NCWSS • News

North Central Weed Science Society

Volume 23, Number 3, Fall 2007

www.ncwss.org

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North Central Weed Science Society



Meet Me in St. Louis! 62nd Annual NCWSS Meeting.

The 62nd annual conference of the North Central Weed Science Society will be held in St. Louis on December 10 through 13, 2007. Bill Johnson, your 2007 Program Chair is putting together an excellent program for the meeting. The Hyatt Regency at Union Station in St. Louis is an excellent facility for our meeting. It is located near business, financial and sports venues as well as cultural and tourist attractions. If you have time during the meeting, consider a tour of the Anheuser-Busch Brewery or take in a Blues Hockey game on Tuesday, December 11.

Plan now to attend the NCWSS annual meeting at the Hyatt Regency St. Louis, One St. Louis Union Station, St. Louis, MO 63103.

To reserve your room at the Hyatt Regency St. Louis: call 800-233-1234 (or direct at 314-923-3970), mail in your reservation form or go online to www.stlouis.hyatt.com and enter your dates of stay and in the Group/Corporate# enter G-NCWS. Please make your reservation prior to November 10 in order to receive our guaranteed single room rate of \$97.00 / night.

If you have questions or comments about the meeting contact the local arrangements chairman, Greg Elmore (greg.a.elmore@monsanto.com or 314-694-4379). To schedule meals please contact Sue Rick (susan.k.rick@usadupont.com or 618-939-0263). Contact Ronald Krausz at rhrausz@siu.edu for information about sustaining membership displays or poster set up.

We look forward to seeing you in St. Louis!

Hotel Directions

To the Hotel from Lambert Airport:

(Approximately 20-30 Minutes)

A. 70 East. Exit Memorial Drive East. Turn right at the 3rd light (Market Street). Stay on Market Street until 18th Street. We are on the left hand side.

To Lambert Airport from the Hotel:

(Approximately 20-30 Minutes)

B. Take Market Street East toward the river (Downtown). Turn left on 4th street. Right on Chestnut. Left on Memorial to 70 West to Airport.

To Hotel via 70 East: Same as Airport

directions $\underline{\mathbf{A}}$.

To Hotel via 44 East: <u>Exit Jefferson</u>. Turn

left at the light. Turn right at Market Street,

five blocks on right hand side.

To Hotel via 55 North: Exit Memorial Drive.

Turn left on Market Street (two blocks). Follow Market Street to 18th Street. We are on the left hand side.

To Hotel via 55 South, 64 West, 40 West or 70 West: Stay in the left hand lane under I-64 signs (while on bridge). Once across the bridge, follow I-64 West for one mile. Exit Market at 21st Street. Turn right at the light (Market). We are three blocks on the right.

Parking Options

Valet: (Available at Market Street) \$6.00 per car—Up to Three Hours \$9.00 per car — Three to Six Hours \$24.00 per car—Over Six & Up to 24 Hours **Self:** (Available at 18th & 20th Streets) \$1.00 per car—Per Half Hour for Up to Ten Hours \$14.00 per car—Ten to Sixteen Hours \$16.00 per car—Over Sixteen &Up to 24 Hours **Lost Ticket - \$16.00 per car**

Transportation to & from Airport

Metrolink (www.bi-state.org):

From Airport to Hyatt: \$3.50 From Hyatt to Airport: \$1.75

Running Time: M-F 5:00am-1:00am

Sat 5:00am-2:00am

Sun 5:30am-midnight

Phone: 314-231-2345

Good for single travelers, with minimal luggage

TransExpress Shuttle (www.transexpressstl.com):

One Way: \$16.00 Round Trip: \$27.00

Running Time: From Hyatt to air port:

5:50am-6:10pm

(Please call 4 hours prior for evening transfers) Runs every 20 minutes from airport to downtown Reservation Hours: 6:00am-10:00pm / 7 days a

week

Phone: 314-427-3311 (Please call if pickup is

needed to the airport after 6:30pm)

A Few Notes From the Program Chair - Bill Johnson

The NCWSS program is shaping up nicely and will hopefully offer topics to many diverse interests. During our general session on Tuesday, we will have two speakers addressing the current situation in biofuels, Dr. James Fischer from the U.S. Department of Energy and Dr. John Bonner from CAST. We hope to gain some insight on how the biofuel situation will impact crop production and weed management. Secondly, our meeting is being held in conjunction with the 3rd Biennel Gene Flow Meeting. We will be offering symposia on the science and art of wildlife habitat restoration, and effective communication methods. More details on the Gene Flow meeting and the two symposia can be found in this newsletter and on specific web pages devoted to these symposia at NCWSS.org. Third, we will have the always informative "What's New in Industry" session on Tuesday afternoon, just prior to the industry mixer on Tuesday evening. For a glimpse of the structure of the entire program, see page 4. We hope to have the final printed copy of the program mailed out by mid November.

Also, a reminder to the oral paper presenters and section chairs that the presentations need to be sent to the section chairs by **December 3, 2007**. Please consult the printed copy of the program that you will receive in the mail to determine your section and section chair. Also, please consult the directions in this newsletter and the NCWSS web site on how to prepare your Powerpoint presentations before sending them to the section chair. The section chairs and their contact information are shown below.

Agronomic Crops I (Cereals, Sugar Beets, Dry Beans)

Mike Edwards - 303-280-3830 or michael.t.edwards@usa.dupont.com

Agronomic Crops II (Corn, Sorghum)

Tony Dobbels - 614-403-3237 or dobbels.1@osu.edu

Agronomic Crops III (Soybeans, Legumes, Forage and Range)

Jeff Bunting - 309-557-6315 or jbunting@growmark.com

Extension

Kevin Bradley - 573-882-4039 or bradleyke@missouri.edu

Herbicide Physiology

Dean Volenberg – 920-746-2260 or dean.volenberg@ces.uwex.edu

Invasive Weeds, Forage, and RangelandMarc Renz - (608)263-7437 or mrenz@wisc.edu

Horticulture and Ornamentals

Darren Robinson - 519-674-1604 or drobinson@ridgetownc.uoguelph.ca

Weed Biology, Ecology and Management Ed Luschei Chair 608-263-7436 or ecluschei@wisc.edu

All North Central Weed Science Society committees will convene during our conference so be sure and check the schedule to see when and where your group will meet. The committee meetings are open to all members so please review the program and attend the meetings that interest you. Each session of our conference will have a business meeting at the conclusion of the session to elect a vice-chair and conduct any business pertinent to their area. The facilities in St. Louis are excellent and Greg Elmore and his local arrangements team have kept in close contact with the hotel to insure things run smoothly. Please plan to attend the meeting as it should offer a topic of interest and value to everyone.

NCWSS

The NCWSS Tri-annual Newsletter is edited by Harlene Hatterman-Valenti arranged by Glenn Nice and filled by the Membership of the NCWSS

If you have content that you would like to submit to the NCWSS Newsletter, please send articles to the editor.

NCWSS 62nd Annual Meeting Condensed Program (tentative) - Bill Johnson

Monday (Dec. 10)	Tuesday (Dec. 11)	Wednesday (Dec. 12)	Thursday (Dec. 13)
PM: - LAC 11-12 AM room - Program Committee meeting 12:00 - 1:00 pm - Board meeting 1:00-5:00 - Committee meetings - Poster/Display setup after 5:00 - Grad student mixer 5:00 pm	AM: - Posters session I and displays 8:00-4:30 (authors present 8:00 to 10:00 AM) - NCWSS General session 10:00-12:00 PM: - What's new in Industry? 3:00-5:00 pm - Weed biology, ecology, and management 1:00-4:45 pm - Agronomic Crops I (Cereals, Sugar Beets, Dry Beans) 1:00-4:45 pm - Herbicide Physiology 1:00-2:15 pm - Social 5:00-7:00	- Poster session II and displays 8:00 - 4:30 (authors present 8:00 to 9:30 AM) - Horticulture and Ornamentals 9:30 - 2:45 pm - Gene flow meeting (10:00 start, all day) - Wildlife habit restoration symposium (10:00 start, all day) - Agronomics Crops III (Soybeans, Legumes, Forage and Range) 9:30 - 11:45 - Agronomic Crops II (Corn & Sorghum) 9:30 - 3:30 pm PM: - Gene flow meeting cont - Wildlife habitat restoration cont Extension 1:00-4:45 pm - Social 5:30 Banquet 6:45 - Board meeting 8:30-11:00	AM: - Industry Breakfast 7:30 - Communication symposia (all AM) - Gene flow meeting cont (AM) - Invasive weeds volunteer papers 8:00 - 9:45 - Local Arrangements Committee Meeting 2006 + 2007 11:30

A Word from Your President - Adrian Moses

The "North Central" winds are starting to blow and it is a welcome change in most parts of the NCWSS from the temperatures, floods and droughts of this summer. We cover a lot of territory in the NCWSS and it was obvious from the drastic difference of weather in our region.

Our summer weed science contest at Bennett Agriculture Research near Fairfield, IA was a great time and the NCWSS and students received some TV media coverage too. Not only were the efforts of Bennett's and staff outstanding, so was your effort to provide funding, judges and coordinators for the event. Congratulations and thanks go to many volunteers and to the efforts of the Bennett's family, Tate Castillo, Anita Dille, and John Hinz, (to name a few). The Volunteer coordination and planning of committees such as "Education," "Contest Subcommittee," "Industry," Bennett Ag, and our "Industry Financial Contributors" went a long way to achieve a first class event for future weed scientists. The students not only received awards at the contest and banquet but some meetings with future professors and employers. Our society is thankful and proud of the efforts of all involved in putting together this educational meeting.

The Executive Committee meeting also took place in Fairfield, IA and received plans from the Contest committees and Industry. Bill Johnson, Mick Holm, Christy Sprague, Bob Hartzler, Anita Dille, Karen Renner, Robert Schmidt and myself represented you and spent a majority of the time planning the NCWSS future and the annual meeting in St. Louis, MO.

Summer is winding down and the NCWSS annual meeting activities are picking up, except for Bill Johnson and the Local Arrangements committee who has been working all summer long on preparing for the meeting. Bill has made some planning changes for the St. Louis meeting that will allow you an enjoyable and informative meeting. These include paper and poster submissions, section chair responsibility changes, registration and symposia. Bill has provided a preview and update for you in this newsletter.

Please take some time to go over your NCWSS responsibilities and keep providing the suggestions to make our organization worthwhile and strong. I look forward to visiting with you all in St. Louis.

Annual Meeting Registration and Presentation Changes

Online Payment:

Online pre-registration will be available again this year through Pay Pal, an affiliate of Ebay. You will also be able to update your membership information online. Some of you may have already used the early registration online payment system. For those of you who have not used the system I invite you to do so.

When you hit the link to go to the payment system from the meeting information page you will be taken to a member registration page. This page is essentially the online equivalent to the early registration form you used to fill out. Please take a moment to fill out this information for membership records. Once this form is completed and you have pressed the "submit" button you will get a confirmation page showing the information you entered and a link to continue on to the purchase page.

On the purchase page, when you select "Member early registration" or "industry breakfast," you will be sent to a shopping cart. This page gives you the option of either paying for what is in your shopping cart or continuing to shop. Each item added to your cart will show in your updated cart.

Once you are ready to check out, view the items in your cart or proceed to check out. The shopping cart and the secured check out is handled by Pay Pal. Pay Pal uses a 128-bit encryption key to protect the information collected in the purchase process. The NCWSS does not see or store your credit card information.

If you have any questions or problems with the process please contact Glenn Nice at your convenience.

Oral Paper Presenters:

This year, the multimedia room and the local arrangement's room shall be in the same room (to be announced in the program). Remember you need to email your presentation directly to your respective section chair one week before the annual conference. Please consult the printed program, which will be mailed to you later this fall to see where your presentation was placed in the program and who the section **chair is for that section.** After receiving your presentation, the section chair should send a confirmation note to you that they received the presentation. If you do not receive a confirmation, please contact the section chair by phone. See the "Annual Meeting" page at <u>www.ncwss.org</u> for contact information of your section chair.

In your last minute preparations, please keep the following points in mind:

- 1. All presentations must be in Microsoft Powerpoint (PC compatible). Macintosh/Apple formats will not be supported.
- 2. Most large corporations and universities have filters which prevent the transfer of files larger than 5 MB. So please limit presentation file size to 5 MB or less. Video clips are discouraged. If you need to use a video clip or your presentation is larger than 5 MB please contact your section chair

On behalf of the Electronic Communications Committee and the Program Committee, we thank you in advance for adhering to these instructions. If you have any questions or concerns, please feel free to contact Glenn Nice or Bill Johnson. Have a safe trip to the meeting!!

Judges are needed!

Judges are needed for the Graduate Student Poster and Paper Contest at the North Central Weed Science Society meeting. Anyone interested, please contact John Hinz (Poster) at: john.hinz@bayercropscience.com, (515) 733-9250 or Jess Spotanski (Paper) at jess_spotanski@mainstaycomm.net, (402) 643-3709.



The purpose of the meeting is to bring together academia, industry, government, and other interested scientists to discuss recent and ongoing research on topics related to gene flow from transgenic plants. The meeting will focus on: 1) within-species gene flow; 2) hybridization and gene introgression between transgenic plants and their sexually compatible relatives; 3) consequences of gene flow from transgenic and non-transgenic plants; 4) approaches to managing gene flow; and 5) modeling gene flow. Research papers and posters on transgenic plant species of agronomic, horticulture, forestry, and bio-fuels will be presented.

Periodic updates: To receive periodic information concerning the meeting program, registration, and submission deadlines, please send a request to mi-chael.j.horak@monsanto.com. The meeting web page is http://www.ncwss.org/meeting/2007/GeneFlow.htm (active mid-July)

Tentative Program:

The 11/2 - 2 day program will consist of:

- Invited papers
- Volunteer posters
- Discussion times

Organizing Committee:

Michael Horak, Chair. Monsanto Company (michael.j.horak@monsanto.com; 314-694-3476.

David Gealy, USDA, (<u>dgealy@spa.ars.usda.gov</u>)
Hector Quemada, Crop Technology, Inc.
(<u>hdquemada@croptechnology.com</u>)
Allison Snow, Ohio State Univ. (<u>snow.1@osu.edu</u>)

Neal Stewart, Univ. of Tennessee

(nealstewart@utk.edu)

Mork Westgete Love State Univ.

Mark Westgate, Iowa State Univ., (westgate@iastate.edu)



Please mark your calendars for an important meeting on Invasive Plants in the Midwest.

The North Central Weed Science Society (NCWSS) will sponsor a one day program (Dec. 12, 2007) on managing invasive plants during wildlife habitat restoration and improvement in the Midwest. The program will be held during the 62nd NCWSS Annual Meeting at the Hyatt Regency Hotel in St. Louis, Missouri, Dec. 10-13, 2007.

The full-day symposium will focus on the science and art of wildlife habitat restoration and improvement. The symposium will be an exciting venue where a diverse group of academics, consultants, and land management professionals to discuss invasive plant biology, ecology, and management and highlight what weed scientists and the weed science discipline can offer to increase efficiency of restoration programs. The program will include invited presenta-

tions and contributed papers and posters. Among the topics presented will be management of invasive algae, impacts of invasive plants on wildlife habitat quality, value of wildlife as an alternative source of revenue for farmers and ranchers, wildlife habitat im-

provement with case studies provided by Quail Unlimited, National Wild Turkey Federation, Quality Deer Habitat, industry panel to discuss herbicide and application technologies in habitat improvement programs.

For more information on the conference, please visit the NCWSS website at www.ncwss.org. Additional information on speakers and workshop topics will be announced in the next few weeks and posted on the NCWSS website. We believe we've put together a great program and encourage everyone interested in invasive plants in the Midwest to attend.

For Further Information Contact:

Mark Renz, University of Wisconsin, mrenz@wisc.edu
Bob Masters, Dow AgroSciences, ramasters@dow.com
Jerry Doll , Professor Emeritus, University of Wisconsin – Madison, jddoll@wisc.edu



When you grow up, assuming you will someday, do you want to be a researcher, teacher, or a technical service or extension specialist in agriculture? Would you like to work in academia, industry, or with a regulatory agency? Success in any chosen career path will depend on effective communication skills. Even if you think you're communication skills are polished, there is always room to grow, adapt, and further hone your communication skills. Not only must we develop and hone our abilities to communicate, the methods and technologies used to communicate continually evolve. This year at the North Central Weed Science Society meeting in St. Louis, MO, you're in luck. You are invited to attend a professional development symposium devoted to developing communication skills. The purpose of this symposium is to provide education and advice on how to effectively prepare and present weed science information to a variety of specific audiences. It will be held on the morning of Thursday, December 14th. Presentations from an excellent line-up of speakers will begin at 9:00 and conclude at noon following 20 minutes of open panel discussion with the speakers. The morning promises to be interactive, fun, and educational.

Invited presenters include **Chuck Zimmerman** from ZimmComm New Media, LLC. Chuck is an expert at using new communication tools such as blogging and podcasting, and you can check out his handy work at www.agwired.com. His presentation will be interactive while demonstrating the technologies used to get information delivered to the world fast. **Kent Harrison**

from The Ohio State University has served on the Editorial Boards of Weed Science and Phytoprotection for a combined 19 years and is currently an Associate Editor for both journals. Kent will address meeting the reader's needs through scientific writing. Karen Renner from Michigan State University will offer guidance about preparing and presenting oral papers to a scientific audience. Christy **Sprague.** also from Michigan State University, has been actively involved in judging graduate and undergraduate posters including service on the resident education committee for our society. She will

discuss the keys to successfully crafting the perfect poster. **Bryan Young** from Southern Illinois University will educate us on presentations targeting the certified crop adviser audience. Bryan has served on the board for the Illinois Certified Crop Adviser program since 1998. He annually delivers 25 or more presentations on weed management to practitioners and is frequently invited to speak out of state at CCA conferences. We didn't forget the importance of delivering a message directly to agriculture producers, and this will be discussed by Fred Whitford. Fred is the coordinator of Purdue Pesticide Program of the Purdue Cooperative Extension Service and has delivered over 2500 presentations to a wide array of audiences. If you dream extension service, don't miss this one. And last but not least, learn some tricks about communicating with the media before your misquote becomes the quote of a lifetime. **Steve Leer** from Purdue University Agriculture Communications Department will offer education and helpful advice for interviewing with the media.

Improving our abilities to communicate is critical to all of us. If it wasn't important to deliver a message clearly, some marketing genius wouldn't have coined the phrase "Can you hear me now?". As you think about the upcoming annual meeting, please plan to stay until the end of the conference on Thursday December 14th and attend this communication development symposium. See you there. – Vince Davis, Purdue University

People and Places Weed Science

Graduations:

Mark R. Jeschke

Ph.D. in Agronomy, August 2007, University of Wisconsin-Madison

Advisor: Dave Stoltenberg

Thesis: Weed Community Responses to Cropping System Factors in Glyphosate-

Resistant Corn and Soybean

Current Position: Senior Research Agronomist, Pioneer, Johnston, IA

"The People and Places Weed Science" is a place to announce graduations, meetings, courses, and anything else Weed Science.

Science Policy Update: July 20, 2007 Lee Van Wychen

National and Regional Weed Science Societies

WEEDS/INVASIVE PLANT LEGISATION IN THE 110th CONGRESS

H.R. 658 / S. 241 – Natural Resource Protection Cooperative Agreement Act

This bill would authorize the Secretary of the Interior to enter into cooperative agreements to protect natural resources of units of the National Park System through collaborative efforts on land inside and outside of units of the National Park System.

This was one of three NIWAW positions that we advocated for in February. The House bill is sponsored by Rep Jon Porter from Nevada. H.R. 658 passed the House on March 19 by a vote of 390-10.

The Senate version, S.241, was introduced by Sen. Ron Wyden, Oregon. On June 26, 2007, the Senate Committee on Energy and Natural Resources, chaired by Sen. Bingaman (NM) reported this bill without amendment after a favorable report from the Department of Interior and the Congressional Budget Office (Senate report 110-105). This bill is awaiting action on the Senate Legislative Calendar and has a very good chance to be signed into law by President Bush by this fall.

S. 1160 - Specialty Crops Competition Act of 2007 introduced by Sen. Debbie Stabenow (MI) on April 19 with 18 co-sponsors. This bill establishes an invasive pest threat identification and mitigation program (including noxious weeds) authorized at \$40 million per year. It would implement an integrated pest management initiative and amend the Homeland Security Act of 2002 to restore import and entry agricultural inspection functions to USDA Animal and Plant Health Inspection Service (APHIS).

S. 1242 - A bill to amend the Federal Crop Insurance Act and 2002 Farm Bill to establish a biofuel pilot program to offer crop insurance to producers of experimental biofuel crops. Introduced by Sen. Jon Tester (MT) on April 26. This bill defines the terms and conditions for an "experimental biofuel crop" to include a determination by USDA demonstrating that there are sufficient safeguards to prevent the spread of the crop as a noxious weed

H.R. 1600 - Equitable Agriculture Today for a Healthy America Act introduced by Rep. Dennis Cardoza (CA) on March 20 and now has 115 co-sponsors. This bill includes many similar provisions as in S. 1160 above as well as a section titled "Invasive Pests and Diseases". It authorizes \$50 million per year for an "Early Pest Detection and Surveillance Improvement Program". However, they define "pest" according to the legal definition given "plant pest" in the Plant Protection Act (7 U.S.C. 7702(14)) – just a few lines of text below the

definition for "noxious weed". For the record, the legal term 'plant pest' means any living stage of any of the following that can directly or indirectly injure, cause damage to, or cause disease in any plant or plant product: (A) A protozoan; (B) A nonhuman animal; (C) A parasitic plant; (D) A bacterium; (E) A fungus; (F) A virus or viroid; (G) An infectious agent or other pathogen; (H) Any article similar to or allied with any of the articles specified in the preceding subparagraphs.

H.R. 620 - Rep. Olver (MA), S. 280 - Sen. Lieberman (CT), and S. 317 - Sen. Feinstein (CA) -

Three related bills with a goal to reduce greenhouse gas emissions in the U.S. by establishing a market-driven system of greenhouse gas tradeable allowances. Sen. Feinstein's bill, S. 317, is more specific than the other two bills and is the only one to mention invasive species and noxious weeds. Invasive species in S. 317 is defined as a species (including pathogens, seeds, spores, or any other biological material relating to a species) introduction of which causes or is likely to cause economic or environmental harm or harm to human health. In Sen. Feinstein's bill, greenhouse gas reductions projects from agricultural, forestry, wetlands, and other land use-related sequestration projects may only receive offset credits if native plant materials are given primary consideration and Federal- or State-designated noxious weeds or use of a species listed by a regional or State invasive plant councils within the applicable region or State are prohibited.

S. 725 - National Aquatic Invasive Species Act of **2007** introduced by Sen. Carl Levin (MI) on March 1. This bill would amend the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 to establish aquatic invasive species reduction and prevention requirements for vessels (including towed vessels and structures) operating in U.S. waters. Some of the main priorities listed in S. 725 include: Requires the National Invasive Species Council (NISC) to establish a federal rapid response team for each of the ten federal regions: Directs the Aquatic Nuisance Species Task Force (ANSTF) to establish a priority pathway management program that identifies those pathways that pose the highest risk for the introduction of aquatic invasive species; and requires the National Science Foundation (NSF) to establish a grant program for researchers at institutions of higher education and museums to carry out research in systematics and taxonomy. The bill would cost about \$150 million per year if the authorized funding was fully appropriated.

2007 FARM BILL

Last night (July 19), the House Agriculture Committee passed their version of the 2007 Farm Bill. Over the last 3 days, they managed to get through over 100 amendments in committee. Next stop is for consideration and

amendments on the House Floor. Even if the House passes their version of the Farm Bill before August recess, the Senate is not likely to get to it until September. That being said, the "big hitters" driving the Farm Bill want to see the current 2002 Farm Bill extended as is. There is a high probability that the current 2002 Farm Bill will be extended given the pending 2008 Presidential election, the Doha Round of WTO talks, and of course the influence from the "big hitters". However, 2008 election politics may drive the passage of the next Farm Bill given the swing votes at stake between the Democrats and Republicans and the level of interest in this bill from the highest levels (Pelosi, Reid, Johanns).

The Research Title in the 2007 Farm Bill is a potpourri of the various proposals (The Administration, CREATE-21 and NIFA) that have been introduced up to this point. The bad news is that there is no mention of doubling agricultural research funding. This was a primary goal of the CREATE-21 and NIFA proposals. However, the good news is that the House version of the Farm Bill proposal adopted the Administration's proposal that includes \$50 million per year for the agricultural bioenergy and biobased products research initiative and \$100 million per year for the specialty crops research initiative. Unlike the Administration's or the CREATE-21 proposal, there would be no merger of the Research Education and Economics Agencies (CSREES, ARS, ERS or FS R&D) in the House Farm Bill proposal.

The National Agricultural Research, Extension, Education, and Economics (NAREEE) Advisory Board would be retained as the principal vehicle for stakeholder input, while also adding the Agricultural Research Institute concept being championed in the CREATE-21 proposal. In the House Farm Bill proposal, the Agricultural Research Institute will coordinate the programs and activities of the research agencies through the following six institutes:

Renewable energy, resources, and environment Food safety, nutrition, and health Plant health and production Animal health and production Agriculture systems and technology Agriculture economics and rural communities

Each research institute will have a Director appointed by the Under Secretary, and will formulate programs, develop strategic planning and priorities for department-wide research, education, extension and related activities. The Under Secretary, along with the Directors and in consultation with the NAREEE Advisory Board, will direct research, education, extension, and related programs for relevant departmental agencies, and ensure that strategies and funds are coordinated throughout.

Finally, the a National Institute of Food and Agriculture (NIFA) would be established, but only under CSREES, to administer **all** competitive grants including the National Research Initiative (NRI), which is re-authorized at \$500 million per year.

In the **Conservation Title** passed by the House Agriculture Committee a couple of brief **invasive species** highlights include:

a provision that would allow a producer to conduct prescribed grazing for the control of **invasive species** on Conservation Reserve Program (CRP) lands.

Amending the Environmental Quality Incentives Program (EQIP) to include the promotion of forest management and energy conservation. Forest management practices are defined as activities that may be needed to improve water quality, increase instream flows, restore forest biodiversity, or control **invasive species**.

<u>\$425 million for Secure Rural Schools and Community Self-Determination Act</u>

The Secure Rural Schools and Community Self-Determination Act (P.L. 106-393), signed into law in 2000, provides an alternative source of funding for schools and other purposes in counties that were once dependent on timber sales from federal lands. At the time the law was passed, it was estimated to provide assistance to 700 counties in 39 states. The Act also provides funding for (A) road, trail, and infrastructure maintenance or obliteration; (B) soil productivity improvement; (C) improvements in forest ecosystem health; (D) watershed restoration and maintenance; (E) restoration, maintenance and improvement of wildlife and fish habitat; (F) control of **noxious and exotic weeds**; and (G) reestablishment of native species.

The \$425 million provides funding for a one-year extension of the Secure Rural Schools Act and gives Congress time to find a long-term solution for counties with a high percentage of national forests or federal land. The \$425 million appropriation was part of the much larger Emergency War Funding bill (\$120 billion) that was wrangled over during much of May by the House, Senate and President. Also included in that bill (P.L. 110-28) was \$3 billion for agriculture disaster relief and \$465 million for wildfire suppression.

Standardization of Nomenclature for Weed Definitions

(NOTE: The next 2 pages are background info that is in my Washington Report in the July 2007 WSSA Newsletterplease skip this if you have already read it there).

Recently, I have been dealing with a number of increasing issues concerning the classification of weeds that may greatly impact the mission of the National and Regional Weed Science Societies. The mission of the WSSA (www.wssa.net) is to:

- 1) Promote research, education, and extension outreach activities related to weeds;
- 2) Provide science-based information to the public and policy makers;

3) Foster awareness of weeds and their impacts on managed and natural ecosystems.

As a weed scientist, I sometimes struggle with the various classifications of weeds such as noxious, exotic, invasive, alien, nonnative, nonindigenous, volunteer crop and my favorite- plant out of place (no acronym necessary). However, I believe there is a very important role for the weed science societies to help standardize science-based classifications for the public and policy makers as we foster the awareness of weeds and their impacts on both managed and natural ecosystems through research, education, and extension outreach activities.

Of all the classifications of weeds above, a "noxious" weed is the most straightforward because it's a legal term (7 U.S.C. 7702(10)) defined in the Plant Protection Act (Public Law 106-224). The term 'noxious weed' means any plant or plant product that can directly or indirectly injure or cause damage to crops (including nursery stock or plant products), livestock, poultry, or other interests of agriculture, irrigation, navigation, the natural resources of the United States, the public health, or the environment. In other words, a **noxious weed** is any plant designated by a Federal, State or county government as injurious to public health, agriculture, recreation, wildlife or property. There is a well defined federal process for both listing and delisting plants as federal noxious weeds that is conducted through USDA APHIS. For more info see: http://www.aphis.usda.gov/ plant health/plant pest info/weeds/index.shtml

The word "invasive" is at the forefront of this discussion. What is an invasive weed or invasive plant? There is no mention of "invasive" or "exotic" or "alien" in the Plant Protection Act. Yet, the term invasive weed is increasingly popular in new federal legislation being introduced in the House and Senate (see below). The WSSA will be issuing a new journal during the first quarter of 2008 titled "Invasive Plant Science and Management". The WSSA is also a major stakeholder in conducting the National Invasive Weeds Awareness Week (NIWAW). Certainly, people seem to "get" the invasive species message because the "message" has been out there much longer thanks to our fellow pest control colleagues working in entomology and plant pathology. Mission statement #2 above is a much easier to convey when I talk to people in Washington DC about "invasive plants" vs. "weeds".

In the 2002 National Research Council report titled "Predicting Invasions of Nonindigenous Plants and Plant Pests" (http://www.nap.edu/catalog/10259.html), a biological **invasion** is defined as a phenomenon in which a nonindigenous species arrives in a new range in which it establishes, proliferates, spreads, and causes broadly-defined detrimental consequences in the environment.

Executive Order 13112, signed by President Clinton in 1999, defines an **invasive species** as "an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health." The Invasive Species Advisory Committee (ISAC) to the National Invasive Species Council (NISC) issued an excellent white paper on invasive species definition clarifications last year. This paper can be found at: http://www.invasivespeciesinfo.gov/docs/council/isacdef.pdf

The ISAC definitions white paper was intended to provide a non-regulatory policy interpretation of the term **invasive species** by identifying **what is meant**, and just as important, **what is not meant** by the term. Some of the key conclusions of this paper are:

Invasive species are those that are not native to the ecosystem under consideration and that cause or are likely to cause economic or environmental harm or harm to human, animal, or plant health.

Plant and animal species under domestication or cultivation and under human control are **not** invasive species.

Furthermore for policy purposes, to be considered invasive, the negative impacts caused by a nonnative species will be **deemed to outweigh** the beneficial effects it provides.

This leads me to my last point, or rather question: Do the National and Regional Weed Science Societies need to adopt a standard definition or criteria for an "invasive plant"?

Are all weeds invasive plants? Are all invasive plants weeds? Are all noxious weeds invasive plants?

As I mentioned at the beginning of this article, there can be confusion associated with all the various terms used to describe a weed. What is most troubling is that many people in our discipline would have no trouble stating a definitive "yes or no" answer to the above three questions, yet the general public is exposed to many different definitions and classifications. For example, you can go to the USDA Natural Resource Conservation Service (NRCS) Plants Database (http://plants.usda.gov/jndex.html) and look up "Invasive and Noxious Weeds" (http://plants.usda.gov/java/noxiousDriver).

As you scroll down the "Invasive and Noxious Weeds" page and start searching for different weeds, you also find that crops like corn, soybeans, cotton, rice, wheat, and alfalfa are listed with the description "This plant can be weedy or invasive according to the authoritative sources noted below." Can a volunteer crop be weedy? Can a volunteer crop be invasive?

Whether or not a species is considered an invasive species depends largely on human values. Do the National and Regional Weed Science Societies need to make a distinction between an "invasive plant" and a "weed"? The WSSA Science Policy Committee has agreed that we should attempt to define and standardize the nomenclature surrounding the major classifications of weeds. Many thanks to Jill Schroeder, WSSA President, who has initiated this process by enlisting the help of the Terminology Committee (P22) chaired by Corey Ransom and coordinated by Linda Nelson and the Federal Noxious and Invasive Weeds Committee (E4) chaired by Charles Bryson and coordinated by John Jachetta.

ACTION ITEM: Should each weed science society simply ratify the Invasive Species Advisory Committee (ISAC) white paper on invasive species definition clarifications (found at: http://www.invasivespeciesinfo.gov/docs/council/isacdef.pdf? Or, if the WSSA Federal Noxious and Invasive Weeds Committee and the Terminology Committee can draft definitions, how can we make this an official declaration of the National and Regional Weed Science Societies? Should the APMS, NCWSS, NEWSS, SWSS, WSWS and other affiliate weed science societies also adopt standardized definitions? Lastly, should this be a resolution to be voted upon by all members and what is the timeline for accomplishing this?

WSSA Members Organize 2nd Glyphosate Stewardship Forum in St. Louis

On March 20-21, a broad array of stakeholders from University Weed Scientists, Commodity Groups, Industry Representatives, Farmers, and Federal Policy and Regulatory Officials attended the 2nd National Glyphosate Stewardship Forum (NGSF) in St. Louis, Missouri. I would like commend the principal coordinators, Mike Owen from Iowa State and Chris Boerboom from the University of Wisconsin for their time and effort in organizing this event. Other WSSA members who actively participated in this forum include: Christy Sprague- Michigan State; Bill Johnson- Purdue; Stanley Culpepper- Georgia; Alan York and John Wilcut- North Carolina State; Larry Steckel-Tennessee; Andrew Kniss- Wyoming; Harold Coble-USDA; Bill Chism- EPA; Janis McFarland and Chuck Foresman- Syngenta; Jennifer Ralston- Monsanto; Raymond Forney- DuPont; Mike DeFelice- Pioneer Hi-Bred; and Bob Nichols- Cotton Incorporated. I have undoubtedly missed some WSSA members so I send my apologies in advance.

The first NGSF was conducted in St. Louis in November 2004 and was organized as a result of discussions among several university weed scientists about the potential evolution of glyphosate-resistant weeds and the management challenges they may pose for growers. This group of weed scientists included: Mike Owen, Iowa State; Chris Boerboom, Wisconsin; Stanley Culpepper, Georgia; Mark Loux, Ohio State; Tom Mueller, Tennessee; David Shaw, Mississippi State; Christy Sprague, Michigan State; and John Wilcut, North Carolina State. A summary of presentations and stakeholder comments from the 1st NGSF can be found at: http://www.weeds.iastate.edu/

weednews/2006/NGSF%20final%20report.pdf

The executive summary and stakeholder discussion comments from the 2nd NGSF are forthcoming. Some personal observations from 2nd NGSF include:

Any glyphosate stewardship program should be voluntary and not mandated by regulatory action.

A <u>consistent</u> glyphosate stewardship message needs to be adopted by all stakeholders for managing the potential evolution of glyphosate-resistant weeds.

Financial incentives should be provided to crop consultants and herbicide retailers for disseminating a consistent herbicide stewardship message to endusers.

On a separate, but related event, Dr. Stephen Powles from Australia presented a talk at the U.S. EPA on April 4 in Washington DC following the American Chemical Society meeting in Chicago. Thanks to Rick Keigwin, Director of BEAD at EPA for helping to organize the seminar. The topic for Dr. Powles talk was evolved glyphosate resistant weeds around the world. Dr. Powles felt that the current status of glyphosate stewardship was "lamentable" and that much more could be done prevent further weed resistance because glyphosate is "1 in a 100 year herbicide discovery". A particular point he emphasized was not to cut glyphosate application rates.

Herbicide stewardship and resistance management is not a new concept to the WSSA. However, with glyphosate now being applied on over 110 million acres across the U.S., the National and Regional Weed Science Societies need to be provide consistent, science-based glyphosate stewardship information to the public and policy makers.

NIWAW 9 Scheduled for February 24-29, 2008 in DC

Planning for the 9th Annual National Invasive Weed Awareness Week (NIWAW 9) is underway in Washington DC. Dr. Nelroy Jackson will be leading the Invasive Weed Awareness Coalition (IWAC) to help plan and coordinate the week long activities. The WSSA has once again received a \$15,000 Pulling Together Initiative grant from the National Fish and Wildlife Federation in April to help organize NIWAW 9. The slogan for NIWAW 9 is "*Weeds won't wait: Don't hesitate*". The six **invasive weeds** that will be featured on this year's poster are:

Yellow starthistle Cheatgrass Beach vitex Japanese stiltgrass Russian olive Giant salvinia

It is interesting to note that only 1 of 6 of the aforementioned NIWAW 9 poster weeds are a federally listed **noxious weed**. Yet all 6 weeds are listed as a **noxious** weed in at least one or more states.

2007 NCWSS Weed Contest



Calibration Farmer Problem Herbicide Injury Weed ID

2007 NCWSS Weed Contest Results

Over All Graduate Individual

1st Place - Jason Parrish **2nd Place** - Carl Woodard **3rd Place** - Jason Haegele

(The Ohio State (University of (Iowa State University) Missouri) University)

Over All Graduate Team

1st Place - Purdue University **2nd Place** - University of **3rd Place** - Kansas State

Missouri University

Over All Undergraduate Individual

1st Place - Nathan Miller **2nd Place** - Janelle Donahue **3rd Place** - Melinda Hoffman

(The Ohio State University) (The Ohio State University) University)

Over All Undergraduate Team

1st Place - The Ohio State **2nd Place** - The Ohio State **3rd Place** - Illinois State

University - Green University - Blue University

Category Awards

Team Field Sprayer Calibration Unknown Herbicide

Graduate - Kansas State University **Graduate** - Jason Parrish **Under Graduate** - The Ohio State University)

(The Ohio State University)

sity - Blue **Undergraduate** - Jenelle Donahue (Purdue University)

Written Sprayer Calibration Weed Identification

Graduate - Joe Armstrong (Michigan State
University)

Graduate - Jason Parrish
(The Ohio State University)

Undergraduate - Mike Butler Undergraduate - Nathan Miller

(University of Illinois) (The Ohio State University)

Problem Solving

Graduate - Kellan Kershner

(Kansas State University)

Undergraduate - Mike Butler

(University of Illinois)

2007 NCWSS Weed Contest Problems

The 2007 NCWSS Weed Contest was hosted by Bennett Ag Research Corp. near Richland, Iowa. Students, coaches and volunteers arrived on the afternoon of July 18 for a cookout and social hour. That night a 2.5 inch rainstorm made a real mess of things but walkways were made to the field events using hay bales and the contest was held without delay. As usual the day of the contest was hot and humid!

There were 28 graduate and 20 undergraduate students who competed. The 48 students represented nine schools from throughout the North Central region. The participating schools included: Kansas State University, University of Nebraska, Michigan State University, Iowa State University, University of Missouri, Ohio State University, University of Illinois, Purdue University and Parkland College. There were 30 volunteers from industry and academia who helped make the contest a success.

One of the most popular events for students and volunteers alike is the Farmer Problem. This year there were 2 problems created for the first round of the contest: one for graduates and one for undergraduates. Two additional problems were utilized for the finalist round to determine the winners of the graduate and undergraduate divisions. A brief summary of each problem is included below.

Graduate Problem

Scenario: Volunteer corn in a Roundup Ready corn field is not controlled with glyphosate application.

Background: The corn is currently 10 inches tall and was sprayed with Roundup WeatherMax at 22 oz/a about 10 days ago. Some volunteer corn died but others look healthy and unaffected.

Most of the live volunteers can be found along one side of the field. The grower says he always planted white corn (no transgenic traits) in the past but this year wanted to try some RR corn that he had heard so much about.

Cause: In the previous year white corn crosspollinated with a neighbors RR field and the volunteers now have the RR trait.

Recommendation: Row cultivation to remove the volunteer corn. A tractor with duals may help knock down more volunteer corn. In the future he needs to find out what his neighbor planted and plan accordingly.

Undergraduate Problem

Scenario: Soybeans are dying on one side of field.

Background: Soybeans are currently 3 inches tall. The grower called in an agronomist (student) because he believes that he has a seedling disease problem. Symptoms range from complete death on one edge of the field to no injury on the other side. The agronomist should have noticed the puckering of leaves and twisting of petioles to identify plant growth regulator injury.

Cause: A neighbor sprayed a PGR herbicide on a corn field and it drifted into the soybeans.

Recommendation: Replant the dead and severely injured areas and discuss with the neighbor what was sprayed and what happened. In the future the grower should maintain a healthy relationship with his neighbor so he will be more cautious of drift.



Graduate Problem, Volunteer Corn

> Undergraduate Problem, Drift



2007 NCWSS Weed Contest Problems

Graduate Problem- Finalist Round

Scenario: A field of spring wheat has strips of dead/dying plants.

Background: The field was planted about 4 weeks ago. Clearfield wheat was purchased for the field but he didn't get enough seed. The farmer had to return to his seed dealer and pick up a few more bags to finish planting. Beyond at 4 oz/a was sprayed 10 days ago on 3 leaf wheat. There are now strips of wheat dying throughout the field.

Cause: A few bags of conventional seed were dumped in one side of the drill with the rest being Clearfield wheat.

Recommendation: It is too late to replant the field. Grower will probably have to take some yield loss due to the thin stand. In the future he should always check every seed bag when planting and save the bags for future reference.

Undergraduate Problem- Finalist Round

Scenario: Sunflower field with poor weed control.

Background: A Clearfield sunflower variety was planted. Beyond at 4 oz/a was sprayed 10 days ago by the local Coop. The farmer went on a fishing trip for a week and when he returned there were still weeds in the field. The agronomist should have seen that some waterhemp was controlled while others were stunted and yellow.

Cause: Some of the waterhemp is resistant to ALS herbicides.

Recommendation: Cultivation is the only option to remove the ALS resistant waterhemp. In the future the grower will have to select herbicides with another MOA to control the waterhemp. Rotating modes of action should be a standard practice to prevent other weeds from developing resistance.



Graduate
Problem
Finalist,
Conventional
wheat contamination





Weed Identification and Management - Jerry Doll's Course on DVD

Jerry Doll's course on weed identification and management is available on DVD through University of Wisconsin-Extension Publications at http://learningstore.uwex.edu/Weed-Identification-and-ManagementDVD-P1211C252.aspx. Jerry taught this six-week course 30 times to students in the UW College of Agricultural and Life Sciences Farm and Industry Short Course Program. His presentations have been specially recorded for this DVD in Flash Player format.

The DVD addresses weed identification and management in Midwest corn, soybean, small grains, forages, and pasture systems, but the principles are applicable to habitats and regions globally. The presentations include 30 years of Dr. Doll's personal observations and experiences and are rich in plant and field images.

The DVD includes nearly all topics pertinent to identifying and managing weeds. In addition to the 28 lecture-style presentations in Flash Player format, the DVD includes videos with live demonstrations of weed identification, sprayer calibration and nozzle characteristics, in-field rotary hoeing and cultivation, and safe handling of pesticides. DVD price is \$30.

New Weed Publication Available

A new weed science publication, Practical Weed Science for the Field Scout (IPM 1007), is now available for purchase through MU Extension. This publication contains 60 pages of information that will help field scouts diagnose herbicide injury problems and identify common weeds and weeds seedlings. Practical Weed Science for the Field Scout contains over 150 photographs of the most up-to-date herbicide injury symptoms encountered in today's production systems as well as over 300 photographs of 98 weed species in different stages of growth. This publication is a great buy at a cost of \$3 per copy, and can be purchased by calling 573-882-7216. More information about IPM 1007 as well as a PDF version of the publication can be found online at http://extension.missouri.edu/explore/agguides/pests/ipm1007.htm.

Ecology of Weeds and Invasive Plants: Relationship to Agriculture and Natural Resource Management

Just in time for fall quarter! The newly revised and updated classic reference, *Ecology of Weeds and Invasive Plants: Relationship to Agriculture and Natural Resource Management*, 3rd Edition, by S.R. Radosevich, J.S. Holt, and C.M. Ghersa, will be released in August 2007 and is now available for purchase from John Wiley for \$74.95. To link directly to the publisher, click here: http://www.wiley.com/WileyCDA/WileyTitle/productCd-0471767794.html

The Third Edition of the authoritative reference gives readers an in-depth understanding of how weeds and invasive plants develop and interact in the environment so they can manage and control them more effectively. The guide includes an introduction to weeds and invasive plants in various environments and an overview of their ecology and evolution. With extensive examples, it:

- Focuses on the biological features of weeds and invasive plants, especially as they exist in agriculture, forests, rangelands, and natural ecosystems
- Includes coverage of exotic invasive plants
- Discusses a variety of methods and tools for managing weeds and invasive plants, including physical, cultural, biological, and chemical approaches
- Examines systems approaches for management, including modern Integrated Pest Management
- Addresses future challenges for scientists, farmers, and land managers

This is the definitive, hands-on reference for land managers and professionals in plant sciences, agronomy, weed science, and horticulture. It is also an excellent textbook for senior undergraduate or graduate students studying agriculture, ecology, natural resources management, environmental management, or related fields.

POSITION ANNOUNCEMENTS

Faculty Position in Water Quality

College of Agriculture Department of Plant and Soil Sciences University of Kentucky

POSITION: Assistant or Associate Professor, Extension Water Quality

RESPONSIBILITIES: This is a 12 month tenure track position in the Extension Title Series located in Lexington, Kentucky and is one of a series of coordinated positions the College of Agriculture plans to address natural resource and environmental issues. Depending upon the interests and qualifications of the appointee, consideration can be given to a 20% research appointment. The appointee will develop a comprehensive, effective, and productive extension/education and research program related to water and waste water in rural, urban, and suburban settings. Visible and effective education activities are needed to assist county agents, agricultural producers, state agencies, recreation specialists and other interested groups. A key responsibility for the person in this position is to serve as chair of the Environmental and Natural Resource Issues Task Force (ENRI) which develops environmental extension programs for the College of Agriculture. This includes coordination and oversight of Task Force programs and activities and supervision of at least one Extension Associate. Additional information on the Task Force can be found at http://www.ca.uky.edu/enri/. ENRI is an affiliated program of the College's Tracy Farmer Center for the Environment (http://tfce.uky.edu/) and the appointee will serve on the Farmer Center Board and support its programs. In addition, the appointee will serve as the College liaison to the Kentucky Department of Agriculture, Division of Conservation, the Water Resources Research Institute, and other water quality programs at the state, regional and national levels. The research associated with this position will involve investigations of water and waste water processes and their potential to affect surface and ground water quality and development of strategies to mitigate negative effects. There are opportunities for collaboration with existing departmental and interdepartmental research programs in environmental soil and water science at the laboratory, plot, field, and watershed scale. The successful candidate is expected to develop a strong publication record for supporting water quality education programs as well as publish peer-reviewed research articles. The successful candidate is also expected to secure extramural funding to support their extension and research programs.

QUALIFICATIONS: A Ph.D. in soil science, environmental science, or related discipline with an emphasis in hydrology, watershed science or environmental contaminant management is required. We seek an individual with sound training and demonstrated experience in the relationships between soils, land management and water quality in rural, urban, and suburban settings; familiarity with current and developing water quality regulations and policy development; and the ability to communicate effectively with clientele and research colleagues. Previous extension experience is an asset. Applications from women and minorities are particularly encouraged.

RANK AND SALARY: The position will be filled at the Assistant or Associate Professor level depending on qualifications. Salary, fringe benefits, and operating support are competitive with other leading land grant universities.

APPLICATION PROCEDURES: Review of applications will begin October 29, 2007 but applications will be accepted until a suitable applicant is selected. The position is available April 1, 2008. To apply for this position #SP518154, a UK Online Application must be submitted at www.uky.edu/HR/UKjobs. The application should include three documents: a cover letter and curriculum vitae with the names and addresses of three referees (and have letters sent), university transcripts (scanned copies acceptable), and a 1-2 page statement of extension philosophy relating to the focus of the position plus a brief statement of research interests and philosophy. For questions concerning how to apply, contact HR/ Employment (phone 859-257-9555 press 2) or email uk-jobs@email.uky.edu. Questions about the position can be directed to: Dr. Michael Barrett (Chair), Department of Plant and Soil Sciences, (mbarrett@uky.edu; telephone 859-257-5020, x 80709). Upon offer of employment, successful applicants for certain positions must undergo a national background check as required by University of Kentucky Human Resources.

Applications and inquiries from women and minorities are particularly encouraged. The University of Kentucky is an Equal Opportunity Employer. Applications will be accepted without regard to race, color, age, sex, religion, disability, or national origin. The address of the College of Agriculture EEO Coordinator is room S-101 Agricultural Science Building, 500 S. Limestone, Lexington, KY 40546-0091.

POSITION ANNOUNCEMENTS

Diamond Ag Research, Inc.

Larned, KS

EMPLOYER: Diamond Ag Research, Inc. – An independent Contract Field Research Company operating in Kansas since 1992 conducting a broad range of pesticide and seed registration and efficacy research.

POSITION: Field Research Project Manager

RESPONSIBILITIES: This individual will be responsible for planning and conducting of field research projects for clients. This will include securing resources to implement contracted work, supervising assistants, applications of test treatments, data and sample collection, overseeing successful completion of trials, reporting data in the format desired by clients. Research projects include emerging technologies in seeds, pesticides, plant growth regulators, and fertilizers. If you have a desire to excel in the Contract Agricultural Research Industry, this position will provide ample opportunity.

QUALIFICATIONS: Ph.D. or M.S. in Crop Science; Ability to conduct field research procedures; proficiency with computer technology; Good verbal and written communication skills; strong organizational ability; a broad agricultural background is helpful because of the range of work done.

RANK AND SALARY: Competitive – Commensurate with education and experience

POSITION AVAILABLE: October 1, 2007

CLOSING DATE: December 31, 2007

CONTACT: Doug Nord

Diamond Ag Research, Inc. 855 K-19 Highway South Larned, KS 67550

Phone: 620-285-3380 Fax: 620-285-3383

e-mail: diamondag@gbta.net