- **Northeast:** Northern Research Station, Forest Service, Durham, N.H.
- **Southeast:** Southern Research Station, Forest Service, Raleigh N.C.
- Southeast Sub-Hub in Rio Piedras, Puerto Rico
- **Northern Plains:** National Resources Center, Agricultural Research Service, Fort Collins, Colo.
- **Southern Plains:** Grazinglands Research Lab, Agricultural Research Service, El Reno, Okla.
- **Pacific Northwest:** Pacific Northwest Research Station, Forest Service, Corvallis, Ore.
- **Southwest:** Rangeland Management Unit/Jornada Experimental Range, Agricultural Research Service, Las Cruces, N.M.
- Southwest Sub-hub in Davis, Calif.

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## Necrology

**Dr. William (Bill) O'Neal** passed away Tuesday, November 12, after a long battle with cancer. Bill was born to a farming family in South Dakota in 1947 and educated at SDSU and Penn State before becoming an outstanding weed scientist. Over the years, Bill worked for Velsicol Chemical, Sandoz Agro, BASF, and most recently AMVAC. His professionalism and contributions to agronomy and weed science were appreciated by all who knew and worked with Bill. Of more importance, Bill will be remembered for his humble nature and kindness to all he met. Bill is survived by his wife Helen, daughters Paula and Tatiana, son Sean, and extended family in South Dakota.

**Dr. Stephen E. Hart** passed away suddenly at his home in East Brunswick, NJ on February 18th. Born April 9, 1964 to Laurence and Clare (Dukehart) Hart in Baltimore, MD, Stephen graduated from Salesianum High School in Wilmington, DE. He went on to earn a Bachelors degree and a Masters degree in Agronomy from the University of Maryland and a Doctoral degree in Weed Science from Michigan State University, specializing in field crops. After graduation, Stephen worked as a Research Biologist in the Herbicide Discovery Group at FMC for several years before joining the faculty at the University of Illinois where he conducted research, taught graduate and undergraduate courses, and assisted farmers in the area of chemical and cultural weed management of agronomic crops. Stephen joined the faculty in the Dept. of Plant Biology and Pathology at Rutgers University in 1999 as an Extension Specialist in Turfgrass and Ornamental Weed Science. He was a mentor to many graduate students, all of whom are now in respected positions in academia and private industry, taught an undergraduate class in Principles of Weed Science for many years, and had extension responsibilities in turf and ornamentals in New Jersey as well as field crops in Delaware.



## People and Places



***Dr. Thomas Peters—North Dakota State University—Extension Sugarbeet Agronomist.***

**Dr. Thomas Peters** accepted a position as Extension Sugarbeet Agronomist, with emphasis on weed control, North Dakota State University and University of Minnesota. Tom will be collaborating with other faculty and staff, the sugarbeet cooperatives and allied industry on a systems approach for controlling weeds in sugarbeet. Tom recently retired from Monsanto after nearly 24 years with the company. Much of his time with Monsanto was in the biotech organization, with the exception of the last four years when he was responsible for regulatory sciences operations. Tom returns to NDSU where he obtained his Ph.D. in agronomy and specializing in weed science under the supervision of Dr. Alan Dexter, longtime NDSU/UM sugarbeet weed specialist.

## Web Pages to Know!

### NCWSS Web Resources

**Visit the NCWSS web page for past newsletters and proceedings**

<b>Web Page</b>	<a href="http://www.ncwss.org/index.php">http://www.ncwss.org/index.php</a>
<b>Proceedings</b>	<a href="http://www.ncwss.org/proceed/NCWSS-2013-Proceedings.pdf">http://www.ncwss.org/proceed/NCWSS-2013-Proceedings.pdf</a>
<b>Meeting Minutes</b>	<a href="http://www.ncwss.org/meeting-minutes.php">http://www.ncwss.org/meeting-minutes.php</a>

### WSSA Web Resources

**Visit the WSSA web page for many weed science resources**

<b>Web Page</b>	<a href="http://www.wssa.net">http://www.wssa.net</a>
<b>Publications</b>	<a href="http://www.wssa.net/publications/">http://www.wssa.net/publications/</a>
<b>Meeting</b>	<a href="http://www.wssa.net/meeting/">http://www.wssa.net/meeting/</a>
<b>Society</b>	<a href="http://wssa.net/society/">http://wssa.net/society/</a>

### EPA Web Resources

**Visit the EPA's web page**

<b>Web Page</b>	<a href="http://www.epa.gov/">http://www.epa.gov/</a>
<b>Pesticides</b>	<a href="http://www2.epa.gov/safepestcontrol/">http://www2.epa.gov/safepestcontrol/</a>