

# NCWSS *News*

North Central Weed Science Society

Volume 17, Number 1, Spring 2000

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*The NCWSS is on the web at:  
[www.ncwss.iastate.edu](http://www.ncwss.iastate.edu)*



North Central  
Weed Science Society

## From Your 2000 President – Jim Kells

It is with great pleasure that I serve as President of the North Central Weed Science Society for 2000. I look forward to the challenges and opportunities that await me in the upcoming year. I am honored to serve in this capacity.

One of the greatest strengths of NCWSS is the willingness of our members to contribute time in support of the Society. I have been very pleased by the number of members that have volunteered to serve on committees for 2000. Every individual that I asked to chair important committees gladly agreed to serve, indicative of the strong support of our members.

In my opinion, the 54<sup>th</sup> annual meeting in Columbus was a success. There were a total of 150 papers and 73 posters presented at the meeting. As always, a highlight of the meeting was the Graduate Paper and Poster Contests. This year there were 46 students in the Paper Contest and 28 students in the Poster Contest. The excellent graduate student presentations continue to set the pace for quality at our meeting.



The web submission procedure for paper and poster titles was extremely successful this year. I would like to express my appreciation to Brent Pringnitz and the Electronic Communications Committee for developing this very efficient mechanism for submitting titles and for creating and maintaining an outstanding web site for the NCWSS.

The theme of the meeting, Weed Science in Transition, was highlighted by two outstanding General Session presentations by Eric Ward (Novartis) and Kriton Hatzios (Virginia Tech). We also had three superb symposia as part of the meeting - Forensic Weed Science, Biology and Management of Weed Banks, and Biotechnology: A Catalyst for Change in Weed Science. These symposia complemented the theme of the meeting and added greatly to the quality and richness of the scientific program.

There are several people who deserve recognition for their service to NCWSS during the past year. Mark Loux and the Columbus Local Arrangements Committee deserve a special thanks for doing an outstanding job with all aspects of the meeting arrangements. A special thanks to Dave Johnson, Frank Forcella, and Tom Peters for serving as organizers for the symposia. The graduate student contests were a success due in large part to the Reid Smeda, Chair of the Paper Contest, and Dave Johnson, Chair of the Poster Contest. I especially want to thank the committee and session chairs for their service to the society. Two officers are

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*President continued from page 1*

retiring from the Board of Directors. Doug Buhler has completed his year as Past President. Merrill Ross and Carol Lembi are retiring as the Editors of the NCWSS Proceedings. Many thanks to Doug, Merrill, and Carol for their dedicated service to NCWSS. The Society remains financially strong. Thanks to Chris Boerboom, Secretary/Treasurer, for managing our investments and to Bob Schmidt for serving as our Executive Secretary and acting as our business manager.

Plans for the 2000 meeting in Kansas City are well underway. The meeting will be held December 11 – 14 at the Hyatt Regency Hotel. Jim Bloomberg and the Kansas City Local Arrangements Committee are working with the hotel to insure an excellent meeting. Duane Rathmann, 2000 Program Chair, is planning the general session and is making arrangements for symposia for the meeting. Mark your calendars now!

The Board of Directors met during the past NCWSS meeting and discussed several matters relative to the Society. The Board discussed the procedure for submitting nominations for the Distinguished Achievement Awards and the Fellow Awards. The Distinguished Achievement Award Committee and the Fellow Committee are working to streamline the nomination procedure.

## From the Editor

The deadlines for submitting items for the next two NCWSS Newsletters are May 15 and September 1. Preferred method of news item submission is by e-mail (michael.j.horak@monsanto.com). Otherwise, contact:

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These changes are being made to encourage nominations for these awards that recognize the contribution of our members. Alan Dexter, Chair of the NCWSS Fellow Committee, and Phil Orwick, Chair of the NCWSS Distinguished Achievement Award Committee, will be actively seeking nominations for these two prestigious awards.

Two new officers were elected to the Board of Directors. Robert Hartzler was elected as the new Editor of the NCWSS Proceedings. Dallas Peterson was elected Vice President.

The North Central Weed Science Society contributes to the financial support of the Weed Science Director of Science Policy (Washington Liaison). WSSA has recently finalized a memorandum of understanding with all the contributing societies regarding this position. The current Director of Science Policy is Robert Hedberg. Dallas Peterson is the NCWSS representative on the WSSA Washington Liaison Committee. He will keep the NCWSS members informed about important activities on “the hill” through the NCWSS Newsletter and on the NCWSS Web Site at <http://www.ncwss.iastate.edu/>. In fact, a Washington Report is now available on the web site.

An important activity of the Society is the North Central Collegiate Weed Science Contest. The 2000 contest will be hosted by Bayer at their West Lafayette station on July 20. Contact Dave Doran (fax 765-385-2043, [dave.doran.b@Bayer.com](mailto:dave.doran.b@Bayer.com)) for details on the contest.

In closing, let me remind you, that you the members are the North Central Weed Science Society. Even during these times of unprecedented change within our discipline, NCWSS remains strong. This strength lies in your dedicated service to NCWSS and the weed science discipline. I encourage all members to continue to actively participate in NCWSS and help the Society to continue to grow and serve your needs as weed scientists.

## Multimedia Projectors at the 2000 Annual Meeting

The Electronic Communications Committee is studying the feasibility of using multimedia computer projectors in selected sessions of the 2000 annual meeting. A brief discussion of this topic was held during general session of the 1999 meeting but more input is needed from the membership.

Please take the time to visit the NCWSS website and complete the on-line survey. The committee is looking for your opinions on equipment, software, and the viability of this option. The committee will report to the board of directors at the July meeting. Watch the newsletter and website for more details. A link to the survey can be found on the website at [www.ncwss.iastate.edu](http://www.ncwss.iastate.edu)

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*Editors note: Phil was unable to attend the annual meeting. Thus we are printing the text of his address.*

## Presidential Address— Phil Orwick

Allow me to also welcome you to Columbus, Ohio and the Hyatt Regency Columbus as we begin the 54<sup>th</sup> meeting of the North Central Weed Science Society. Your Local Arrangement Committee has put in many long hours to make sure that all is in readiness for an outstanding meeting in this exceptional facility. Your Program Committee has assembled an excellent array of papers and posters to keep us all on the cutting edge of our discipline.

Let me begin by thanking all of the members who have spent the extra time necessary for a Society such as ours to function smoothly. This includes all of the officers, committee chairs, committee members, section chairs, and graduate student contest judges. I would like to mention a few people by name, because without them all the details wouldn't have gotten done. Jim Kells, Program Chair and your President-Elect, spent many hours with his favorite computer putting together our program. Mark Loux, Local Arrangements Chair, and his committee are responsible for our outstanding facility and seeing to it that all runs smoothly. I would also like to thank Jim Ladlie for hosting our Summer Weed Science Contest this past July. My thanks also go out to Brent Pringnitz for serving as the Chair of the Electronic Communications Committee and as the Webmaster for our Society's site on the World Wide Web. If you haven't had a chance to visit the site, please do so at your earliest convenience at [www.ncwss.iastate.edu](http://www.ncwss.iastate.edu); Brent has put together a fun and informational site that is packed with great information. Finally, I'd like to thank Bob Schmidt, Executive Secretary. I've enjoyed working with Bob this year and see him as a real asset to the Society.

As I look out upon this audience, I can't help but reflect back to my first North Central Weed Control Conference in 1971. I was fresh out of undergraduate school with a degree in botany and not much knowledge of agriculture let alone weed science. Marv Schreiber at Purdue had taken a chance that he might be able to teach me a thing or two about agriculture in general and weed science in particular. Merrill Ross and Tom Bauman were definitely wondering what Dr. Schreiber was doing. I sought their council on a regular basis and still do so to this day. I thank them. As Doug Buhler stated last year, I too remember my first paper in 1973. I was a little more than apprehensive but I got through it just as many of you graduate students will do in the next few days.

I would now like to speak directly with the graduate students in the audience. It's never too early to become involved with the Society. The Society needs your input. Volunteer for a committee or otherwise let it be known that you'd like to be more of a part of the workings of NCWSS. Now let me speak to everyone in the audience that USED to be a graduate student. I'm guessing that's pretty much everybody else out there! We need you to be involved in the Society too. Jim Kells will be soliciting new committee members for 2000. Let him know you're willing to help. There will also be committee sign-up sheets at the registration desk so you can volunteer in that manner. You can also serve the Society by becoming an officer. This is how you can make a difference in the future of NCWSS. Don't just assume that someone else will run for office. Please let Jim Kells or myself know of your interest.

One of the major accomplishments that your Board of Directors has achieved is the streamlining of the procedure for elections of Fellows of the Society and recipients of the Distinguished Achievement Awards. The Board has significantly reduced the amount of paperwork required for nominations for each of these honors while retaining the requirement for quality information about the nominee. While the quality of our new

Fellows and Distinguished Achievement Awards winners has remained high over the past few years, we have seen the number of nominees go down. I personally want this to now reverse. We have removed the "too much paperwork" excuse so now is the time to plan on YOUR nomination for Fellow or Distinguished Achievement Award winner for 2000. We have many qualified individuals among us deserving of recognition so lets give the Fellows and Distinguished Achievement Award committees plenty of work in 2000.

In keeping with the theme of this meeting, weed science truly is in transition. As you've just heard from our previous speakers, biotechnology will continue to play a major role in how we manage weeds in the future. Will biotech supplant traditional weed control methodology? I personally believe we'll see a balance achieved between biotech and traditional methods. Our symposia on Thursday morning entitled "Biotechnology: A Catalyst for Change in Weed Science" will provide an excellent forum to discuss many of the issues surrounding this important topic.

As we head into the new century, the one constant that will follow us is change. The industry that is a part of weed science continues its consolidation and contraction. Downsizing and mergers seem to be in the news almost on a weekly basis. The question on everyone's mind seems to be "Who's going to merge with whom next?" I certainly don't have the answer for this question and I doubt any of you have it either. Change is never easy; we all want to stay in our comfort zone. But change can offer new opportunities and a chance to grow as a person and as a weed scientist.

Once again, I thank you for the opportunity to serve as your President for 1999. It's been a lot of fun and I've enjoyed working with so many of you throughout the year. As I "transition" from my role as President, I hope to see many more of you as active members of our Society.

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## Resolutions of the NCWSS

**RESOLUTION ON:** Local Arrangement Committee for the 54<sup>th</sup> Annual Meeting.

WHEREAS the North Central Weed Science Society relies upon the effort and diligence of the Local Arrangements Committee for arranging suitable facilities for the annual meeting; and

WHEREAS a well-organized Local Arrangements Committee is crucial to the conduct of a successful annual meeting; and

WHEREAS Chairperson Mark Loux and the other members of the Local Arrangements Committee have fulfilled all their responsibilities in an exemplary manner;

THEREFORE BE IT RESOLVED that the North Central Weed Science Society in session at Columbus, OH, December 13 - 16, 1999 for the 54<sup>th</sup> Annual Meeting commends Mark Loux and the Local Arrangements Committee for their outstanding efforts in providing the Society with the excellent meeting facilities and arrangements.

**RESOLUTION ON:** The North Central Collegiate Weed Science Contest.

WHEREAS the North Central Collegiate Weed Science Contest requires adequate facilities in order to conduct the contest in an orderly and educational manner; and

WHEREAS the facilities at Agri-Growth, Inc. in Hollandale, MN provided an excellent contest environment; and

WHEREAS the Summer Contest Host and staff of Agri-Growth, Inc. in Hollandale, MN met the needs of the Society and had the dedication for a successful North Central Collegiate Weed Science contest;

THEREFORE BE IT RESOLVED that the North Central Weed Science Society in session at Columbus, OH, December 13 - 16, 1999 for the 54<sup>th</sup> Annual Meeting commends Jim Ladlie and the staff of Agri-Growth for their outstanding efforts and hard work in providing the Society with an excellent facility and a well run and educational Weed Science Contest.

**RESOLUTION ON:** Graduate Student paper and Poster Contest Judges for the 54<sup>th</sup> Annual Meeting.

WHEREAS the North Central Weed Science Society relies on the voluntary contribution of time, effort and expertise of its member selected to judge the Graduate Student Paper and Poster Contests; and

WHEREAS the judges selected for the Graduate Student Paper and Poster Contest for the 54<sup>th</sup> Annual Meeting fulfilled their obligations and responsibilities with dedication and commitment.

THEREFORE BE IT RESOLVED that the North Central Weed Science Society in session at Columbus, OH, December 13 - 16, 1999 for the 54<sup>th</sup> Annual Meeting commends the judges of the Graduate Student Paper and Poster Contest for their inputs of time, effort, and cooperation in providing the Society with well run, successful contests at this Annual Meeting.

**RESOLUTION ON:** The Hotel Meeting Facilities for the 54<sup>th</sup> Annual Meeting of the North Central Weed Science Society.

WHEREAS the North Central Weed Science Society requires adequate facilities and lodging in order to conduct the business and program of the Society at the annual meeting; and

WHEREAS the meeting rooms and facilities of the Hyatt Regency of Columbus, OH provided an excellent and spacious meeting environment; and

WHEREAS the staff and management of the Hyatt Regency of Columbus, OH were helpful and cooperative in fulfilling the needs of the society for a successful annual meeting;

THEREFORE BE IT RESOLVED that the North Central Weed Science Society in session at Columbus, OH, December 13 - 16, 1999 for the 54<sup>th</sup> Annual Meeting commends the Hyatt Regency, its staff and management for their outstanding efforts in providing the Society with excellent meeting facilities and arrangements.

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## NCWSS Representatives

### **Peter Sikkema, Ontario**

Peter Sikkema is a College Professor at Ridgetown College, University of Guelph. He conducts research on weed management systems in field corn, sweet corn, edible beans, peas, tomatoes, rutabagas and industrial hemp. Peter teaches courses in Applied Weed Science, Horticultural Weed Science and Crop Diagnostics and Recommendations



*Peter Sikkema*

at the diploma level. Prior to his employment at Ridgetown College, Peter worked for May & Baker Agrochemicals Canada from 1986-1988 as Product Development Manager for Canada and for Union Carbide Agricultural Products Company from 1983-1986 as a Product Development Representative. Peter completed his B.Sc.(Agr) at the University of Guelph in 1981 and his M.Sc. (Weed Physiology) in 1983.

Peter is presently enrolled in a Ph.D. program in Environmental Sciences at the University of Western Ontario in London. Peter and his wife, Angela, have three children. They reside in Ridgetown.

### **Damian Franzenburg, Iowa**

Damian Franzenburg attended Iowa State University from 1986 to 1993 and earned a B.S. in Agronomy and Integrated

Pest Management and a M.S. in Weed Science. In 1993, Damian coordinated field research for an IPM project while a member of the ISU Plant Pathology Department. In 1994,

Damian began serving the ISU Agronomy Department as an Ag Specialist, where he conducts research for the herbicide evaluation program. Damian has enjoyed North Central Weed Science Society membership since 1994.

### **Dr. Abdel O. Mesbah, Wyoming**

Dr. Abdel O. Mesbah is a research scientist at the University of Wyoming, Northwest Research and Extension Center at Powell. He received his B.Sc. Degree in

Animal Science from L'Ecole Nationale D'Agriculture (ENA) of Meknes, Morocco (1982). He obtained an M.S. in Seed Production (1990), and a Ph.D. in Weed Science (1993) from the University of Wyoming. In February 1998, he joined the Department of Plant Sciences at the



*Damian Franzenburg*

University of Wyoming as a weed scientist/agronomist for the northern part of Wyoming. Abdel's research and extension responsibilities include weed control and

management in both transgenic and conventional crops including alfalfa, canola, dry beans, small grain and sugarbeets. Prior to joining the University of Wyoming, Abdel worked as a manager of a station for seed production for the Ministère

de l'Agriculture, Morocco from 1982 to 1987. Abdel has been a member of the Western Society of Weed Science (WSWS) since 1991 and North Central Society of Weed Science (NCSWS) since 1993. He is also a member of the Weed Science

Society of America (WSSA), the Western Society of Crop Science (WSCS) and the American Society of Sugar Beet Technologists (ASSBT).

### **Dain Bruno, North Dakota**

A native of Eastern North Dakota, Dain was raised on a small grain farm. Upon completion of

his undergraduate Crop and Weed Science degree at North Dakota State University, he entered the Weed Science graduate program at NDSU, completing his dissertation in 1997. Since then, Dain has worked as a Research and Development Representative for Novartis Crop Protection and is located in Fargo, ND.



*Abdel O. Mesbah*



*Dain Bruno*

## Distinguished Service Awards

### Research—Robert J. Kremer

Dr. Robert J. Kremer was born in Jefferson City, Missouri. He earned B.S. and M.S. degrees from the University of Missouri and his Ph.D. from Mississippi State University in 1981. Since 1983 he has been a Microbiologist the USDA-Agricultural Research Service in Columbia, Missouri. Dr. Kremer also holds academic appointments in the departments of Agronomy and Soil and Atmospheric Sciences at the University of Missouri. He has established and supervised research aimed at reducing weed infestations by developing new biological control strategies based on attacking seeds and seedlings using microbial and insect agents and integrating these with cultural practices. Through this research he has extended knowledge and theory of weed seed persistence, documented existence of deleterious rhizobacteria on weed seedlings, pioneered the use of tissue culture for rapid screening of rhizobacteria for biocontrol potential, demonstrated that microbial and insect biocontrol agents can be integrated for control of velvetleaf, and the addition of low levels of herbicides with microbial agents can enhance biocontrol activity.

Over his 25 years of research, Dr. Kremer has produced 60 refereed publications, 10 conference proceedings papers, 7 book chapters, 1 book, and 80 abstracts and technical reports covering over 40 presentations at professional meetings. His research has been supported by numerous grants from state and federal agencies. He has worked with 4 postdoctoral fellows, advised or co-advised 13 graduate students, and served on the committees of 35 other graduate students. In addition, he has participated in team teaching a graduate level weed science course.

Dr. Kremer is a nationally and internationally recognized authority in the area of plant-microbe interactions and biological control of weeds as evidenced by invitations to contribute review papers and book chapters, participate and present research findings at symposia and workshops, participate in regional research committees,

and requests for technical assistance and consultation. In addition to biological control of weeds and integrated weed management, he has been sought out and is involved in cooperative research on microbial degradation of pesticides, soil quality, and allelopathy.

Dr. Kremer is active in both NCWSS and the Weed Science Society of America as well as being a member of several other scientific societies. He has served as an associate editor for *Weed Science* as well as numerous committee assignments and received an award for the outstanding paper in *Weed Technology* in 1990. He also serves on the editorial board of *Communications in Soil Science & Plant Analysis*. He has been honored by USDA-ARS on several occasions for outstanding research and outreach activities.

### Service—J. D. Green

Dr. Jonathan David Green (also known as J.D.) was born July 21, 1959 in Honolulu, Hawaii and spent most of his young life in Richmond, Kentucky. He received his B.S. degree in Agriculture and M.S. degree in Crop Science (Weed Science) from the University of Kentucky in 1981 and 1983, respectively, and Ph. D. in Crop Science (Weed Science) from Oklahoma State University in 1986.

Dr. Green joined the faculty at the University of Kentucky where he has been an Extension Weed Control Specialist since 1986. He has developed an Extension program that is well respected throughout Kentucky and the North Central Region. A major focus of Dr. Green's program has involved the development and validation of computerized decision aids to help sort through the complexity of agronomic, environmental, and economic factors that impact weed control decisions. He is currently developing a new program to help address herbicide recommendations in ground and surface water sensitive areas. This is a classic example of taking several years of good research on a very complex issue and putting it in a format that is useful to Kentucky's growers.

During the last two seasons Dr. Green has been evaluating the use of Global Positioning Systems (GPS) and Geographic Information Systems (GIS) for assessing presence of weed species in row crops.

Results of the early testing suggest this survey method is fairly reliable in determining the presence and relative frequency of most weed species and may eventually evolve as a practical method for growers and consultants to use in developing weed maps and weed histories.



*Distinguished Achievement Award Winners (left to right) Chris M. Boerboom, Reid J. Smeda, J.D. Green, Robert J. Kremer, and Thomas R. Hoverstad.*

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Developing strategies for managing perennial dicots in row crops is another area where Dr. Green has focused much attention. Some of his most recent work includes evaluating mechanical control methods in corn and soybeans, using a specialized conservation-tillage cultivator designed for no-tillage agriculture, with and without herbicidal approaches.

Dr. Green has played a key role in coordinating in-service training and other educational programs. He recently initiated the intensive Weed Science Educational Workshop for county extension agents, crop consultants, and agrichemical dealers. As part of this effort, he developed our comprehensive *Weed Science Reference Notebook* that serves as popular desk reference for Kentucky's county extension agents for agriculture and pesticide dealers. A number of groups and organizations seek his counsel and participation in their training programs including those for the Kentucky Certified Crop Advisors (CCA), the Vegetation Management Association of Kentucky (VMAK), and Southern States Cooperative. Because of his reputation in managing perennial dicots, Dr. Green has been invited as a featured speaker and participant outside of Kentucky including the Illinois Agricultural Pesticide Conference, CCA training in Nashville, TN and a soybean production tour of Brazil.

Much of Dr. Green's work has been put into print. At least 20 Extension publications have been authored or co-authored by Dr. Green. He contributed to 25 abstracts or papers for papers presented at the NCWSS, SWSS, and WSSA and authored or co-authored more than 80 newsletter articles, and research reports.

Dr. Green enjoys interacting with students and has served as guest lecturer for several undergraduate courses. He has served on 14 graduate student advisory committees (7 M.S. and 7 Ph.D.). He initiated a graduate level course on weed seedling identification (AGR 697).

Dr. Green has served professional societies in several capacities, both regional and national in scope. During the last ten years J.D. served on nine committees in the

NCWSS, eight in the Southern Weed Science Society, and eight in the WSSA. He had the honor to serve as Kentucky's representative to the NCWSS Board of Directors during 1988 to 1991. Because of his interest in Extension work, J.D. was elected to the NCWSS Board of Directors as Director-at-Large for Extension during 1993. In this capacity J.D. was chairperson for the Extension section and lead discussions during the business session for Extension. He was one of only a few weed scientists that served on the American Society of Agronomy's ARCPACS Board during its initial stages of development; consequently, he played a key role in laying the foundation for developing criteria for certifying weed scientists.

### **Professional Staff— Thomas R. Hoverstad**

Mr. Thomas R. Hoverstad is a native of Red Wing, Minnesota. He earned his B.S. degree from the University of Minnesota and is currently pursuing the M.S. degree at the same institution. He began his professional career in 1982 as a Junior Scientist at the University of Minnesota Southern Experiment Station (now called the Southern Research and Outreach Center) and was promoted to Scientist in 1993. Tom has been a very active participant in planning and conducting research and outreach programs. Each year Tom cooperates with 15 to 20 scientists from the University of Minnesota, USDA-ARS, and universities from other states. He also has developed and maintained a very strong relationship with industry personnel. Because of his reputation as an outstanding researcher, he is flooded with opportunities to conduct research in cooperation with industry scientists. Tom has also been involved with the publication of research results in the form of refereed publications, research reports, and abstracts.

Tom has been a member of the NCWSS since 1983. He has attended 15 annual meetings and presented ten oral papers and three poster papers at those meetings. Tom has authored or co-authored 165 reports published in the *NCWSS*

*Research Report*. He has been a judge for the graduate student paper contest, served on the local arrangements committee for the annual meeting, and assisted with the summer weed science contest when it was held in Minnesota.

Tom plays a key role in many of the major programs of the Southern Research and Outreach Center. He helps plan and conduct field day programs, outreach activities, and workshops. Tom is a frequent and popular speaker at meetings dealing with economics of weed management, control of wild proso millet and woolly cupgrass, and integrated weed management strategies. Growers appreciate Tom's honesty and his concern for their best interests. His knowledge of weed management, crop growth and development, and his practical insights into modern agriculture make him an outstanding teacher and trainer of other professionals.

### **Young Scientist— Chris M. Boerboom**

Dr. Boerboom has been an extension weed scientist (75 percent extension, 25 percent research) at the University of Wisconsin since 1994; he was promoted to associate professor in 1997. From 1989 to 1994, Dr. Boerboom was an extension weed scientist (75 percent extension, 25 percent teaching) at Washington State University. At the University of Wisconsin, Dr. Boerboom's extension responsibilities include assisting Wisconsin growers to adopt environmentally sound weed management systems in field corn, sweet corn, soybean, and green peas. His research program focuses on the impact of management factors on weed population dynamics and weed-crop interactions in corn and soybean cropping systems.

Dr. Boerboom's extension program focuses on providing cutting-edge information on reduced herbicide use, herbicide performance, herbicide-resistant crops and weeds, herbicide injury diagnosis, and weed ecology and biology. Dr. Boerboom has been prolific in terms of extension publications and highly active in terms of extension presentations. He has authored or co-authored more than 40 extension publications

and over 110 newsletter articles. During the previous 10 years, Dr. Boerboom has coordinated and/or presented information and training at more than 325 extension meetings or field events which were attended by a total of over 26,000 individuals. Additionally, Dr. Boerboom has coordinated the certification of over 35,500 individuals via the Pesticide Applicator Training Program in Wisconsin.

Dr. Boerboom's research program is innovative, rigorous, and productive. Dr. Boerboom has authored or co-authored 14 refereed journal papers and has six papers currently in review. He has authored or co-authored 55 conference papers or abstracts and over 50 technical research reports and related publications. Dr. Boerboom has conducted extensive research on the effect of reduced herbicide rates on the survival, productivity, and fecundity of several important weed species. This research has provided important information concerning the long-term risks associated with adoption of reduced herbicide rate strategies and has contributed to a strong scientific basis for formulating comprehensive weed management recommendations in corn and soybean cropping systems.

Dr. Boerboom was one of the first researchers to investigate the performance and profitability of herbicide-resistant crop technologies. Recent research determined the critical time of weed removal in transgenic soybean cropping systems. This research has provided fundamental information about weed-crop competition in soybean, and has identified risks of yield loss associated with weed removal at various stages of soybean growth. Dr. Boerboom has also made important contributions concerning the management of herbicide resistant weeds in the Midwest.

Dr. Boerboom has been an active member in the North Central Weed Science Society (NCWSS) and is currently the Secretary/Treasurer for the NCWSS. He previously served as chair of the Finance, Steering, and Policy Committee, and as Wisconsin Director. He has made numerous presentations at annual NCWSS meetings

including participation in a 1997 symposium that addressed information needs for weed management, as well as a 1998 symposium that addressed management of herbicide-resistant weeds.

### **Young Scientist—Reid J. Smeda**

Dr. Reid Smeda is a native of Brantford, Ontario, Canada. He earned his B.S. and M.S. degrees from Michigan State University and his Ph.D. degree from Purdue University. He began his professional career as a plant physiologist with the U.S. Department of Agriculture, Agricultural Research Service at Stoneville, Mississippi in 1991. He became involved in a number of important projects including herbicide resistance development in weeds, physiology of herbicides, and herbicide fates in the environment. He also cooperated in some of the first research aimed at controlling illicit drug plants with herbicides. Since accepting a weed science faculty position at the University of Missouri, Dr. Smeda has developed research projects centered on weed management with selected herbicides under Midwestern U.S. conditions and on weed suppression using various cover crops. Much of his research is innovative with potential impact on solutions for future weed problems producers may face with current available herbicides and use of transgenic crops.

Dr. Smeda has authored or co-authored over 20 refereed articles on the various aspects of weed research in which he is involved. His expertise in these broad areas has led to several invitations to author or co-author review chapters and to present his work at major scientific conferences. His research accomplishments have been recognized with the Outstanding Research Award presented by the Mississippi Weed Science Society.

He is very active in NCWSS, serving as vice chair of the Education Committee and holding numerous other positions in committees and contest administration. He also serves in similar capacities in WSSA. He is a

dedicated teacher of weed science and is actively involved in student organizations including the graduate weed science team and the undergraduate agronomy club at the University of Missouri.

## **Fellows**

### **Michael Barrett**

Michael Barrett was born March 20, 1951 in Boston, MA. He received his B.S. in Plant and Soil Science from the University of Massachusetts in 1974 graduating Cum Laude. He received his M.S. in Plant Science Agronomy from the University of Connecticut in 1976 and Ph.D. in Botany in 1980 from the University of California.

Dr. Barrett's professional career began with a position as an assistant professor at Michigan State University where he served as the weed science extension specialist. Three years later he moved to the University of Kentucky where he continued his career with a 90 percent research and 10 percent teaching appointment in Weed Science-Plant Physiology. Dr. Barrett maintained an active research program over the years becoming an associate professor in 1989 and a full professor in 1997. The high esteem that his colleagues and administrators hold for Dr. Barrett is evident in his March 1999 appointment as chair of the Department of Agronomy at the University of Kentucky.



*Fellows Award Recipients (left to right) Norman Probst and Michael Barrett.*



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During the past 20 years, Dr. Barrett's outstanding research program has helped to broaden our understanding of herbicide metabolism and selectivity. He is recognized both nationally and internationally for his work on the oxidative metabolism of herbicides and particularly the role of cytochrome P-450 with herbicide interactions.

Dr. Barrett has been invited to present his findings at numerous conferences and symposia including the XIVth International Plant Protection Conference, The 1999 American Chemical Society Meeting, XVI International Botanical Congress, and the Brighton Crop Protection Conference. He has traveled to Israel, France, Greece, Germany, Hungary, and Spain to present his work and to interact with other scientists. He has written eight book chapters, and has coauthored 24 refereed journal articles.

Dr. Barrett also has been active in graduate student education where he and his graduate students have made significant discoveries in the area of herbicide mode of action. Two of his Ph.D. students were selected as "Outstanding Weed Science Graduate Students" by the Weed Science Society of America. Dr. Barrett also has shared his knowledge and understanding of weed science principles through numerous presentations to crop producers, consultants, and other agribusiness professionals.

Dr Barrett has given significant service to the NCWSS and its Membership having served 8 years as Editor of the North Central Weed Science Society's *Annual Research Report*. He also has served on the NCWSS Board of Directors, Executive Committee, and as chair of the Physiology section and Placement committee. In 1989 he served as Local Arrangements Committee Chair for the NCWSS meeting in Lexington, KY. Dr. Barrett has been an active member of the Weed Science Society of America and the Southern Weed Science Society serving on various committees and presenting his work at the annual meetings. He has served as an Associate Editor for the journal *Weed Science*. In 1992 Dr. Barrett was selected for the "Outstanding Young Weed Scientist Award" by the WSSA.

## **Norman J. Probst**

Norman J. Probst was born May 28, 1941 in Mattoon, IL. He graduated from Mattoon High School in 1959 and went on to Southern Illinois University where he received a B.S. degree in Agronomy in 1963 and a M.S. degree in 1965.

Norm began his career as a quality control supervisor with Dekalb Agri Research in Monmouth, IT, and in 1966 joined Monsanto in St. Louis, MO as a crop technologist. In 1968 he became a product development representative for Monsanto in Mankato, MN where he conducted field research and provided technical support for the market introduction of Lasso herbicide and worked on the initial product development for glyphosate and acetochlor.

In 1973 Mr. Probst returned to St. Louis to become a regional manager for product development. In this position he supervised product development representatives, provided technical direction, and guided the market introductions of numerous products. While in this position he prepared the economic benefit assessment package for the EPA Special Review of Alachlor in 1984. In 1986 he became a manager of marketing technical services and served in that position until 1996 when he was made technical manager for Roundup Ready Corn where he presently develops weed control programs and guidelines for the labeling of glyphosate tolerant corn.

Norm has made a significant contribution to the development of a number of technologies that have revolutionized production agriculture. Norm contributed to the characterization and adoption of alachlor for control of annual grass and small seeded broadleaves in corn and soybean during the 1960s, 1970s and 1980s.

Significant contributions included the introduction of alachlor to customers that for the most part, had previously relied on cultural and mechanical weed control, the development of tank mix systems with atrazine for broad spectrum weed control in corn and the development of herbicide incorporation techniques appropriate for acetanilide herbicides.

Norm and his colleagues were responsible for the development of encapsulation technology during the 1980s. Encapsulation technology was originally developed to reduce our dependency on oil during the energy crisis. However, it was discovered that encapsulation offered benefits to the grower in reduced tillage and no-tillage systems in corn and soybean.

Norm also contributed to the characterization and commercialization of glyphosate. Early focus was control of perennial weeds including quackgrass and Canada thistle in the Midwest. However, in the 1990s, glyphosate was repositioned for the annual burndown market in corn, soybean and non-crop areas.

Norm has been extremely adaptable to changes in the discipline of weed science. This has resulted in a focus away from traditional herbicide development to biotechnology at Monsanto. At age 55 and after 28 years at Monsanto, Norm began a new career in biotechnology at Monsanto. Norm's responsibilities as Roundup Ready corn technical manager include corn safety assessment of hybrids that contain the Roundup Ready gene and the development of a weed control system around RR corn.

Norm has been an active and dedicated member of the NCWSS since 1968 and a regular attendee of the annual meeting. He has co-authored several presentations for NCWSS meetings. Norm also has willingly served the society when called upon. Most recently he was a member or the Local Arrangements Committee for the 1996 NCWSS meeting in St. Louis.

Norm has been an outstanding mentor and role model for hundreds of weed scientists at Monsanto who have gleaned knowledge from Norm and then have taken on other responsibilities within Monsanto, in academia or in agricultural industry. He is considered a team player and selfless in his efforts. Norm is considered exceptionally productive, has demonstrated excellence in research management of people and products, and has provided a sustained contribution to Monsanto Company, the NCWSS and the agricultural community for more than 30 years.

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## North Central Weed Science Society, Inc. – 2000 Officers

### President

James J. Kells  
Department of Crop and Soil Sciences  
Michigan State University  
468 Plant and Soil Science Building  
East Lansing, MI 48824  
kells@msu.edu

### President-Elect

Duane P. Rathmann  
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Waseca, MN 56093-3625  
duane\_rathmann@py.cyanamid.com

### Vice President

Dallas E. Peterson  
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dpeterso@oz.oznet.ksu.edu

### Secretary/Treasurer

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### Editor, NCWSS Proceedings

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### Editor, NCWSS Newsletter

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### Editor, NCWSS Research Report

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Ohio State University  
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Columbus, OH 43210  
harrison.9@osu.edu

### CAST Representative

Thomas J. Peters  
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St. Louis, MO 63167  
tjpete@monsanto.com

### Past President

Philip L. Orwick  
8848 Mountain Ash Court  
Carmel, IN 46033  
Plorwick@aol.com

### Executive Secretary

Robert A. Schmidt  
1508 West University Avenue  
Champaign, IL 61821-3133  
raschwssa@aol.com

## NCWSS Elects New Vice President

Dallas Peterson grew up on a diversified crop and livestock farm in north central Kansas and received his B.S. and M.S. degrees from Kansas State University. He completed his Ph.D. degree at North Dakota State University and served as an extension weed specialist in North Dakota from 1987 through 1989. Dallas currently serves as a professor and extension weed specialist at Kansas State University with statewide responsibilities for applied research and public education related to weed management in soybeans, small grains, and forages. Dallas has been an active member of the NCWSS since 1981, co-authoring numerous papers and serving on several committees. He also served as the NCWSS representative on the WSSA Board of Directors from 1995 through 1998.



2000 Officers (left to right) Bob Hartzler, Dallas Peterson, Chris Boerboom, Jim Kells, Michael Horak, Duane Rathman, Kent Harrison, Bryan Young, Bob Schmidt, and Thomas Peters.



*Keith Smith welcomes members to the general session.*



*Jim Kells opens the general session.*



*Kriton Hatzios speaks to the general session.*



*The passing of the gavel from Douglas Bubler to Jim Kells.*



*NCWSS members listen intently at the general session.*



*Enjoying the banquet meal.*

## Highlights of the 1999 NCWSS General Session and Meeting

The 54<sup>th</sup> meeting of the North Central Weed Science Society was held in Columbus, OH at the Hyatt Regency on December 13 -16, 1999. The theme of the meeting was "Weed Science in Transition". Approximately 600 weed scientists from the North Central Region and other areas of the world attended the meeting.

Dr. Keith Smith, Director, Ohio State University Extension welcomed the attendees to Columbus. Eric Ward, Co-President, Novartis Agribusiness, presented his vision of "Weed Science in an Era of Biotechnology" while Dr. Kriton Hatzios, Director for the Virginia Agricultural Experiment Station and Associate Dean for Research spoke on the same topic from the university perspective. President Phil Orwick was unable to preside at the meeting so the text of his presidential address is included elsewhere in the newsletter.

Highlights of the meeting included excellent symposia, the graduate student contests and the awards banquet.



*Eric Ward addresses the general session.*



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# 2000 Committee Appointments

## A. Standing Committees

### 1. NCWSS Board

#### Board of Directors

James J. Kells, President (517/355-2173, kells@msu.edu)

Duane P. Rathmann, President-Elect (507/835-2580, duane\_rathmann@py.cyanamid.com)

Dallas Peterson, Vice President (785/532-5776, dpetero@oznet.ksu.edu)

Chris Boerboom, Secretary-Treasurer (608/262-1392, boerboom@facstaff.wisc.edu)

Robert G. Hartzler, Editor, Proceedings (515/294-1923, hartzler@iastate.edu)

Michael J. Horak, Editor, Newsletter (314/694-3476, michael.j.horak@monsanto.com)

Bryan G. Young, Editor, Research Report (618/453-2496, bgyoung@siu.edu)

Kent Harrison, WSSA Representative (614/292-8468, harrison.9@osu.edu)

Thomas J. Peters, CAST Representative (314/694-2647, tjpete@monsanto.com)

Philip L. Orwick, Past President (317/848-2818, plorwick@aol.com)

Robert A. Schmidt, Executive Secretary (217/352-4212, raschwssa@aol.com)

#### Directors

Colorado - Jeffery Coultas (515/223-5710) (2000)  
Illinois - Aaron Hager (217/333-4424) (2002)  
Indiana - Michael Hickman (765/494-4448) (2000)  
Iowa - Damian Franzenburg (515/294-5358) (2002)  
Kansas - John Fenderson (316/825-4379) (2001)  
Kentucky - James Martin (502/365-7541) (2000)  
Michigan - John Kaufmann (517/349-7084) (2001)  
Minnesota - Fritz Breitenbach (507/280-2870) (2002)  
Missouri - Gerald Gogan (816/459-6018) (2000)  
Nebraska - Duane Ebke (402/332-5528) (2001)  
North Dakota - Dain Bruns (701/293-9412) (2002)  
Ohio - Paul Sprankle (614/794-0096) (2001)  
Oklahoma - Aithel McMahon (405/223-3505) (2000)  
Ontario - Peter Sikkema (519/674-1603) (2002)  
South Dakota - David Vos (605/688-5100) (2000)  
Wisconsin - Richard Proost (608/262-7743) (2001)  
Wyoming - Abdel Mesbah (307/766-5184) (2002)

### Directors at Large

Extension - Ron Krausz (618/566-4761)

Graduate Students - Chad Lee (517/353-8714)

Industry - David Nicolai (651/451-4996)

Regulatory and Crop Consultants - Sue Bellman (608/883-6990)

Research and Publications - Julie Young (618/684-8256)

Resident Education - Reid Smeda (573/882-2002)

### 2. Constitution and Operating Procedures Committee

Chris Boerboom, Chair (608/262-1392, boerboom@facstaff.wisc.edu)

John M. Fenderson, Vice Chair

Gary Kilgore (1999)

Adrian Moses (2002)

Robert Schmidt, Ex Officio

Jim Kells, Ex Officio

### 3. Finance, Steering, and Policy Committee

Chris Boerboom, Chair (608/262-1392, boerboom@facstaff.wisc.edu)

Jim Kells (2000)

Phil Stahlman (2001)

Dirk Drost (2002)

Reid Smeda (2002)

Robert Schmidt, Ex Officio

### 4. NCWSS Fellow Committee

Alan Dexter, Chair (701/231-8131, adexter@ndsuxext.nodak.edu)

Bill Witt, Vice Chair

Brent Petersen, Past Chair

Tom Bauman (2000)

Gary Fellows (2000)

Ted Warfield (2000)

Steve Miller (2001)

John Kaufmann (2002)

Robert Kremer (2002)

### 5. Legislative Information Committee

Dallas Peterson, Chair (785/532-5776, dpetero@oznet.ksu.edu)

Duane Rathmann, Past Chair

George Czapar

Don Null

Jamie Retzinger

Rodney Schultz

Bernard Zandstra

Washington Liaison, Ex Officio

### 6. Local Arrangements Committee

#### 2000 - Kansas City, MO

##### Hyatt Regency Kansas City

Jim Bloomberg, Chair (816/242-2268, jim.bloomberg.b@bayer.com)

Dwight Mosier

Kassim Al-Khatib

Craig Nichols

Brent Philbrook

Adrian Moses

Jim Olson

David Austin

Patrick Geier

Larry Thompson

Bill Johnson

Kathy Maret

Jerry Doll

Duane Rathmann, Ex Officio (507/835-2580, duane\_rathmann@py.cyanamid.com)

### 7. Career Placement Committee

Steve Valenti, Chair (605/334-3350, valentis@pt.cyanamid.com)

Henry McLean, Vice Chair

Bob Hartzler, Past Chair

Richard Proost (2000)

Mark Dahmer (2000)

Sara Allen (2001)

Eric Spandl (2002)

### 8. Membership Committee

Bryce Nelson, Chair (507/325-2540, bnelson@wolf.co.net)

Jamie Retzinger, Vice Chair

Gary Fellows, Past Chair

Ken Carlson (2001)

Patrick Geier (2001)

Bill Ahrens (2002)

Peter Sikkema (2002)

James Stewart (2002)

### 9. Nominating Committee

Dave Johnson, Chair (651/699-0173, johnsondh@pt.cyanamid.com)

Charles Slack, Vice Chair

Ed Stoller, Past Chair

Steve Busse (2000)

Jerry Doll (2000)

Loyd Wax (2000)

Mark Loux (2002)

David Nicolai (2002)

### 10. Extension Committee

Ron Krausz, Chair (618/566-4761, rkrausz@siu.edu)

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Christy Sprague, Vice Chair  
Aaron Hager, Past Chair  
Richard Zollinger (2000)  
Bill Johnson (2001)  
Micheal Owen, (2001)  
Case Medlin (2002)  
Steve Siegelin (2002)

### **11. Program Committee**

Duane Rathmann, Chair (507/835-2580,  
duane\_rathmann@py.cyanamid.com)  
Jim Bloomberg, Local Arrangements  
Dallas Peterson, Vice President  
Chris Boerboom, Secretary/Treasurer  
Ron Krauz, Extension  
Chad Lee, Graduate Students  
David Nicolai, Industry  
Sue Bellman, Regulatory and Crop  
Consultants  
Julie Young, Research and Publications  
Reid Smeda, Resident Education  
Jim Kells, Ex Officio.

### **12. Publicity and Public Relations Committee**

Dallas Peterson, Vice President, Co-Chair  
(785/532-5776,  
dpeterso@oznet.ksu.edu)  
Jim Bloomberg, Local Arrangements, Co-Chair  
(816/242-2268)  
Duane Rathmann, Past Chair

### **13. Resolutions and Necrology Committee**

Richard Proost, Chair (608/262-7845,  
rproost@facstaff.wisc.edu)  
Richard Zollinger, Vice Chair  
Gail Wicks, Past Chair

### **14. Distinguished Achievement Award Committee**

Phil Orwick, Chair (317/848-1767,  
plorwick@aol.com)  
Jim Kells, Vice Chair  
Doug Buhler, Past Chair  
Jeff Gunsolus (2000)  
Micheal Owen (2000)  
Bill Johnson (2001)  
Steve Weller (2001)  
Joe Bruce (2002)  
Randall Currie (2002)

## **B. NCWSS Special Interest Groups**

### **1. Industry**

David Nicolai, Chair (651/451-4966,  
dnico@cnxlol.com)  
James Olson, Vice Chair  
Brent Petersen, Past Chair

### **2. Regulatory and Crop Consultants**

Sue Bellman, Chair (608/883-6990)  
Dave Bennett, Vice Chair  
Jon Baldock, Past Chair

### **3. Research and Publications**

Julie Young, Chair (618/684-8256,  
julieyoung@valent.com)  
Matt Foes, Vice Chair  
Michele Obermeier, Past Chair

### **4. Resident Education**

Reid Smeda, Chair (573/882-2002,  
smedar@missouri.edu)  
Dave Johnson, First Vice Chair  
Kassim Al-Khatib, Second Vice Chair  
Randy Lloyd, Past Chair

### **5. Graduate Students**

Chad Lee, Chair 517/353-8714,  
leechad@msu.edu)  
Erin Chadbourne, First Vice Chair  
Darren Barker, Second Vice Chair  
Krishona Bjork, Past Chair

## **C. Sectional Program Chairs**

### **1. General Program**

Duane Rathmann, Chair (507/835-2580,  
duane\_rathmann@py.cyanamid.com)

### **2. Poster Session**

Patrick Tranel, Chair (217/333-1531,  
tranel@uiuc.edu)  
Dave Johnson, Vice Chair  
Rick Bottoms, Past Chair

### **3. Corn and Sorghum**

Shane Taylor, Chair (812/876-3967,  
shane.taylor@agna.zeneca.com)  
Terry Wright, Vice Chair

### **4. Cereals and Oilseeds**

Patrick Geier, Chair (785/625-3425,  
pgeier@oz.oznet.ksu.edu)  
Daine Bruns, Vice Chair

### **5. Forage and Range**

Gary Kilgore, Chair (316/431-1530,  
gkilgore@oznet.ksu.edu)  
Ken Carlson, Vice Chair

### **6. Industrial, Forestry, Turf, and Aquatics**

Arvon Glazer, Chair (913/897-7378,  
glaz7277@aol.com)  
James Olson, Vice Chair

### **7. Equipment and Application Methods**

John Fenderson, Chair (316/825-4379,  
john.m.fenderson@stl.monsanto)

### **8. Soybeans and Annual Legumes**

Peter Porpiglia, Chair (914/682-8934,  
porpiglia@aol.com)  
Jamie Retzinger, Vice Chair

### **9. Herbicide Physiology**

Mark Dahmer, Chair (319/377-5260,  
dahmerm@msn.com)  
Kassim Al-Khatib, Vice Chair

### **10. Weed Ecology and Biology**

Stevan Knezevic, Chair (402/584-2080,  
sknezevic2@unl.edu)  
Anita Diehlman, Vice Chair

### **11. Soil and Environmental Aspects**

Michael Hickman, Chair (317/494-4448,  
hickman@btpy.purdue.edu)  
Jennifer Simmons, Vice Chair

### **12. Sugarbeets, Horticulture, and Ornamentals**

Doug Doohan, Chair (902/893-6554,  
ddoohan@cadadmin.nsac.ns.ca)

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## Paper contest winners:

### **Corn and Sorghum:**

**1st place:** *Herbicide loss in surface water runoff.* Ryan J. Rector, Dave Regehr, and Phil Barnes, Kansas State University.

**2nd place (tie):** *Effect of corn population and row spacing on weed growth and corn yield in glufosinate-resistant corn.* Brent E. Tharp and James J. Kells, Michigan State University.

**2nd place (tie):** *Relevance of sub-field soil variation on plant fitness using isoxaflutole.* Martin M. Williams II, David A. Mortensen, Alex R. Martin, and David B. Marx, University of Nebraska.



*Student Papers Winners-Corn: Ryan Rector, Brent Thorp and Martin Williams*

### **Soybeans and Annual Legumes; Industrial, Forestry, Turf, Aquatic; Forage and Range; and Extension (combined sections):**

**1st place:** *Influence of environmental conditions on dry edible bean tolerance to dimethenamid and metolachlor.* Kyle W. Poling and Karen A. Renner, Michigan State University.

**2nd place (tie):** *Interaction of POST herbicides with iron chlorosis on soybean.* John H. O'Barr, Richard K. Zollinger, and David W. Franzen, North Dakota State University.

**2nd place (tie):** *Extending alfalfa stand longevity with over-seeded, cool-season grasses and integrated pest management.* D. Chad Cummings, Jim F. Stritzke, and Richard C. Berberet, Oklahoma State University.



*Student Papers Winners-Soybeans: Kyle Poling, John O'Barr and Chad Cummings*

### **Weed Ecology and Biology:**

**1st place:** *Gene flow, growth, and competitiveness of imazethapyr-resistant common sunflower.* Michael W. Marshall and Kassim Al-Khatib, Kansas State University.

**2nd place:** *Species circumscriptions of common and tall waterbemp.* Donald B. Pratt and Michael D. K. Owen, Iowa State University.



*Student Paper Winners-Weed Ecology and Biology: Donald Pratt and Michael Marchall*

### **Soil and Environmental Aspects; Sugarbeets, Horticulture, and Ornamentals; and Herbicide Physiology (combined sections):**

**1st place:** *Glyphosate efficacy as affected by varying time of day applications.* Aaron L. Waltz, John L. Lindquist, Alex R. Martin, and Fred W. Roeth, University of Nebraska.

**2nd place:** *Effect of ammonium sulfate on glyphosate absorption and translocation in common lambsquarters and velvetleaf.* Andrew W. Knepp and L.M. Wax, University of Illinois and USDA-ARS, Urbana, and Stephen E. Hart, Rutgers University, New Brunswick, NJ.



*Student Papers Winners-Other: Aaron Waltz and Andy Knepp*

## Poster contest winners:

### **Soybeans and Annual Legumes:**

**1st place:** *Glufosinate efficacy on pigweeds (*Amaranthus* spp.) in glufosinate-tolerant soybeans.* Elme Coetzer, Kassim Al-Khatib, and Dallas E. Peterson, Kansas State University.

**2nd place:** *Postemergence herbicides affect soybean development and incidence of white mold.* Kelly A. Nelson and Karen A. Renner, Michigan State University.



*Student Poster Winners-Soybean: Kelly Nelson and Elme Coetzer.*

### **Herbicide Physiology and Weed Ecology and Biology (combined sections):**

**1st place:** *Characterization of herbicide metabolism by a heterologously expressed cytochrome P450 from corn.* Jennifer L. Ralston, Sergei A. Avdiushko, Ann M. Freytag, Sharon Potter, Eric Ward, and Michael Barrett. University of Kentucky.

**2nd place (tie):** *Sulfosulfuron metabolism by grass species as affected by temperature and soil moisture.* Brian L. S. Olson, Kassim Al-Khatib, Phillip W. Stahlman, and Paul J. Jackson, Kansas State University.

**2nd place (tie):** *Measuring light interception by Palmer amaranth in soybean.* Curtis N. Bensch, Steven M. Welch, Michael J. Horak, and Dallas E. Peterson, Kansas State University.



*Student Poster Winners-Herbicide Physiology and Weed Ecology and Biology: Curtis Bensch, Brian Olson and Jennifer Ralston.*

### **Corn and Sorghum; Sugarbeets, Horticulture, and Ornamentals; Equipment and Application Methods; Extension; and Soil and Environmental Aspects (combined sections):**

**1st place:** *Circadian rhythmicity in the efficacy of glyphosate and glufosinate to velvetleaf under field and controlled environmental conditions.* Krishona L. Bjork, Beverly R. Durgan, Jeffrey L. Gunsolus, and Willard L. Koukkari, University of Minnesota.

**2nd place:** *Optimizing burndown activity with sulfentrazone on three annual weeds.* Jeremy T. Dirks and William G. Johnson, University of Missouri.



*Student Poster Winners-Corn and Sorghum: Krishona Bjork and Jeremy Dirks*

## The 1999 NCWSS Collegiate Weed Science Contest and Graduate Student Paper and Poster Contests.

The Collegiate Weed Science Contest was held at Agri-Growth, Inc. in Hollandale, MN. There were 94 contestants from 12 universities involved in the competition. Individuals and teams competed in four areas of weed science; sprayer calibration, weed identification, identification of unknown herbicides based upon plant symptomology, and problem solving with recommendations.

The paper and poster competitions provide valuable experience to graduate students in presenting research results. This year there were 46 contestants in the paper contest and 28 participants in the poster contests. The contests are part of every North Central Meeting. The presentations consistently set the standards for the way we communicate research results. We acknowledge all the student participants and the contest judges for their time and effort associated with the contest.

*(Editors note: Photos of the summer contest winners were not available).*

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# 1999 NCCWSS AWARDS

## Field Sprayer Calibration (Team Award)

1<sup>st</sup> Place Mindy DeVries Iowa State University  
Dustin Gleason  
Brent Hofmeyer  
Chad Johnson

## Unknown Herbicide (Individual Award)

1<sup>st</sup> Place Kelly Nelson Michigan State University  
2<sup>nd</sup> Place Jess Spotanski University of Nebraska  
3<sup>rd</sup> Place Nathan Kemp Michigan State University

## Written Sprayer Calibration (Individual Award)

1<sup>st</sup> Place Jess Spotanski University of Nebraska

## Weed Identification (Individual Award)

1<sup>st</sup> Place Joel Roehl North Dakota State University

## Problem Solving (Individual Award)

1<sup>st</sup> Place (Tie) Jeremy Dirks University of Missouri  
Lynn Frandrich Colorado State University

## Overall Graduate Individual

1<sup>st</sup> Place Jess Spotanski University of Nebraska  
2<sup>nd</sup> Place Brent Tharp Michigan State University  
3<sup>rd</sup> Place Kelly Nelson Michigan State University

## Overall Undergraduate Individual

1<sup>st</sup> Place Shalome Jaquish University of WI - Platteville  
2<sup>nd</sup> Place Chad Johnson Iowa State University  
3<sup>rd</sup> Place (Tie) Gabe Tarr University of Illinois  
Stacy McKaufsky University of Illinois

## Overall Graduate Team

1<sup>st</sup> Place Brent Tharp Michigan State University  
Kelly Nelson  
Chad Lee  
Nathan Kemp  
2<sup>nd</sup> Place Adam Anderson University of Illinois  
Chad Kalaher  
Andy Knepp  
Dan Parker  
3<sup>rd</sup> Place Mike Bertram University of IW Madison  
David Fischer  
Mike Moeching  
Mike Particka

## Overall Undergraduate Team

1<sup>st</sup> Place Shalome Jaquish University of WI - Platteville  
Jacob Bonnet  
Bobby Leifker  
Karyl Rosengren  
2<sup>nd</sup> Place Gabe Tarr University of Illinois  
Stacy McKaufsky  
Kurt Maertens  
Tyson Walters  
3<sup>rd</sup> Place Chad Johnson Iowa State University  
Mindy DeVries  
Brent Hofmeyer  
Dustin Gleason

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## Resolution and Necrology Committee

The committee received notification of five deaths of longtime friends associated with the North Central Weed Science Society. Our thoughts and prayers are extended to the families of Dr. W. Eugene Arnold, Dr. Lyle A. Derscheid, Dr. Charley Edward Rieck, Dr. Dennis D. Warnes, and Dr. George Frederick Warren. These weed scientists have served the NCWSS well during their illustrious careers.

**W. Eugene Arnold.** Gene died August 25, 1999 at Brookings, SD. Gene was born August 12, 1943, in Grand Prairie, TX. He received his bachelor's degree from Oklahoma State University in 1965 and his Ph.D. from North Dakota State University. Following graduation he was employed by South Dakota State University where he taught graduate and undergraduate classes and conducted research in plant and weed science. His research activities involved field bindweed, downy brome control in established

alfalfa, effect of dicamba drift on soybean, and weed control in field crops. From 1988 to 1999, Gene served as the Associate dean and Director of Academic Programs for the College of Agriculture and Biological Services.

He married Sharon Kay Johnson June 24, 1967. Gene and Sharon had two children, son Deron of Sioux Falls, SD, and daughter Dawn Mason of Winona, MN. Gene always put his family first. He was an active member of his church, and president of his Rotary Club.

**Lyle A. Derscheid.** Lyle passed away November 25, 1999 at Brookings, SD. Lyle was born December 14, 1916 in Kingsbury County, SD. He received his degree in Agronomy in 1943. During World War II, he served as a lieutenant in the 12 Armored Division in Europe where he was wounded twice in 1945. After 13 months in



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the hospital, he enrolled as a graduate student in Agronomy at South Dakota State College. Lyle received his M.S. degree South Dakota State College in 1947 and was appointed as the project leader of the weed research project. He obtained his Ph.D. degree in Agronomy from Iowa State University in 1951. Lyle continued as the leader of the weed science research program at South Dakota State College for many years. In later years, he was the project leader of the Agronomy Extension Specialists, Extension Coordinator, and Pasture and Crop Specialist. Lyle was known widely for his work on the effects of 2,4-D on barley and oat, and on controlling perennial weeds in field crops with the three C's: cultivation, competitive crops, and chemicals. We now call this integrated weed management. He worked extensively with Canada thistle, field bindweed, leafy spurge, and Russian knapweed. He was the President of the North Central Weed Control Conference in 1958, a charter member of the WSSA, and received honorary membership in NCWCC in 1976. He was active in many civic and community activities. Lyle was known for his quick wit and his fantastic memory.

He married "Bonnie" Gustafson September 8, 1940. They had one daughter Karen Rykhuis of Lapeer, MI, and two sons Gary of Phoenix, AZ, and Craig of DeKalb, IL. Following retirement, his hobbies were horses, genealogy, and South Dakota historical events. Lyle built a contastoga wagon for his horses to pull across eastern South Dakota to celebrate the centennial in 1989.

**Charley Edward Rieck.** Charley died June 11, 1999. He was born January 15, 1942. He received his B.S. and M.S. degrees in Agronomy from Oklahoma State University and Ph.D. in Weed Science from University of Nebraska. Charley's professional career began as an assistant professor at Clemson University. He was a member of the faculty of the Department of Agronomy at the University

of Kentucky during 1971 to 1980. Charley worked on soil degradation of herbicides, response of corn inbreds to selected thiocarbamates herbicides and seed protectants, effect of temperature and moisture on metribuzin injury to soybean, soil dissipation of herbicides, no-till renovation of forages with herbicides, the dissipation of atrazine as related to soil pH and tillage, weed control in field crops, and studied specific control of specific weeds such as cocklebur and johnsongrass. Since then he taught at Cameron University, farmed, and was a consultant. Survivors include his wife Linda of Fletcher, OK; son Brett of Kansas City, KS; stepson, David Faries of Monte Vista, CO; and stepdaughter Stephanie Hall of Elgin, OK.

**Dennis D. Warnes.** Dennis passed away during the fall of 1999. Dennis was born June 14, 1933 near Stephen, MN. He received his B.S. degree in 1955 from North Dakota State University, and M.S. from the University of Minnesota and Ph.D. degree from the University of Nebraska in 1969. He was the Research Agronomist at the University of Minnesota's West Central Experiment Station at Morris, MN for 26 years. Dennis worked on controlling purple loosestrife and wild oat and weed control in alfalfa, corn, soybean, and spring wheat. He was also interested in cultural practices in controlling weeds and reducing erosion. Two practices he studied were establishment of alfalfa using oat as a cover crop and using winter rye cover crop for erosion and weed control in soybean production. Dennis was a frequent contributor to the NCWSS Research Report and Proceedings.

Dennis married Evelyn Torkelson August 18, 1956. He is survived by his wife Evelyn of Morris, MN; sons Daniel of Waconia, MN; Timothy of Shoreview, MN, and Peter of Robbinsdale, MN.

**George Frederick Warren.** Fred died July 18, 1999 at West Lafayette, IN. Fred was born September 23, 1913 in Ithaca, NY. He received his B.S. degree in 1935 and became the District County Agent working with vegetables at the University of Maine from 1935 to 1938. Then he was a Research Assistant at Cornell University until 1942. He served in the U.S. Air Corps from 1942 to 1944. Fred received his Ph.D. degree in agriculture from Cornell University in 1945. He was an assistant professor at the University of Wisconsin from 1945 to 1949. He joined the Department of Horticulture at Purdue University in 1949 and retired in 1979. Fred's research dealt with the fate of herbicides, basis of herbicide selective action, herbicide combinations, and weed control practices in vegetable crops. Fred was a past president of WSSA. He was a charter member of WSSA and received honorary membership into NCWCC in 1970. Fred and Ann faithfully attended almost every NCWSS and WSSA meeting after his retirement. During his retirement he developed and taught the popular shortcourse on herbicide action at Purdue University for 14 years. His hobbies included traveling, camping, hiking, photography, and growing hybrid tea roses.

Fred married Ann Fusek July 30, 1944. He is survived by his wife Ann of West Lafayette, IN; sons Stephen of Seattle, WA and William of Ithaca, NY; and daughter Virginia Loconsolo of Guerneville, CA.

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## CAST Continues to Support Weed Science Initiatives

*Tom Peters*

Tell me again what CAST does? The Council for Agriculture Science and Technology (CAST) is a resource for national and international decision makers. Agricultural policy-makers increasingly invite CAST to provide testimony on key issues and to review reports from the National Academy of Sciences, National Research Council and Federal agencies. These CAST services have influenced the direction and speed of Congressional decisions and actions on important issues. CAST publications on topics of national importance also have significant impact.

CAST representatives testified, served as host or co-host to briefings or work-

shops and developed issue papers or reports of importance to NCWSS members in 1999 and 2000. The North Central Weed Science Society has representation on the CAST board of directors. My role is to represent weed scientists and to support initiatives that add value for the weed science discipline. This is done mainly through the development of reports or issue papers on topics that advance in the public interest the understanding and use of the science and technology for the production, processing and utilization of food and fiber.

Anyone can recommend subjects on which scientists and technologists can provide credible information. Please follow the directions that are found on the

website (<http://www.cast-science.org>), or contact your CAST representative.

I attend two CAST meetings per year. From these meetings, I summarize all activities that have relevance to weed scientists. This information is posted on the NCWSS website, (<http://www.ncwss.iastate.edu>).

CAST offers individual memberships including student rates for those that are interested in receiving NewsCAST, issue papers and reports.

CAST can be contacted by telephone (515-292-2125), fax (515-292-4512), email ([cast@cast-science.org](mailto:cast@cast-science.org)), web (<http://www.cast-science.org>), or via NCWSS representative Tom Peters (314-694-2647), fax (314-694-2811, email ([tjpete@monsanto.com](mailto:tjpete@monsanto.com))).

## The R. Gordon Harvey Weed Science Distinguished Graduate Fellowship Campaign

Since 1970, leadership in Weed Science at the University of Wisconsin has been provided by Dr. Robert Gordon Harvey. His entire career has focused on the needs of Wisconsin's agricultural community and he has conducted extensive field trials in all our major agronomic crops and the processing crops of peas, sweet corn and drybeans. Gordon is particularly gifted in sensing and researching the next level of questions a new weeding practice, technology or system may bring. Many of his discoveries are published in 100 scientific journal articles he has authored and coauthored. His research program has gained the highest respect of regional and national peers and Wisconsin's agricultural professionals and producers.

Dr. Harvey's research has provided a dynamic, synergistic environment for advising more than 43 graduate students, who have continued his legacy at other universities and in the agricultural industry. Dr. Harvey has also influenced nearly 2300 UW undergraduate students who have taken his weed management courses since 1970.

Gordon's contributions to weed science are being cut short as he was diagnosed with ALS (Lou Gehrig's Disease) at age 52 in 1998. To ensure that our strong tradition of weed science research and training in Wisconsin continues, we are creating the R. Gordon Harvey Weed Science Distinguished Graduate Fellowship to provide support for a graduate student. This initiative is part of the Wisconsin Distinguished Graduate Fellowship Program of the Wisconsin Alumni Research Foundation which will

match gift funds dollar for dollar so that your support doubles in value.

Your gift will be an investment in maintaining agricultural productivity and environmental protection through sustained weed science research. You will also help provide a lasting tribute to a dynamic researcher and wonderful friend - Professor R. Gordon Harvey.

You may send a contribution payable to the UW Foundation-R.G. Harvey Fellowship to the Univ. of Wis. Foundation, 1848 University Ave., PO Box 8860, Madison, WI 53708-8860. To have your donation billed to your credit card, FAX the card number, card type (MasterCard, Visa, etc.), the expiration date, the cardholder's name and your signature to 608-263-0781. All contributions are deductible for tax purposes.

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# Minutes from the Herbicide Resistance Action Committee

## November 15, 1999

By Jamie Retzinger, Secretary

The technical representatives from the main herbicide-producing Companies form the industry-led Herbicide Resistance Action Committee (HRAC) met in Brighton, UK. The purpose of this working group is to establish more effective communications to alert all people involved in the research, production, marketing, registration and use of herbicides to the potential problems of herbicide resistance and how it can be prevented/managed.

The HRAC web page (<http://www.plantprotection.org/HRAC/>) has been recently updated to include the following publications: Role of Industry in Resistance Management, Weed Resistance Guidelines, in 2000 an updated HRAC Herbicide Classification containing the new herbicides introduced at the Brighton conference, a publication authored by Dr. Stephen Moss, "Detecting Herbicide Resistance", "Financial Risk of Resistance" by James Orson. A color poster on "The World of Herbicides" which groups herbicides by location in the plant and site of action". This poster will be put on the web page in early 2000 and have color copies available for order in 2000.

There are direct links to Ian Heap's Weed Resistance Survey, a HRAC supported project, along with hot links to the Fungicide Resistance Action Committee, Insecticide Resistance Action Committee, Global Crop Protection Federation and the Plant Pathology Internet guidebook. Ian Heap maintains a listing of confirmed resistant weeds from around the world, 232 as of 11/15/99 (<http://weedsience.com>). Soon to be added will be the ability to search by: resistant species by country, degree of infestation by species, species by herbicide. Hot links will be added from Ian's site to HRAC publications.

Dale Shaner, HRAC Chairman, presented a paper on "Effectiveness of mode of action labeling for resistance management: a survey of Australian farmers" at the Brighton conference. A copy of the paper is available from the HRAC web site.

Guidelines for research proposals dealing with resistance management can be found on the HRAC web site.

Dr. Max Landes, BASF was voted the new Chairperson for HRAC.

The European Herbicide Resistance Working Group Report reported the inclusion of new members from Poland, Hungary, and the Czech Republic. *Papaver rhoeas* (poppy) has been found that is resistant to the ALS, hormone and both herbicide groups in Spain. In Greece, and Italy *Papaver* resistance has been confirmed to both 2,4-D, sulfonyleureas (SU's) and imazethapyr but not to other IMI's.

In Saudi Arabia, *Lolium rigidum* resistance in cereals is an increasing problem with *Lolium* resistant to trifluralin, pendamethalin, chlorotoluron and isoproturon soil applied. Variable control, ranging from good to poor depending on the population was achieved with clodinafop, diclofop-methyl, tralkoxydim, and flurtamone.

Mexican HRAC sponsored an International Seminar on Herbicide Resistant Weeds in Guanajuato, Gto. March 5-7, 1999. Trials and demo plots having problems with *Phalaris* resistant to herbicides in wheat was viewed by 200 weed control specialists.

The group has translated the following reprints in Spanish:

- Classification of Herbicides According to Mode of Action
- HRAC Guidelines - How to Minimize Resistance and How to Respond to Cases of Suspected and Confirmed Resistance.

The North American Herbicide Resistance Working Group conducted an e-mail exchange of information as the fall meeting was postponed to December 16-17.

1. The following information has been shared on any new confirmed and suspected cases of resistant weeds in the US and Canada. 1- Group 22(D) 1- Group 4 (O) 9- Group 2 (B) Seven new species the rest just additional locations.
  - a. Paraquat tolerant/resistant goosegrass in Florida
  - b. Suspected ALS resistant shattercane (*Sorghum bicolor*) in Missouri
  - c. Group 4 (synthetic auxin) resistant hemp nettle (*Galeopsis tetrahit*) western Canada
  - d. ALS resistant ball mustard (*Neslia paniculata*) western Canada
  - e. ALS resistant green foxtail (*Setaria viridis*), giant foxtail (*Setaria faberi*) in Wisconsin and Illinois.
  - f. ALS (FIRSTRATE & SPIRIT) resistant ragweed (*Ambrosia* sp) in Indiana, Ohio and Iowa.

- g. ALS-IMI resistant NIGHTSHADE black nightshade (*Solanum nigrum*) and Eastern Black nightshade (*Solanum phycanthum*) in Minnesota, Wisconsin and North Dakota
- h. North Dakota : ALS (not SU) resistant redroot pigweed (*Amaranthus retroflexus*) North Dakota
- i. ALS (both IMI and SU) waterhemp pigweed (*Amaranthus rudis*) North Dakota
- j. ALS (both IMI and SU) wild mustard, (*Sinapis arvensis*), - North Dakota
- k. ALS resistant downy brome (*Bromus tectorum*) in Oregon.

New business will include a discussion on the gene movement in herbicide tolerant crops

- a. In Canada there are confirmed reports of gene infiltration between Roundup Ready (glyphosate) and Liberty Link (glufosinate ammonium) canola (*Brassica napus* L). fields, creating crop volunteers with stacked genes (double resistance). This has created some problems in controlling volunteers, particularly with organic growers and no-till growers who routinely apply Roundup as a pre-seeding burn-off. First season field surveys have been completed. Monitoring for out crossing from *Brassica napus* to wild mustard (*Sinapis arvensis*), dog mustard, (*Erucastrum gallium*) and *Brassica rapa* is being monitored. No cases of out crossing have been reported to date.
  - b. Roundup Ready spring wheat registration is pending in Canada and discussions in managing herbicide tolerant (HT) volunteers and gene flow to weedy species.
  - c. The development of Roundup Ready, IMI, and SU resistant cultivated sunflower in North Dakota.
  - d. In Oregon ROUNDUP READY bentgrass and Kentucky bluegrass have raised some interesting questions for the Willemette Valley of Oregon. This area produces grass for use on golf courses and for turf. These perennial species outcross with native and naturalized relatives, and are weedy in their own right.
  - e. Update on the continuing studies on gene flow between wheat and jointed goatgrass. More hybrids are being found under field conditions than have previously been reported and selfing BC1 plants in greenhouse studies.

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## **Bayer Welcomes the 2000 North Central Collegiate Weed Science Contest.**

### **Volunteer or Register Now!**

Located at their West Lafayette Station, Indiana, Bayer is pleased to sponsor the 2000 North Central Weed Science Contest. This years event will be held on Thursday, July 20<sup>th</sup>. The contest will include weed identification, sprayer calibration, unknown herbicide identification, and problem solving. For additional details and registration information contact Dave Doran (fax 765-385-2043, [dave.doran.b@Bayer.com](mailto:dave.doran.b@Bayer.com)). Anyone interested in volunteering help with the contest should contact Dave. See the NCWSS web page for complete contest details.

## **Dielman Joins K-State**

Dr. Anita Dieleman has recently joined the faculty at Kansas State University in the Department of Agronomy to conduct a research and teaching program in weed ecology.

Anita grew up on a cash-crop family farm in southwestern Ontario. She received her B.S. and M.S. degrees at the University of Guelph and her Ph.D. at the University of Nebraska.

Anita's research efforts have focused on integrated weed management and the population dynamics and spatial distribution of weeds in field crops. Dr. Dieleman most recently served as coordinator of the WeedSoft regionalization project at the University of Nebraska. Anita will be teaching the beginning weed science course and an advanced weed ecology class at Kansas State.

## **New Address for Weed Science Director of Science Policy**

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