

President's Welcome

2008 North Central Weed Science Society Meeting

On behalf of the Society's Board of Directors, and our Local Arrangements Committee, I welcome you to Indianapolis and the 63rd annual meeting of the North Central Weed Science Society. This event provides opportunities to share information and experiences with fellow weed scientists, to participate in the many informative sessions, to renew acquaintances, and to make new friends! In addition, this year we are fortunate to be able to have a joint meeting with the Midwest Invasive Plant Network.

The Program Committee, chaired by President-Elect Mick Holm, has assembled an impressive array of symposia, paper sections, and poster sessions. My colleagues on the local arrangements committee have done an excellent job of preparing our site and organizing the logistics of our meeting. The Hyatt Regency – Indianapolis is a great facility and one that I am sure will fully meet our expectations.

In addition to the many excellent volunteer paper and poster presentations, the program includes three symposia: Herbicide-Resistant Crops, Integrated Weed Management Strategies: Tools of the Trade, and What's New in Industry? Dr. Tom Stohlgren will give a presentation in our general session on the impacts of climate change on invasive weeds. The Midwest Invasive Plant Network has assembled a symposium for Wednesday and two concurrent sessions of papers for Thursday.

It is never too late to become an active member of the Society! I urge you to volunteer for committee service or run for an office. Every committee of the society will meet during the conference. Be sure to note the times of your committee meetings and please feel free to attend any committee meeting that interests you.

Mick Holm will make the committee assignments for 2009 soon after this meeting. Please see him at the meeting, sign up at the meeting, or send him a message that you would like to become a committee member for the coming year. Both you and the society will benefit from your involvement. It has been a great privilege to serve you as President of NCWSS. I look forward to seeing you at the meeting and thank you for your continued active support of NCWSS.

Bill Johnson
President and Local Arrangements Chair

General Information

Conference Headquarters

All sessions of the conference will be held at the Hyatt Regency, Indianapolis, 1 South Capitol Avenue, Indianapolis, IN. 46204; Phone: 317-632-1234

Registration

Registration is required to attend the conference. Pre-registration is **\$230**. Registration at the conference is **\$280**. Student pre-registration is **\$115**; student registration at the conference is **\$165**.

For those just attending the MIPN Symposium, pre - registration is **\$75** and at the conference is **\$85**.

Industry breakfast tickets are available for **\$25**.

Registration Hours

The registration desk (Third Level Foyer) will be open Monday 4 to 8 pm, Tuesday 8 am to 5 pm, Wednesday 7:30 am to 5 pm, and Thursday 7:30 to 10 am.

Local Arrangements Headquarters

Studio Six

Meeting Rooms

Additional meetings may be arranged any time during the conference by contacting the Local Arrangements Chair.

Proceedings

Copies of the 2008 NCWSS Proceedings on a CD may be requested at the registration desk. The CD is **\$30** if purchased separately.

Interactive Encyclopedia of North American Weeds

DVD is \$64.95 if purchased during the conference.

Sustaining Members

Sustaining members that have made prior arrangements with the Industry Chair may put up a display in the Third Level Foyer. No other displays are allowed.

No Smoking

Smoking is not permitted in the sessions.

Program Symbols

- * Presenting Author
- ** Paper or poster in the graduate student contest
- *** Poster in the undergraduate student poster contest

Meetings of the Society 2008

Board of Directors

Monday, 1:00 pm	Vision
Wednesday, 7:00 pm	Vision

Local Arrangements

Monday, 11:00 am	Studio 6
Thursday, 11:30 am (with 2009 committee)	Studio 6

Paper & Symposium Section chairs

Tuesday, 8:00 am	Studio 5
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Contest Judges for Paper and Poster Contests

Judges breakfast, Tuesday, 7:00 am	Studio 4 & 5
Paper Judges, Tuesday, 7:15 am	Studio 5
Poster Judges, Tuesday, 7:15 am	Studio 4
Paper Judges, Tuesday, 6:00 pm	Studio 5
Poster Judges, Tuesday, 6:00 pm	Studio 4

Meal Functions

Breaks

Tuesday, 9:00 – 10:00 am	Third Level Foyer
Tuesday, 2:45 – 3:30 pm	Third Level Foyer
Wednesday, 9:45 – 10:15 am	Third Level Foyer
Wednesday, 3:00 – 3:30 pm	Third Level Foyer
Thursday, 9:30 – 10:15 am	Third Level Foyer
Thursday, 2:45 – 3:15 pm	Third Level Foyer

Student Mixer

Sponsored by BASF Corporation

Monday, 6:30 pm	Regency CD
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Student Luncheon/Business Meeting

Sponsored by Dow AgroSciences

Tuesday, 12:00 – 1:15 pm	Discovery
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Society Awards Luncheon

MC: Larry Hageman

Wednesday, 11:30 am	Regency CDEF
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Joint Society/MIPN Social

Sponsored by Industry

Wednesday, 5:45 – 7:30 pm	Third Level Foyer
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Industry Breakfast (Cost \$25)

Speaker: To be determined

Thursday, 7:00 am	Regency EF
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Meetings of the Society 2008

The following meetings will take place for the purpose of conducting the business of each respective committee and to elect a new Vice Chairperson to serve as Chairperson in 2009. Most meetings are open to members. Please see the committee chair or attend the committee meeting if you are interested in serving the Society by being a committee member.

NCWSS Committee Meetings

Program	
Monday, 12:00 pm	Studio 6
Distinguished Achievement Award	
Tuesday, 12:30 pm	Studio 2
Electronic Communications	
Tuesday, 12:30 pm	Studio 3
Finance, Steering, & Policy	
Tuesday, 12:30 pm	Studio 4
Future Site Selection	
Wednesday, 5:30 pm	Studio 3
Legislation, Regulatory, & Public Policy	
Tuesday, 4:30 pm	Studio 2
Long Range Planning & Organizational Affairs	
Tuesday, 4:30 pm	Studio 3
Membership	
Tuesday, 4:30 pm	Studio 4
NCWSS Fellow	
Tuesday, 4:30 pm	Studio 5
Nominating	
Tuesday, 5:30 pm	Studio 2
Publicity & Public Relations	
Tuesday, 5:30 pm	Studio 3
Resident Education	
Wednesday, 7:00 am	Studio 4
Resolutions & Necrology	
Tuesday, 5:30 pm	Studio 4
Summer Contest	
Wednesday, 5:00 pm	Studio 5
Contest Rules	
Wednesday, 5:00 pm	Studio 5

Meetings of the Society 2008

Program Section Business Meetings

Agronomic Crops I	
Wednesday, 11:00 am	Discovery
Agronomic Crops II	
Wednesday, 4:30 pm	Cosmopolitan A
Agronomic Crops III	
Thursday, 11:45 am	Regency D
Extension	
Wednesday, 11:15 am	Cosmopolitan A
Herbicide Physiology	
Tuesday, 4:45 pm	Discovery
Horticulture & Ornamentals	
Wednesday, 3:30 pm	Discovery
Invasive Weeds	
Wednesday, 5:15 pm	Cosmopolitan CD
Poster Session	
Monday, 6:00 pm	Studio 5
Weed Biology, Ecology & Management	
Tuesday, 4:30 pm	Regency EF

Special Interest Groups

Graduate Students	
Tuesday, 12:00 pm	Discovery
Industry Breakfast	
Thursday, 7:00 am	Regency EF

Symposia

Herbicide-Resistant Crops Symposium

Tuesday, 1:00– 5:00 pm	Regency CD
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Midwest Invasive Plant Network Symposium

Wednesday, 8:30 - 5:30 pm	Cosmopolitan CD
Thursday, 8:30 - 5:00 pm	Cosmopolitan CD
Thursday, 8:30 - 5:00 pm	Discovery

What's New in the Industry?

Wednesday, 3:30 - 5:30 pm	Regency CD
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Integrated Weed Management Strategies

Thursday, 8:00 - 12:00	Regency C
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Condensed Program – NCWSS 2008

Monday, December 8

1:00	Board of Directors Meeting	Vision
1:00 - 10:00	Poster Session Setup	Cosmo B
6:30	Graduate Student Mixer	Regency CD

Tuesday, December 9

8:00 – 9:45	Poster Session 1	Cosmo B
10:00 – 12:00	NCWSS General Session	Regency CD
12:00 – 1:15	Graduate Student Luncheon	Discovery
1:00 – 5:00	Herbicide-Resistant Crops Symposium	Regency CD

1:15 – 5:00	Weed Biology, Ecology and Management Papers	Regency EF
1:15 – 5:00	Student Contest Papers	Cosmo A
3:00 – 5:00	Herbicide Physiology Papers	Discovery
4:00	MIPN Board Meeting	Concept ABCD
5:00 – 6:00	Poster Session II	Cosmo B

Wednesday, December 10

8:00 – 11:15	Extension Papers	Cosmo A
8:00 – 11:15	Agronomic Crops I Papers	Discovery
8:30 – 11:45	MIPN Symposium	Cosmo CD
11:30 – 1:15	NCWSS Awards Luncheon	Regency CDEF
12:30 – 1:30	MIPN Annual Mtg.	Cosmo CD
1:30 – 5:30	Invasive Weeds Papers	Cosmo CD
1:30 – 3:30	Horticulture and Ornamentals Papers	Discovery
1:30 – 5:00	Agronomic Crops II Papers	Cosmo A
3:30 – 5:30	What's New in the Industry	Regency CD
5:45 – 7:30	MIPN Poster Session	Third Level Foyer
5:45 – 7:30	Industry Sponsored MIPN/NCWSS Social	Third Level Foyer
7:00 – 9:00	NCWSS Board Meeting	Vision

Thursday, December 11

7:00 – 8:15	Industry Breakfast	Regency EF
8:15 – 12:00	Agronomic Crops III Papers	Regency D
8:00 – 12:00	Integrated Weed Management Symposium	Regency C
8:30 – 12:00	MIPN Symposium; Session A	Cosmo CD
8:30 – 12:00	MIPN Symposium; Session B	Discovery
1:00 – 5:00	MIPN Symposium; Session A	Cosmo CD
1:00 – 5:00	MIPN Symposium; Session B	Discovery

Poster Sessions

Room: Cosmopolitan B

Chairperson: Steve Sanborn

Poster Setup

Posters may be set up between 1:00 pm and 10:00 pm on Monday, December 8. All posters will be on display from 8:00 am Tuesday, December 9 through 7:30 pm Wednesday, December 10.

Students in the Poster Contest should be with their posters during both Poster Sessions on Tuesday. It is recommended for poster presenters and ***required*** for contest participants that you bring letter sized copies of your posters to hand out.

Tuesday, December 9

8:00 – 9:45 am Poster Session I (authors present at odd numbered posters)

5:00 – 6:00 pm Poster Session II (authors present at even numbered posters)

Poster Removal

All posters (except the Invasive posters) must be removed between 7:30 pm Wednesday and 8:00 am Thursday. On Wednesday, Invasive posters will be moved to the Third Level Foyer for the 5:45 – 7:30 MIPN poster session. Invasive Posters can be removed after 1:00 pm on Thursday.

Program Symbols

- * Presenting Author
- ** Paper or poster in the graduate student contest
- *** Poster in the undergraduate student poster contest

Agronomic Crops I Posters

Response of Various Market Classes of Dry Beans to Halosulfuron. Nader Soltani*, Christy Shropshire and Peter H. Sikkema, University of Guelph, Ridgetown Campus, ON. Canada. (1)

Control of Winter Cereals in the Spring with Glyphosate. Peter H. Sikkema, Christy Shropshire and Nader Soltani*, University of Guelph, Ridgetown Campus, ON. Canada. (2)

Response of Wheat to Preplant and Postemergence Applications of 2,4-D and Dicamba. James R. Martin*, Charles R. Tutt and Dorothy L. Call, University of Kentucky, Princeton. (3)

Efficacy of Pyrasulfotole & Bromoxynil Tank Mixtures in Wheat. Patrick W. Geier* and Phillip W. Stahlman, Kansas State University, Hays. (4)

Cheat and Japanese Brome Resistance to ALS-Inhibiting Herbicides. Dallas E. Peterson* and Curtis R. Thompson, Kansas State University, Manhattan. (5)

****Does the Addition of Triflurosulfuron to Glyphosate Enhance Control of Velvetleaf and Common Lambsquarters?** Jon-Joseph Q. Armstrong* and Christy L. Sprague, Michigan State University, East Lansing. (6)

Winter Wheat Tolerance to PRE and POST Applications of BAS 800H. Stevan Z. Knezevic, Jon Scott* and Leo Charvat, University of Nebraska, Concord; BASF Corporation, Lincoln, NE. (7)

****Response of Winter Wheat and Winter Annual Weeds to Two Saflufenacil Formulations.** John C. Frihauf*, Phillip W. Stahlman and Patrick W. Geier, Kansas State University, Manhattan and Hays. (8)

Agronomic Crops II Posters

Effect of Reduced Herbicide Rates on Weed Control and Yield of Corn. Nader Soltani*, Laura Van Eerd, Richard Vyn, Christy Shropshire and Peter H. Sikkema, University of Guelph, Ridgetown Campus, ON. Canada. (9)

****Broadleaf Weed Management in Corn Utilizing Synergistic Herbicide Combinations.** A.J. Woodyard*, Douglas J. Maxwell and Dean E. Riechers, University of Illinois, Urbana. (10)

Efficacy of Tembotrione + Isoxadifen-ethyl on Symptomatically Bleached Grasses. John R. Hinz*, Brent Philbrook and Mark Wrucke, Bayer CropScience, Research Triangle Park, NC. (11)

Saflufenacil: A New Herbicide for Preplant Burndown and Preemergence Dicot Weed Control. S. Bowe*, R. Liebl, H. Walter, T. Holt, B. Sievernich and W. Patzoldt, BASF Corporation, Research Triangle Park, NC, and Limburgerhof, Germany. (12)

Weed Management in Corn and Sorghum with Saflufenacil. Caren A. Judge*, Steven J. Bowe, Leo D. Charvat, Troy D. Klingaman and Walter E. Thomas, BASF Corporation, Research Triangle Park, NC. (13)

Glyphosate Resistant Giant Ragweed and Waterhemp Management in Corn and Soybeans. Jason Waite*, Shane Hennigh and Kassim Al-Khatib, Kansas State University, Manhattan. (14)

****Absorption, Translocation, and Metabolism of Mesotrione in Grain Sorghum.** M. Joy M. Abit* and Kassim Al-Khatib, Kansas State University, Manhattan. (15)

****Volunteer Corn Control Effect on Corn and Soybean Yield.** Jill Alms*, Mike Moechnig, Darrell Deneke, and Dave Vos, South Dakota State University, Brookings. (16)

Postemergence Herbicide Effects on Field and Silage Corn Biomass Accumulation and Bio-energy Quality. Wesley J. Everman*, Bradley J. Love and Andrew J. Chomas, Michigan State University, East Lansing. (17)

****Competition of Volunteer Corn and Removal from Transgenic Corn Hybrids.** Tye C. Shauck*, Reid J. Smeda and David L. Kleinsorge, University of Missouri, Columbia. (18)

Posters 2008

Tolerance of Six Popcorn Hybrids to BAS 781. Thomas T. Bauman* and Michael D. White, Purdue University, West Lafayette, IN. (19)

****Response of Corn Types to Broadcast Flaming.** Santiago Ulloa*, Claudio Costa, Avishek Datta, Chris Bruening, George Gogos, Zhaoyan Zhang and Stevan Z. Knezevic, University of Nebraska, Concord and Lincoln. (20)

Agronomic Crops III Posters

Simulated Mesotrione Drift Followed by Glyphosate, Imazethapyr, Bentazon or Chlorimuron in Soybean. L.R. Brown, D.E. Robinson, K. Chandler, C.J. Swanton and P.J. Sikkema*, University of Guelph, Ridgetown Campus and Guelph, ON, Canada. (21)

Effectiveness of Preemergence and Postemergence Soybean Herbicides on Common Ragweed with Resistance to Glyphosate and ALS Inhibitors. Mark M. Loux* and Anthony F. Dobbels, The Ohio State University, Columbus. (22)

****Effect of 2,4-D Drift on Roundup Ready Soybean Yield Components.** Andrew P. Robinson* and William G. Johnson, Purdue University, West Lafayette, IN. (23)

Established Glyphosate Resistant Alfalfa Removal with Herbicides. Andrew J. Chomas*, Wesley J. Everman and James J. Kells, Michigan State University, East Lansing. (24)

Evaluating Weed Control Options in Dicamba Tolerant Soybean. Sara K. Carter*, Charles H. Slack, Glen P. Murphy and Paulette Pierson, University of Kentucky, Lexington; The Monsanto Company, St. Louis, MO. (25)

Efficacy of Fall and Spring Applied BAS 800H on Glyphosate-Resistant Horseweed. Glenn R.W. Nice*, Vince M. Davis, William G. Johnson, Greg R. Kruger, Bryan G. Young, Stevan Z. Knezevic and Troy D. Klingaman, Purdue University, West Lafayette, IN; Southern Illinois University, Carbondale; University of Nebraska, Concord; BASF Corporation, Mahomet, IL. (26)

Herbicide Combinations with Saflufenacil for Preplant Burndown Weed Management in Soybean. Adam C. Hixson*, John S. Harden, Leo D. Charvat, Troy D. Klingaman and Walter E. Thomas, BASF Corporation, Research Triangle Park, NC.. (27)

Posters 2008

****Influence of Tall Goldenrod Removal on Total Forage Yield and Quality of Tall Fescue Hay Fields.** Kristin K. Payne*, Eric B. Riley, Jimmy D. Wait and Kevin W. Bradley, University of Missouri, Columbia. (28)

Soybean Response to Simulated Spray Contamination by HPPD-Inhibiting Herbicides. Douglas J. Maxwell*, Lisa C. Gonzini, Joshua T. Kunkel and Aaron G. Hager, University of Illinois, Urbana. (29)

****Leafy Spurge Control with Different Tankmixes of Imazapic and BAS 800H.** Stevan Z. Knezevic, Ryan Rapp*, Avishek Datta, Jon Scott and Leo Charvat, University of Nebraska, Concord; BASF Corporation, Lincoln, NE. (30)

Extension Posters

Influence of Soybean Plant Population and Row Spacing to Current and Future Weed Control Strategies. Jeffrey A. Bunting*, Tom Hunsley, Douglas J. Maxwell and Aaron G. Hager, Growmark, Inc., Bloomington, IL; University of Illinois, Urbana. (31)

Assessing Glyphosate Sensitivity in Illinois Waterhemp Collections. Joseph L. Matthews*, Bryan G. Young and Julie M. Young, Southern Illinois University, Carbondale. (32)

Effect of Preemergence Herbicides for Corn and Soybean on the Weed Community. Dawn E. Refsell*, University of Illinois, Urbana. (33)

Comparison of Postemergence Herbicide Programs Utilizing Best Management Practice Rates of Atrazine or Atrazine Replacements in Field Corn at Rochester, Minnesota. Lisa M. Behnken*, Ryan P. Miller, Fritz R. Breitenbach and Jeffery L. Gunsolus, University of Minnesota Extension, Rochester. (34)

NCWSS Weed Contest 2008. Jess Spotanski* and Greg Steckel, Midwest Research Inc, York, NE.; SGS Alvey Ag Research, Carlyle, IL. (35)

Response of Selected Common Ragweed Accessions to Glyphosate, Fomesafen, and Cloransulam-methyl. Jeff M. Stachler* and John L. Luecke, North Dakota State University and University of Minnesota, Fargo, ND. (36)

Augmenting Weed Management: Farmer and Scientist Knowledge, Perception and Attitudes Regarding Weeds. Mark Tucker*, Robyn Wilson, Jeff LeJeune, Neal Hooker and Doug Doohan, Purdue University, West Lafayette, IN; The Ohio State University, Columbus. (37)

Posters 2008

Fall-Applied Herbicides Differ in Spring Dandelion Control and Survivorship. Timothy L. Trower*, Chris M. Boerboom and Mark J. Renz, University of Wisconsin, Madison. (38)

Response of Pigweed and Foxtail Species to Broadcast Flaming. Santiago Ulloa, Avishek Data and Stevan Z. Knezevic*, University of Nebraska, Concord. (39)

Utilization of Sequential Herbicide Applications and Herbicide Tankmix Components to Improve Glyphosate Efficacy. Ryan P. Miller*, Lisa M. Behnken, Fritz R. Breitenbach and Jeffery L. Gunsolus, University of Minnesota Extension, Rochester. (40)

****Response of Field-Collected Indiana Giant Foxtail Populations to Glyphosate.** Benjamin E. Neild*, Paul T. Marquardt, Greg R. Kruger and William G. Johnson, Purdue University, West Lafayette, IN. (41)

****Weed Control and Eradication Studies in *Miscanthus x giganteus*.** Eric K. Anderson*, Aaron G. Hager, Thomas B. Voigt and Germán A. Bollero, University of Illinois, Urbana. (42)

Herbicide Physiology Posters

Performance Interactions Between Topramezone and ALS-inhibiting Herbicides for the Control of Annual Grasses. A.C. Kaastra, C.J. Swanton, F.J. Tardif and P.H. Sikkema*, University of Guelph, Guelph and Ridgetown Campus, ON, Canada. (43)

Examining the Effect of Glyphosate Treatment on Shikimate Pathway Metabolites in Different Plant Species. Keith Kretzmer*, Mason Hughes, Ashleigh Norris and R. Doug Sammons, Monsanto Company, St. Louis, MO. (44)

****Characterization of Three Horseweed Populations with Different ALS Mutations.** Greg R. Kruger*, Vince M. Davis, Patrick J. Tranel, Stephen C. Weller and William G. Johnson, Purdue University, West Lafayette, IN; University of Illinois, Urbana. (45)

****Characterization of Glyphosate Resistance of *Arabidopsis thaliana* Mediated by PhyB.** Altanbadralt Sharkhuu*, Ray A. Bressan, William G. Johnson and Stephen C. Weller, Purdue University, West Lafayette, IN. (46)

****Interaction of Glyphosate and Saflufenacil on Glyphosate-Susceptible and Glyphosate-Resistant Horseweed Populations.** Tracy G. Mellendorf*, Bryan G. Young and Joseph L. Matthews, Southern Illinois University, Carbondale. (47)

Crop Tolerance to Topramezone Residue as Affected by Soil pH. Richard K. Zollinger* and Jerry L. Ries, North Dakota State University, Fargo. (48)

****Dose-response of 2,4-D and Glufosinate on *Abutilon theophrasti*, *Ipomoea* spp. and *Chenopodium album*.** Chad Brabham*, Andy Robinson and Bill Johnson, Purdue University, West Lafayette, IN. (49)

Horticulture and Ornamentals Posters

Atrazine Accentuates Carryover Injury from Mesotrione in Vegetable Crops. Darren E. Robinson*, University of Guelph, Ridgetown Campus, ON. Canada. (50)

****Influence of Tillage and Herbicides on Onion.** Sarah Gegner*, Harlene Hatterman-Valenti, Walt Albus and Collin Auwarter, North Dakota State University, Fargo; Carrington Research Extension Center, ND. (51)

Russet Burbank Growth the Year Following Glyphosate Simulated Drift to Irrigated Potatoes. Collin P. Auwarter* and Harlene Hatterman-Valenti, North Dakota State University, Fargo. (52)

****Tolerance of Potato Mini-tubers to PRE and POST Herbicide Applications.** Calvin Glaspie*, Wesley Everman, Chris Long and Andrew Chomas, Michigan State University, East Lansing. (53)

Weed Control in Newly Established French-American Hybrid Grapes. Harlene M. Hatterman-Valenti* and Collin P. Auwarter, North Dakota State University, Fargo. (54)

****Simazine Treated Mulches Improve Weed Control and Management of Triazine Resistant Weeds in Vinifera Vineyards.** Linjian Jiang*, Imed Dami and Doug Doohan, The Ohio State University, Wooster.(55)

****Postemergence Shielded Flaming for Weed Control in Vegetable Crops.** Chad M. Herrmann* and Bernard H. Zandstra, Michigan State University, East Lansing. (56)

Effect of Glyphosate Plus Dicamba Drift Rates on Commercial Processing Tomatoes. Greg R. Kruger*, William G. Johnson and Stephen C. Weller, Purdue University, West Lafayette, IN. (57)

****Multiple Applications of Reduced-Rate Herbicides for Weed Control in Onion.** James R. Loken*, Harlene M. Hatterman-Valenti and Collin P. Auwarter, North Dakota State University, Fargo. (58)

Weed Biology, Ecology and Management Posters

Competition of Glyphosate-Resistant Volunteer Corn with Glyphosate-Resistant Soybean. Paul T. Marquardt* and William G. Johnson. Purdue University, West Lafayette, IN. (59)

Vegetation Control with Lime, Ash and Imazapyr on Sandbars Along Missouri River. Stevan Z. Knezevic, Avishek Datta*, Charles Shapiro, Jon Scott and Mike Mainz, University of Nebraska, Concord. (60)

****Removal Timing of Winter Annual Weeds and Its Effect on Soil Water Availability and Corn and Soybean Yield.** Venkata Rao. Mannam*, Mark L. Bernards and John L. Lindquist, University of Nebraska, Lincoln. (61)

A Kansas Kochia Population Found Resistant to a Use Rate of Glyphosate. Curtis R. Thompson* and Dallas E. Peterson, Kansas State University, Manhattan. (62)

Identification of Polymorphic Plastidic DNA Sequences for Waterhemp Population Genetics. Jianyang Liu*, Kate Thinglum, Patrick J. Tranel and Adam S. Davis, University of Illinois, Urbana; USDA-ARS Invasive Weed Management Unit, Urbana, IL. (63)

Winter Annual Weed Influence on Soil Temperature and Soybean Cyst Nematode Population Density. Valerie A. Mock*, William G. Johnson, J. Earl Creech, Purdue University, West Lafayette, IN; University of Nevada Cooperative Extension, Fallon. (64)

Growth and Seed Production of Multiple Glyphosate and Acetolactate Synthesis Resistant Horseweed Biotypes. Vince M. Davis*, Greg R. Kruger and William G. Johnson, Purdue University, West Lafayette, IN. (65)

*****Open-Pollinated Transfer of Glyphosate Resistance in Horseweed in Greenhouse Isolation.** Ryan S. Henry*, Vince M. Davis and William G. Johnson, Purdue University, West Lafayette, IN. (66)

****Survey of Common Sunflower and Giant Ragweed Populations in Kansas.** Analiza Henedina M. Ramirez*, Aifheli Meshack Ndou and J. Anita Dille, Kansas State University, Manhattan. (67)

Posters 2008

****Palmer Amaranth and Downy Brome Emergence and Growth Impacted by Forage Soybean Cover Crop.** Justin S. Petrosino*, J. Anita Dille and Kraig Roozeboom, Kansas State University, Manhattan; Mark Claassen, Kansas State University, Hesston. (68)

****Methods for Culturing Fusarium Lateritium.** Banjara Nabaraj*, John L. Lindquist and Gary Yuen, University of Nebraska, Lincoln. (69)

****Development of Microsatellite Markers for Waterhemp Population Genetics.** Kate Thinglum*, Jianyang Liu, Patrick J. Tranel and Adam S. Davis, University of Illinois, Urbana; USDA-ARS Invasive Weed Management Unit, Urbana, IL. (70)

Invasive Weeds, Forage and Rangeland Posters

The Effects of Past Land Use on Current Invasive Plant and Native Tree Species Richness and Diversity in Ohio Forests. Stephanie K. Smith*, Kathleen S. Knight, Todd F. Hutchinson and Neil H. Sullivan, US Forest Service Northern Research Station, Delaware, OH; Miami University, Oxford, OH. (71)

Native and Invasive Plants in the Seedling Layer of Forests Affected by Emerald Ash Borer. Wendy Klooster*, Catherine Herms, Kathleen Knight, Kamal Gandhi, Annemarie Smith, Daniel Herms and John Cardina, The Ohio State University; USDA Forest Service, Northern Research Station; Ohio Department of Natural Resources, Division of Forestry. (72)

Evaluation of Garlic Mustard Control with Spring and Fall Herbicide Application. Vijaikumar Pandian* and Mark J. Renz, University of Wisconsin Cooperative Extension, Green Bay; University of Wisconsin, Madison. (73)

Saltcedar Control Using Foliar and Basal Bark Treatments. Walter H. Fick* and Wayne A. Geyer, Kansas State University, Manhattan. (74)

A Comparison of the Effects of Imazapyr and Glyphosate Singly and in Combination on Reed Canarygrass. Stuart Orr*, The Nature Conservancy, Indiana Chapter. (75)

Posters 2008

Does Removal of *Gypsophila paniculata* (Baby's Breath) from Lake Michigan Sand Dunes Restore Native Community Structure and Ecosystem Function? Sarah Emery, Patrick Doran*, John Legge, Matt Kleitch and Ken Hyde, University of Louisville, Louisville, KY; The Nature Conservancy, Lansing, MI; Sleeping Bear Dunes National Lakeshore, Empire, MI. (76)

Hyperspectral Signatures of Baby's Breath (*Gypsophila paniculata*): An Invasive Plant in Michigan's Coastal Dunes. David P. Lusch, Robert Goodwin and Patrick J. Doran*, Remote Sensing & GIS Research and Outreach Services, Michigan State University; The Nature Conservancy in Michigan. (77)

****Population Variation in the Allelopathic and Competitive Effects of *Lonicera maackii* on the Native Annual, *Pilea pumila*.** Dan M. Romanek* and Don Cipollini, Wright State University, Dayton, OH. (78)

Clonal Diversity and Hybridization Dynamics of Invasive Cattail Stands in the Great Lakes Region of North America. S.E. Travis, J.E. Marburger* and S.K. Windels, University of New England, Biddeford, ME; Indiana Dunes National Lakeshore, Porter; Voyageurs National Park, International Falls, MN. (79)

****Host Specificity and Distribution of a Powdery Mildew Fungus Attacking Garlic Mustard in Southwestern Ohio.** Victoria Ciola* and Don Cipollini, Wright State University, Dayton, OH. (80)

General Session – NCWSS 2008 63rd Annual Meeting

Room: Regency CD

Chairperson and Moderator: Mick Holm

Time: Tuesday, 10:00 am

- 10:10 **Welcome to Indianapolis.** Tom Jordan, Purdue University, West Lafayette, IN.
- 10:25 **Treasurer's Report.** Christy Sprague, Michigan State University, East Lansing.
- 10:30 **Necrology.** Patrick Geier, Kansas State University, Hays.
- 10:35 **Washington Update.** Lee Van Wychen, WSSA Science Policy Director, Washington, D.C. (81)
- 10:50 **Invasives and Climate Change.** Tom Stohlgren, U.S. Geological Survey, Fort Collins, CO. (82)
- 11:30 **President's Address.** Bill Johnson, Purdue University, West Lafayette, IN. (83)
- 11:50 **Announcements.** Mick Holm, Program Chair, DuPont Crop Protection, Waunakee, WI.

Herbicide-Resistant Crops Symposium

Room: Regency CD

Moderator: Kevin Bradley

- 1:00 **What a Weed Scientist Should Know About the Seed Industry.** Tracy Linbo, Pioneer Hi-Bred. (84)
- 1:30 **Dow AgroSciences Herbicide Tolerance Traits for Corn and Soybean.** David Simpson, Dow AgroSciences. (85)
- 1:45 **Can the DHT Trait Solve all of our Glyphosate Resistance Problems?** Mark Loux, The Ohio State University. (86)
- 2:00 **Development of LibertyLink Soybean Trait Technology.** Jayla Allen, Bayer CropSciences. (87)
- 2:15 **Utility of LibertyLink Soybean in Future Production Systems.** Kevin Bradley, University of Missouri. (88)
- 2:30 **Optimum[®] GAT[®] Trait – New Weed Management Tool for Row Crops.** David Saunders, DuPont Crop Protection. (89)
- 2:45 **Optimum[®] GAT[®]: Revisiting the Value of Sulfonylurea Chemistry for Today's Weed Problems.** Bryan Young, Southern Illinois University. (90)
- 3:00 **Break.**
- 3:15 **Engineering Soybean Resistance to the Dicamba Herbicide.** Paul Feng, Monsanto. (91)
- 3:30 **Glyphosate-Resistant Horseweed Control in Dicamba-Glyphosate Resistant Soybeans.** Larry Steckel, University of Tennessee. (92)
- 3:45 **Roundup Ready Sugarbeet – Bringing Biotech Traits to Specialty Crops.** Paulette Peterson, Monsanto. (93)
- 4:00 **Roundup Ready Sugar Beet: An Industry Changing Trait.** Christy Sprague, Michigan State University. (94)
- 4:15 **The Market Scope of Herbicide Resistant Traits for Today and Tomorrow.** Corinne Alexander, Purdue University. (95)
- 4:45 **Q&A panel**

Weed Biology, Ecology and Management Papers

Room: Regency EF

Moderator: Erin Taylor

- 1:15 **The Fate of Giant Ragweed Seed in Natural and Artificial Soil Seed Banks.** Xianhui Fu*, Joanne Chee-Sanford, Martin M. Williams II, and Adam S. Davis, University of Illinois; USDA-ARS, Urbana. (96)
- 1:30 **Molecular Based Identification and Phylogeny of the Chenopodium Complex Within the North Central States of America.** Sukhvinder Singh* and Patrick J. Tranel, University of Illinois, Urbana. (97)
- 1:45 **Crop Rotation and Herbicide Use Influence Population Dynamics of Glyphosate-Resistant Horseweed in No-Till Crop Management Systems.** Vince M. Davis*, Kevin D. Gibson and William G. Johnson, Purdue University, West Lafayette, IN. (98)
- 2:00 ****Weed Community Characteristics of Corn and Soybean Fields Managed Postemergence in Wisconsin.** Nathanael D. Fickett*, Chris M. Boerboom and Clarissa M. Hammond, University of Wisconsin, Department of Agriculture, Trade, and Consumer Protection, Madison, WI. (99)
- 2:15 ****Corn-Velvetleaf Interference Under Variable Water Supply.** Logan G. Vaughn*, John L. Lindquist, Mark L. Bernards and Timothy J. Arkebauer, University of Nebraska, Lincoln. (100)
- 2:30 ****Relative Fitness of Shattercane, Sorghum and Their Hybrids.** Lilyrani Sahoo, Jared J. Schmidt*, John L. Lindquist and Donald J. Lee, University of Nebraska, Lincoln; Jeffrey F. Pederson, USDA-ARS, Lincoln, NE. (101)
- 2:45 ****Response of Annual Weeds and Select Turfgrasses to Yellow Mustard Seed Meal.** Daniel T. Earlywine*, Reid J. Smeda, Travis C. Teuton and Carl E. Sams, University of Missouri, Columbia; University of Tennessee, Knoxville. (102)
- 3:00 **Break**

Weed Biology, Ecology and Management Papers (continued)

- 3:15 ****Simulating Weed Emergence Under Different Crop Canopies.** Rutendo Nyamusamba*, Michael Moechnig and Darrell Deneke, South Dakota State University, Brookings. (103)
- 3:30 ****Cropping System Effect on the Growth of Four Weed Species.** Rachel B. Paskey* and Robert G. Hartzler, Iowa State University, Ames. (104)
- 3:45 ****Effect of Winter Annual Weed Management on Soybean Cyst Nematode Population and Weed Density.** Valerie A. Mock*, J. Earl Creech and William G. Johnson, Purdue University, West Lafayette, IN; University of Nevada Cooperative Extension, Fallon. (105)
- 4:00 ****Time Requirement from Pollination to Seed Maturity in Common Waterhemp.** Michael S. Bell* and Patrick J. Tranel, University of Illinois, Urbana. (106)
- 4:15 ****Depth and Time of Asiatic Dayflower Emergence in Corn.** José M. Gómez* and Micheal D.K. Owen, Iowa State University, Ames. (107)
- 4:30 **Weed Biology, Ecology and Management Business Meeting**

Agronomic Crops: Student Contest Papers

Room: Cosmopolitan A

Moderator: Sue Rick

- 1:30 ****Influence of Cover Crops on Roundup Ready Sugar Beet.** Molly M. Buckham*, Christy L. Sprague, Erin C. Taylor and Gary E. Powell, Michigan State University, East Lansing. (108)
- 1:45 ****Winter Wheat Tolerance to Broadcast Flaming.** Santiago Ulloa*, Jayme Ferrari-Neto, Avishek Datta and Stevan Z. Knezevic, University of Nebraska, Concord. (109)
- 2:00 ****Weed Control in Wide- and Narrow-row Glyphosate-Resistant Sugar Beet.** Jon-Joseph Q. Armstrong* and Christy L. Sprague, Michigan State University, East Lansing. (110)
- 2:15 ****Weed Control and Crop Response in Tribenuron-Tolerant Sunflower.** Amar S. Godar*, Phillip W. Stahlman and J. Anita Dille, Kansas State University, Manhattan and Hays. (111)
- 2:30 ****Winter Wheat Response and Weed Control Efficacy of Saflufenacil Applied with Growth Regulator Herbicides.** John C. Frihauf*, Phillip W. Stahlman and Patrick W. Geier, Kansas State University, Manhattan and Hays. (112)
- 2:45 ****Does Pyroxsulam Control ALS-Resistant Wild Oat?** Lindsey K. Hanson* and Kirk A. Howatt, North Dakota State University, Fargo. (113)
- 3:00 ****Efficacy of Postemergence Herbicide Tankmixes in Acetolactate Synthase Resistant Grain Sorghum.** D. Shane Hennigh*, Kassim Al-Khatib and Mitch Tuinstra, Kansas State University, Manhattan; Purdue University, West Lafayette, IN. (114)
- 3:15 **Break**
- 3:30 ****Contribution of Thien carbazon-Methyl for Grass Weed Management in Corn.** Dan K. Tiedemann*, Bryan G. Young, Ronald F. Krausz and Joseph L. Matthews, Southern Illinois University, Carbondale. (115)

Agronomic Crops: Student Contest Papers (continued)

- 3:45 ****A Survey of Winter Annual Weeds and Early-Season Pests in Michigan No-till Soybean.** Kelly A. Barnett*, Christy L. Sprague, Christina D. DiFonzo and Fred W. Warner, Michigan State University, East Lansing. (116)
- 4:00 ****Management of Glyphosate-Resistant Giant Ragweed in Soybean.** Chad Brabham*, Mark Loux and Bill Johnson, Purdue University, West Lafayette, IN; The Ohio State University, Columbus. (117)
- 4:15 ****Maximum Weed Control in Onion Using Flumioxazin and Oxyflourfen.** Chad M. Herrmann*, Bernard H. Zandstra and Rodney V. Tocco, Michigan State University, East Lansing. (118)
- 4:30 ****Does Anything Kill Scouringrush? Control Strategies Tested in Nebraska.** Eric E. Frasure* and Mark L. Bernards, University of Nebraska-Lincoln. (119)

Herbicide Physiology Papers

Room: Discovery

Moderator: Vince Davis

- 3:00 **Examining Yellow Flash In Roundup Ready Soybean.**
R. Douglas Sammons* and Mintien Tran, Monsanto,
St. Louis, MO. (120)
- 3:15 ****Dose-response of 2,4-D and Glyphosate on
Abutilon theophrasti, Ipomoea spp. and
Chenopodium album.** Andrew P. Robinson*, Chad
B. Brabham and William G. Johnson, Purdue
University, West Lafayette, IN. (121)
- 3:30 ****Investigation of the Molecular Basis of Resistance
to PPO-Inhibiting Herbicides in Common Ragweed.**
Stephanie L. Rousonelos*, Ryan M. Lee, Mark J.
VanGessel and Patrick J. Tranel, University of Illinois,
Champaign-Urbana; University of Delaware, Newark.
(122)
- 3:45 ****Potential Interactions of Slow Acting and Fast
Acting Herbicides.** Rachel K. Bethke*, Christy L.
Sprague and Donald Penner, Michigan State
University, East Lansing. (123)
- 4:00 ****Response of Selected Indiana Horseweed
Populations to Glyphosate and Cloransulam.** Greg
R. Kruger*, Vince M. Davis, Stephen C. Weller and
William G. Johnson, Purdue University, West
Lafayette, IN. (124)
- 4:15 ****Molecular Genetics of Glyphosate Resistance in
Palmer Amaranth.** Todd A. Gaines*, Philip Westra,
Jan E. Leach, Sarah M. Ward, Bekir Bukun, Stephen T.
Chisholm, Colorado State University, Fort Collins;
Dale L. Shaner, USDA-ARS, Fort Collins; Christopher
Preston, University of Adelaide, Australia; A. Stanley
Culpepper and Timothy L. Gray, University of
Georgia, Tifton; Ted M. Webster, USDA-ARS, Tifton;
William K. Vencill, University of Georgia, Athens; and
Patrick J. Tranel, University of Illinois, Urbana. (125)
- 4:30 ****Interactions Between Mesotrione and Atrazine in
a Velvetleaf Biotype with Metabolism-based
Atrazine Resistance.** A.J. Woodyard*, Josie A. Hugie
and Dean E. Riechers, University of Illinois, Urbana.
(126)
- 4:45 **Herbicide Physiology Business Meeting**

MIPN Symposium and Invasive Papers (page 37)

Extension Papers

Room: Cosmopolitan A

Moderator: Mike Moechnig

- 8:00 **The Effect of Herbicides, Adjuvants and Nozzle Tips on Spray Particle Size.** Robert N. Klein* and Jeffrey A. Golus, University of Nebraska, North Platte. (127)
- 8:15 **The Influence of Spray Components and Nozzle Type on Spray Distribution and Coverage.** Gregory K. Dahl*, Joe V. Gednalske and Eric Spandl, Winfield Solutions, St. Paul, MN. (128)
- 8:30 **Importance of Adjuvant System for Glyphosate Herbicide Combinations in Soybean.** Nathan R. Johanning*, Bryan G. Young, Dawn E. Refsell and Gordon K. Roskamp, Southern Illinois University, Carbondale; University of Illinois, Urbana; Western Illinois University, Macomb. (129)
- 8:45 **Postemergence Weed Control Using a Sand Blaster.** Frank Forcella*, USDA-ARS Soils Lab, Morris, MN. (130)
- 9:00 **How Long can Various Herbicides Remain in the Spray Tank Prior to Application in the Field?** Robert E. Nurse* and Peter H. Sikkema, Agriculture and Agri-Food Canada, Harrow, ON; University of Guelph, Ridgetown Campus, ON. Canada. (131)
- 9:15 **Common Lambsquarters Response to Glyphosate Under Field and Greenhouse Conditions.** Andrew R. Kniss*, University of Wyoming, Laramie. (132)
- 9:30 **Comparison of Postemergence Herbicides in Corn with Resistance to Glyphosate and Glufosinate.** Mark M. Loux* and Anthony F. Dobbels, The Ohio State University, Columbus; William G. Johnson, Purdue University, West Lafayette, IN; Bryan G. Young, Southern Illinois University, Carbondale; Chris Boerboom, University of Wisconsin, Madison; Kevin W. Bradley, University of Missouri, Columbia; Aaron G. Hager, University of Illinois, Urbana. (133)

Extension Papers (continued)

- 9:45 **The Response of a North Dakota Common Ragweed Population to Glyphosate in the Field.** Jeff M. Stachler* and John L. Luecke, North Dakota State University and University of Minnesota, Fargo, ND. (134)
- 10:00 **Break**
- 10:15 **Teaching Weed Management in Winter Wheat.** Robert N. Klein*, University of Nebraska, North Platte. (135)
- 10:30 **Burndown Control of Cover-Crop Wheat and Little Barley.** James R. Martin*, Charles R. Tutt and Dorothy L. Call, University of Kentucky, Princeton. (136)
- 10:45 **Twenty Years of University Corn Yield Data: With and Without Atrazine.** Richard S. Fawcett*, Fawcett Consulting, Huxley, IA. (137)
- 11:00 **Knowledge, Perceptions and Attitudes of Organic Farmers About Weed Control.** Elizabeth Canales, Jason Parker, Robyn Wilson, Mark Tucker and Doug Doohan*, The Ohio State University, Wooster; Purdue University, West Lafayette, IN. (138)
- 11:15 **Extension Business Meeting and Committee Meeting**

Agronomic Crops I Papers

Room: Discovery

Moderator: Patrick Geier

- 8:00 **Glyphosate Control of Abutilon theophrasti, Chenopodium album and Amaranthus Species in Sugarbeets Using Growth Stage Variables to Determine Application Timing.** Mark Bredehoeft*, Southern Minnesota Beet Sugar Cooperative, Renville. (139)
- 8:15 **Weed Control in Glyphosate-Resistant Sugar Beets.** Jeff M. Stachler*, Alan G. Dexter and John L. Luecke, North Dakota State University and University of Minnesota, Fargo. (140)
- 8:30 **Product Integrity - A Comprehensive Program Used to Prevent Cross-Contamination Incidents at Dow AgroSciences.** David Ouse* and Jim Gifford, Dow AgroSciences, Indianapolis, IN. (141)
- 8:45 **Performance of GoldSky Herbicide on Grass and Broadleaf Weeds in Spring Wheat.** Roger E. Gast*, Brett M. Oemichen, Monte R. Weimer and Marcin D. Dzikowski. Dow AgroSciences, Indianapolis, IN. (142)
- 9:00 **Effect of Timing and Adjuvants on Weed Control with Pyroxsulam in Winter Wheat.** Gary A. Finn*, Monte R. Weimer, Brett M. Oemichen, Harvey A. Yoshida and D. Chad Cummings, Dow AgroSciences, Indianapolis, IN. (143)
- 9:15 **Introduction To Wolverine - A New Herbicide for Grass and Broadleaf Weed Control in Northern Plains Cereals.** Dean W. Maruska*, Kevin B. Thorsness, Mary D. Paulsgrove, Michael C. Smith, George S. Simkins and Mark Wrucke, Bayer CropScience, Research Triangle Park, NC. (144)
- 9:30 **Huskie Herbicide – Overview of 2008 Performance in Northern Plains Cereals.** Kevin B. Thorsness*, Dean W. Maruska, Mary D. Paulsgrove, Michael C. Smith, George S. Simkins and Mark Wrucke, Bayer CropScience, Research Triangle Park, NC. (145)
- 9:45 **Break**

Agronomic Crops I Papers (continued)

- 10:00 **Response of Wheat to AEF130060 and Nitrogen Fertilizer Applications.** James R. Martin*, Charles R. Tutt and Dorothy L. Call, University of Kentucky, Princeton. (146)
- 10:15 **Pinoxaden + Florasulam: A New Premix for Grass and Broadleaf Weed Control in Wheat and Barley.** Pete Forster*, Don Porter and Jason Sanders, Syngenta Crop Protection, Eaton, CO. (147)
- 10:30 **Preplant Application of Saflufenacil for Broadleaf Weed Control in Cereals.** Siyuan Tan*, Mark Oostlander, Leo Charvat, Glen Forster, Lyle Drew, John O'Barr and Sam Willingham, BASF Corporation, Research Triangle Park, NC; BASF Canada Inc., Mississauga, ON. (148)
- 10:45 **Potential of Saflufenacil for Preharvest Desiccation of Sunflower.** Kirk A. Howatt*, Brian M. Jenks, Phillip W. Stahlman, and Michael Moechnig, North Dakota State University, Fargo and Minot; Kansas State University, Hays; South Dakota State University, Brookings. (149)
- 11:00 **Agronomic Crops I Business Meeting**

Horticulture and Ornamentals Papers

Room: Discovery

Moderator: Jed Colquhoun

- 1:30 **Environmental Influence on Irrigated Potato Recovery from Glyphosate Simulated Drift.** Harlene M. Hatterman-Valenti* and Collin P. Auwarter, North Dakota State University, Fargo. (150)
- 1:45 **Variety-Specific Weed Management in Potatoes.** Jed B. Colquhoun* and Richard A. Rittmeyer, University of Wisconsin, Madison. (151)
- 2:00 **Vegetable Crop Tolerance to Saflufenacil.** Darren E. Robinson* and Peter H. Sikkema, University of Guelph, Ridgetown Campus, ON Canada. (152)

Horticulture and Ornamentals Papers (continued)

- 2:15 **The Effect of Postemergence Thifensulfuron-methyl on Commercial Processing Tomato Cultivars in a Two Year Study.** Stephen C. Weller*, Greg R. Kruger, William G. Johnson, Timothy A. Koch and Doug Doohan, Purdue University, West Lafayette, IN; The Ohio State University, Wooster. (153)
- 2:30 **A Two Year Study on the Response of Commercial Processing Tomatoes to Simulated Dicamba Drift.** Greg R. Kruger*, William G. Johnson, Doug Doohan, Timothy A. Koch and Stephen C. Weller, Purdue University, West Lafayette, IN; The Ohio State University, Wooster. (154)
- 2:45 **A Two Year Study on the Response of Commercial Processing Tomatoes to Simulated Glyphosate Drift.** Greg R. Kruger*, William G. Johnson, Doug Doohan, Timothy A. Koch and Stephen C. Weller, Purdue University, West Lafayette, IN; The Ohio State University, Wooster. (155)
- 3:00 **Herbicide Treated Mulches Improve Weed Control, Suppress Scion Rooting and Prevent Winter Injury in Vinifera Grapes.** Linjian Jiang*, Imed Dami, Hannah Mathers and Doug Doohan, Ohio State University, Wooster. (156)
- 3:15 **Fall and/or Spring Applications of Granular Dithiopyr and Prodiamine for Crabgrass Control in Turfgrass.** Michael W. Melichar*, Daniel L. Loughner, Zachary J. Reicher and Jeff A. Borger, Dow AgroSciences, Indianapolis, IN; Purdue University, West Lafayette, IN; The Pennsylvania State University, State College. (157)
- 3:30 **Horticulture and Ornamentals Business Meeting**

Agronomic Crops II Papers

Room: Cosmopolitan A

Moderator: Troy Klingaman

- 1:30 **DuPont Herbicides with Multiple Modes of Action and Flexible Utility for use on Optimum® GAT® Corn and Soybeans.** David W. Saunders*, Kevin L. Hahn, Larry H. Hageman, Helen A. Flanigan, Mick F. Holm and Wayne J. Schumacher, DuPont Crop Protection, Dallas Center, IA. (158)
- 1:45 **University Trials with Optimum® GAT® Herbicides in 2008.** Susan K. Rick*, Michael T. Edwards, James D. Harbour and David W. Saunders, DuPont Crop Protection, Wilmington, DE. (159)
- 2:00 **Optimum® GAT® Herbicide Programs as Tools for Managing ALS and/or Glyphosate Resistant Weeds.** D. Raymond Forney*, David W. Saunders, John Beitler and Stephen D. Strachan, DuPont Crop Protection, Wilmington, DE. (160)
- 2:15 **Kixor (saflufenacil) Herbicide Performance Profile in 2008 University Corn Trials.** Dan E. Westberg*, Brady F. Kappler, Mark A. Storr, Duane P. Rathmann, Garfield G. Thomas and Caren A. Judge, BASF Corporation, Research Triangle Park, NC. (161)
- 2:30 **Burndown Control of Fall Germinating Weeds with BAS 800H as Influenced by the Type of Adjuvant.** Stevan Z. Knezevic*, Jon Scott and Leo Charvat, University of Nebraska, Concord; BASF Corporation, Lincoln, NE. (162)
- 2:45 **Sorghum and Millet Response to Saflufenacil.** Phillip W. Stahlman*, John C. Frihauf, Patrick W. Geier and Loretta Serafin, Kansas State University, Hays and Manhattan; Department of Primary Industries, Tamworth, NSW Australia. (163)
- 3:00 **Break**
- 3:15 **Weed Control in Sorghum with Huskie Herbicide.** Amy M. Wyman*, Charles P. Hicks, Greg W. Hudec, Mary D. Paulsgrove, William R. Perkins, Gary L. Schwarzlose, Michael Weber and Kevin K. Watteyne, Bayer CropScience, Research Triangle Park, NC. (164)

Agronomic Crops II Papers (continued)

- 3:30 **Residual and Non-residual Herbicide Application Timing Effects on Weed Control and Corn Yield.** Wesley J. Everman*, Andrew J. Chomas and James J. Kells, Michigan State University, East Lansing. (165)
- 3:45 **Herbicide Tank Mixes for Control of Glyphosate-Recalcitrant Kochia.** Randall S. Currie*, Phillip W. Stahlman and Patrick W. Geier, Kansas State University, Garden City and Hays. (166)
- 4:00 **Response of Corn Hybrids to Glyphosate Application Timings.** Kelly A. Nelson* and Clinton G. Meinhardt, University of Missouri, Novelty. (167)
- 4:15 **Effect of Time of Day of Application on Herbicide Efficacy in Corn.** Peter H. Sikkema*, Nader Soltani and Robert E. Nurse, University of Guelph, Ridgetown Campus, ON; Agriculture and Agri-Food Canada, Harrow, ON. (168)
- 4:30 **Agronomic Crops II Business Meeting**

What's New In Industry?

Room: Regency CD

Moderator: Terry Carmody

Time: 3:30 p.m.

Dow AgroSciences	Eric Scherder
DuPont Crop Protection	Kevin Hahn
Syngenta Crop Protection	Chuck Foresman
BASF Corporation	Duane Rathmann
FMC	Brent Neuberger
Monsanto Company	Shea Murdock
Winfield Solutions LLC	Eric Spandl
Bayer CropScience	Mark Wrucke
Helena	Bobby Alford
Amvac	Rich Porter
Valent USA Corporation	Trevor Dale

Integrated Weed Management Symposium: Tools of the Trade

Room: Regency C

Moderator: Erin Taylor

- 8:00 **Introduction of “Integrated Weed Management: Fine Tuning the System” and the Symposium.** Erin Taylor, Karen Renner, and Christy Sprague, Michigan State University. (169)
- 8:15 **Diverse Crop Rotations and Weed Management Discussion.** Karen Renner and Christy Sprague, Michigan State University. (170)
- 8:45 **Cover Crop Innovations**
- Canada Thistle Control with Covers.* Abram Bicksler and John Masiunas, University of Illinois. (171)
- Mustards as Biofumigants: Current Status and Future Prospects.* John Masiunas, University of Illinois. (172)
- Evaluation of a no-till Organic Soybean System in Michigan.* Dale Mutch, Michigan State University. (173)
- 9:30 **Break**
- 9:45 **Hot Hot Heat: Flaming for Weed Management**
- Effect of Flaming Time on Weed Control.* Erin Taylor, Michigan State University. (174)
- Weed Flaming: An Engineering Approach.* Chris Bruening and Stevan Knezevic, University of Nebraska-Lincoln. (175)
- 10:15 **Grazing as a Biological Weed Control**
- Livestock, an Important Part of the Weed Control Puzzle.* Gary Reding, Langeland Farms, Inc., Greensburg, IN. (176)
- Weed Management Strategies in Sustainable Pasture Systems.* Rich Leep, Michigan State University. (177)

Integrated Weed Management Symposium: Tools of the Trade (continued)

10:45 **Nutrient effects on weeds: Solids, Liquids, and Storage**

Is Weed Competition for Nitrogen Important?

Chris Boerboom, University of Wisconsin. (178)

Weed Seed Survival in Livestock Manure Handling Systems.

Roger Becker, University of Minnesota. (179)

11:30 **Discussion**

Agronomic Crops III Papers

Room: Regency D

Moderator: Kevin Bradley

- 8:15 **Influence of Spring and Summer Herbicide Applications on Weed Control, Total Forage Yield and Total Forage Quality in Tall Fescue Pastures in Missouri.** Kristin K. Payne*, Eric B. Riley, Jimmy D. Wait and Kevin W. Bradley, University of Missouri, Columbia. (180)
- 8:30 **Establishment and Productivity of Forage Legumes Following Fall Herbicide Applications.** Mark J. Renz* and John W. Albright, University of Wisconsin, Madison. (181)
- 8:45 **Effect of Weed Control and Cutting System on Roundup Ready Alfalfa Stand Longevity.** Calvin Glaspie*, Andrew Chomas, Timothy Dietz, James Kells and Wesley Everman, Michigan State University, East Lansing. (182)
- 9:00 **Evaluation of Glufosinate in Burndown Applications.** R. Darren Unland*, Matthew J. Mahoney, Jayla R. Allen and Michael Weber, Bayer CropScience, Research Triangle Park, NC. (183)
- 9:15 **Weed Control in Glufosinate Resistant Soybeans.** Michael Weber* and Jayla Allen, Bayer CropScience, Research Triangle Park, NC. (184)
- 9:30 **Comparison of Weed Management Strategies in Glufosinate, Glyphosate, and Conventional Soybean Varieties.** Dean M. Grossnickle*, Micheal D.K. Owen, James F. Lux and Damian D. Franzenburg, Iowa State University, Ames. (185)
- 9:45 **Glyphosate-Resistant and Conventional Soybean Response to Foliar Manganese Fertilizer.** Mark Bernards*, Lucas Perim and Irvin Schleufer, University of Nebraska, Lincoln. (186)
- 10:00 **Break**
- 10:15 **Evaluation of Soybean Yields between Glufosinate and Glyphosate Resistant Soybeans.** Michael Weber* and Jayla Allen, Bayer CropScience, Research Triangle Park, NC. (187)

Agronomic Crops III Papers (continued)

- 10:30 **Kixor (saflufenacil) Herbicide Performance Profile in 2008 University Soybean Trials.** Dan E. Westberg*, Paul M. Vassalotti, Gery R. Welker, Dennis W. Belcher and Adam C. Hixson, BASF Corporation, Research Triangle Park, NC. (188)
- 10:45 **Influence of Horseweed Height on the Foliar Efficacy of Saflufenacil.** Tracy G. Mellendorf*, Bryan G. Young and Joseph L. Matthews, Southern Illinois University, Carbondale. (189)
- 11:00 **Rotational Crop Sensitivity to Fall-Applied BAS 800H.** Brian M. Jenks*, Gary P. Willoughby and Shanna A. Mazurek, North Dakota State University, Minot; Phillip W. Stahlman and Patrick W. Geier, Kansas State University, Hays; Leo D. Charvat, BASF Corporation, Lincoln, NE. (190)
- 11:15 **Fomesafen + Glyphosate: A New Premix for Managing Glyphosate Resistant Weeds in Soybeans.** Dain Bruns*, Tom Beckett and Don Porter, Syngenta Crop Protection, Marysville, OH. (191)
- 11:30 **Tank Mixes With Glyphosate for Difficult to Control Weeds in Soybean.** Dawn E. Refsell*, Bryan G. Young and Gordon K. Roskamp, University of Illinois, Urbana; University of Southern Illinois, Carbondale; Western Illinois University, Macomb. (192)
- 11:45 **Agronomic Crops III Business Meeting**

Midwest Invasive Plant Network Symposium

Wednesday, December 10

Room: Cosmopolitan CD

- 8:30 **Welcome.** Kate Howe, Midwest Invasive Plant Network Coordinator.
- 8:45 **Invasives and Climate Change.** Thomas J. Stohlgren, U.S. Geological Survey. (193)
- 9:30 **Invasives and Biofuels.** Roger Anderson, Illinois State University. (194)
- 10:00 **Break**
- 10:15 **Reducing Seed Output and Seed Viability of Cultivars: How Much is Enough to Create a Plant That Will Not be Invasive?** Kay Havens, Chicago Botanic Garden. (195)
- 10:45 **Beyond the Browsing Effects: Deer Suppress Unpalatable Natives and Facilitate an Invasive Plant Species' Success in Forests.** Susan Kalisz, University of Pittsburgh. (196)
- 11:15 **Direct and Indirect Effects of Invasive Plants on Tree Regeneration.** Scott J. Meiners and Laura M. Ladwig, Eastern Illinois University. (197)
- 11:45 **Lunch on your own**
- 12:30 **Midwest Invasive Plant Network Annual Meeting.**

Invasive Weeds Papers

Wednesday, December 10

Room: Cosmopolitan CD

Moderator: Bob Masters

- 1:30 **How Novel are the Chemical Weapons of Garlic Mustard in North America?** Don Cipollini*, Stephanie Enright and E. Kathryn Barto, Wright State University, Dayton, OH. (198)
- 1:45 **Wild Parsnip and Wild Carrot Management with Fall and Spring Herbicide Applications of Aminopyralid Containing Herbicides.** Byron Sleugh*, Mark Renz and Mary Halstedt, Dow AgroSciences, West Des Moines, IA; University of Wisconsin, Madison; Dow AgroSciences, Billings, MT. (199)
- 2:00 **Basal Treatment of Tree-of-Heaven (Ailanthus Altissima) with Triclopyr and Imazapyr.** Lisa Herber*, JFNew, Indianapolis, IN. (200)
- 2:15 **Technical Introduction of DuPont's New Vegetation Management Herbicide Aminocyclopyrachlor.** Ronnie G. Turner*, Jon S. Claus, Mark J. Holliday and Edison Hidalgo, DuPont Crop Protection, Memphis, TN. (201)
- 2:30 **Biology Review of Aminocyclopyrachlor.** Susan K. Rick*, Ronnie G. Turner and Jeff H. Meredith, DuPont Crop Protection, Memphis, TN. (202)
- 2:45 **Aminocyclopyrachlor for Invasive Weed Management and Restoration Grass Safety in the Central Great Plains.** Philip Westra*, Scott Nissen, Todd Gaines, Bekir Bekun, Brad Lindenmayer and Dale Shaner. Colorado State University and USDA/ARS, Fort Collins. (203)
- 3:00 **Break**
- 3:15 **Assessment of Conservation Reserve Program (CRP) Mid-Management Options for Suppression of Smooth Brome.** Marie L. Schmidt*, Richard T. Proost and Mark J. Renz, University of Wisconsin, Madison. (204)
- 3:30 **Aminopyralid Plus Triclopyr Efficacy on Problematic Vegetation in Rights-of-Way Sites.** David E. Hillger*, Vanelle F. Peterson, William N. Kline and Pat Burch, Dow AgroSciences, Indianapolis, IN. (205)

Invasive Weeds Papers (continued)

- 3:45 **High Volume Foliar Herbicide Treatments for Late Season Asian Bush Honeysuckle (*Lonicera maackii* (Rupr.) Herder) Control.** Ron Rathfon*, Purdue University, Dubois, IN. (206)
- 4:00 **Timed Foliar Treatment of Glyphosate on Bush Honeysuckle (*Lonicera Maackii*).** Lisa Herber*, JFNew, Indianapolis, IN. (207)
- 4:15 **Predicting Patterns of Spread of Japanese Stiltgrass (*Microstegium vimineum*).** Angie Shelton*, Dan Johnson, Luke Flory, Keith Clay and Burney Fischer, Indiana University, Bloomington. (208)
- 4:30 **Restoration of Savanna and Fen Remnants in Jackson County, MI: An Example of an Effective Research/Management Partnership.** Douglas R. Pearsall*, Douglas A. Landis, Anna K. Fiedler, Patrick J. Doran and Steven S. Woods, The Nature Conservancy, Lansing, MI; Michigan State University, East Lansing. (209)
- 4:45 **Invasive Plants in Forests Infested by Emerald Ash Borer: How Scientists and Managers Worked Together to Design a Useful Research Program.** Kathleen S. Knight*, John Cardina, Catherine P. Herms, Kamal J.K. Gandhi, Annemarie Smith, Robert P. Long and Daniel A. Herms, US Forest Service Northern Research Station, Delaware, OH; The Ohio State University, Wooster; Ohio Department of Natural Resources Division of Forestry, Columbus. (210)
- 5:00 **Effect of Removal of Dame's Rocket (*Hesperis matronalis*) on Forest Understory Vegetation in NW Indiana.** Noel B. Pavlovic*, Stacey Leicht-Young, Krystalyn Frohnapple and Ralph Grundel, U.S. Geological Survey, Porter, IN. (211)
- 5:15 **Invasive Weeds Business Meeting.**
- 5:45 – 7:30 **MIPN Poster Session.**

MIPN Symposium Concurrent Sessions

Session A

Thursday, December 11

Room: Cosmopolitan CD

- 8:30 **At the Crossroads: Invasive Species in Indiana – A Legislative Update.** Ellen Jacquart, The Nature Conservancy. (212)
- 9:00 **Canada Thistle Management Workshop*.** M. Haar and Roger Becker, University of Minnesota; Michael Moechnig, South Dakota State University. (213)
- 10:00 **Garlic Mustard Workshop*.** Mark Renz, University of Wisconsin; Kevin Gibson, Purdue University; Jeannie Katovich, University of Minnesota. (214)
- 11:00 **Reed Canarygrass Management Workshop*.** Kelly Kearns, Wisconsin Department of Natural Resources; Rich Dunbar and Nate Simons, Indiana Department of Natural Resources; Scott Feters, J.F. New; Tom Simpson, McHenry County Conservation District. (215)
- 12:00 **Lunch.**
- 1:00 **Japanese Stiltgrass Management Workshop*.** S. Luke Flory, Indiana University; Bonnie Wolf, The Nature Conservancy. (216)
- 2:00 **Asian Bush Honeysuckle Control Options and Strategies*.** Ron Rathfon and Zach Lowe, Purdue University. (217)
- 3:00 **Fire and Plant Invasions in the Midwest.** S. Luke Flory, Indiana University; Joseph Robb, Big Oaks National Wildlife Refuge; Roger Anderson, Illinois State University; Joanne Rebbeck, USDA Forest Service; Brian Winters, Big Oaks National Wildlife Refuge; Chad Bladow, The Nature Conservancy; Tom Post, Indiana Department of Natural Resources. (218)
- 4:00 **Invasive Plant Impacts.** Zach Lowe, Purdue University. (219)
- 5:00 **Workshop Concludes.**

*CCH credits available for these workshops

MIPN Symposium Concurrent Sessions

Session B

Thursday, December 11

Room: Discovery

- 8:30 **Using Weed-Free Forage and Mulch to Prevent the Introduction of Invasive Plants.** Kate Howe, Midwest Invasive Plant Network/Purdue University. (220)
- 9:00 **Invasive Plant Management on Rights-of-Way.** Robert Masters, Dow AgroSciences; Reid Smeda, University of Missouri; P. David Cornett, Kentucky Transportation Cabinet; Clyde Mason, Indiana Department of Transportation. (221)
- 10:00 **Cooperative Weed Management Areas: What are They and How can You Start One?** Kate Howe, Midwest Invasive Plant Network/Purdue University; Carmen Chapin, National Park Service and Northwoods CWMA. (222)
- 12:00 **Lunch.**
- 1:00 **Scientific Risk Assessment and its Policy Applications for Preventing Plant Invasions.** Reuben Keller, University of Notre Dame; Doug Keller, Indiana Department of Natural Resources; Kelly Kearns, Wisconsin Department of Natural Resources. (223)
- 2:30 **Discussion of Invasive Plant Research and Management Needs in the Midwest.** Alice Heikens, Franklin College. (224)
- 3:00 **Research-Management Collaboration.** Heather L. Reynolds and Sarah Shannon, Indiana University; Chad Kirschbaum, Wayne National Forest - Ironton District; Brian McCarthy, Ohio University; Elizabeth L. Middleton, Indiana University; Chip O'Leary, The Nature Conservancy; Kathleen S. Knight, USDA Forest Service Northern Research Station; Joy Marburger, National Park Service. (225)
- 4:00 **Best Management Practices.** Kelly Kearns, Wisconsin Department of Natural Resources; Carmen Chapin, National Park Service. (226)
- 5:00 **Workshop Concludes.**

* CCH credits available for these workshops

MIPN Displays

New Invasive Plants in the Midwest

Room: Studio 1

This educational display will show pressed plant specimens of new invasive plants in the Midwest as well as native look-alike species to help in the identification new invasive species.

Educational Materials on Invasive Plants

Room: Outside Cosmopolitan CD

Invasive plant educational materials from around the Midwest.

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	Dale E. Bush
	Ronald E. Doersch
1984	Edward W. Stroube *
	Oliver E. Strand *
	Gail A. Wicks *
1985	Robert Hiltibran

North Central Weed Science Society Information

1986	Elroy J. Peters Deane W. Finnerty * Oliver G. Russ
1987	Ralph Althaus * William M. Phillips Gerald R. Miller
1988	Robert Benson Calvin Messersmith Edward Stoller
1989	Loyd M. Wax Alan R. Putman
1990	Alan G. Dexter Russel L. Nash
1991	George Kapusta * Marshall McGlamery Russell Moomaw Don Penner
1992	R. Gordon Harvey, Jr. * Larry K. Binning Alex R. Martin Don Taylor
1993	Merrill A. Ross, Jr. Robert G. Wilson Jerry D. Doll
1994	Ted R. Warfield William W. Witt

Fellows¹

1995	Charles R. Fenster Leon J. Wrage
1996	Thomas T. Bauman Earl W. Chamberlain Richard S. Fawcett William E. Lueschen
1997	Stephen D. Miller Micheal D.K. Owen Fred W. Roeth
1998	Paul J. Ogg James P. Worthington
1999	Michael Barrett Norman J. Probst
2000	Douglas D. Buhler Bill Miller Philip L. Orwick Stephen C. Weller
2001	LeRoy R. Cobia
2002	James J. Kells
2003	Karen Ann Renner Charles Slack Phillip Stahlman
2004	Duane Rathman David Regehr
2005	Dallas E. Peterson
2006	James R. Martin Bernard H. Zandstra
2007	Chris M. Boerboom Michael J. Horak

* Deceased

¹Society members being honored were originally referred to as Honorary Members. Beginning in 1995, the award was changed to Fellow.

North Central Weed Science Society Information
Presidents of the North Central Weed Science
Society

1944	No President	1977	Carpenter, Will D.
1945	Yost, T. F. *	1978	Doersch, Ronald E.
1946	Yost, T. F. *	1979	Nalewaja, John D.
1947	Hanson, Noel S. *	1980	Stroube, Edward W.
1948	Willard, C. J. *	1981	Herron, James W. *
1949	Dunham, R. S. *	1982	Benson, Robert L.
1950	Worzella, W. W. *	1983	DiVall, James W.
1951	Sylwester, E. P. *	1984	Miller, Gerald R.
1952	Buchholtz, K. P. *	1985	Messersmith, Calvin G.
1953	Gilbert, C. J. *	1986	Wax, Loyd M.
1954	Lee, O. C. *	1987	Chamberlain, Earl
1955	Grigsby, Buford H. *	1988	Harvey, R. Gordon *
1956	Helgeson, Earl A. *	1989	Worthington, James P.
1957	Slife, Fred W. *	1990	Martin, Alex R.
1958	Derscheid, Lyle A.	1991	Taylor, T. Don
1959	Foster, J. Roe *	1992	Stoller, Edward W.
1960	Holm, L. G. *	1993	Warfield, Ted R.
1961	Alban, E. K. *	1994	Bauman, Thomas T.
1962	Bjerken Sig. *	1995	Cobia, LeRoy R.
1963	Hemphill, D. D. *	1996	Dexter, Alan G.
1964	Hemphill, D. D. *	1997	Miller, Bill
1965	Furrer, John D.	1998	Buhler, Douglas
1966	Furrer, John D.	1999	Orwick, Philip L.
1967	Warden, Robert L. *	2000	Kells, James J.
1968	Flecthall, O. Hale *	2001	Rathmann, Duane P.
1969	Beck, T. V.	2002	Peterson, Dallas E.
1970	Hannah, L. H.	2003	Horak, Michael J.
1971	Knake, Ellery	2004	Doll, Jerry D.
1972	Williams, Jr., J. L. *	2005	Peters, Tom
1973	Meggitt, William	2006	Miller, Stephen
1974	Bradfield, Kenneth W.	2007	Moses, Adrian
1975	Burnside, Orvin C.	2008	Johnson, William G.
1976	Fink, Rodney J.		

* Deceased

North Central Weed Science Society Information

Distinguished Achievement Awards

1990	Gerald W. Gogan – Education Gail A. Wicks - Service Robert G. Wilson - Research Jeffrey L. Gunsolus - Young Scientist
1991	F. Strizke - Education Paul G. Mayland - Industry Patrick J. Shea - Research
1992	William W. Witt - Education James P. Worthington - Education Rex A. Liebl - Research Jerry D. Doll - Service
1993	Robert G. Hartzler - Education Douglas D. Buhler - Research Karen A. Renner - Young Scientist
1994	David L. Regehr - Education Deane W. Finnerty - Industry Robert N. Andersen - Service David A. Mortensen - Young Scientist
1995	Will D. Carpenter - Industry Phillip W. Stahlman - Research Micheal D.K. Owen - Service
1996	Beverly R. Durgan - Education Charles L. Kern - Industry E. James Retzinger - Industry Michael J. Horak - Young Scientist
1997	Roger Becker - Education Joseph G. Vollmer - Industry Charles H. Slack - Research Richard Zollinger - Service David E. Stoltenberg - Young Scientist
1998	Randy W. Lloyd - Industry Ronald F. Krausz - Research James R. Martin - Service
1999	Thomas R. Hoverstad - Professional Staff Robert J. Kremer - Research J. D. Green - Service Chris M. Boerboom - Young Scientist Reid J. Smeda - Young Scientist
2000	Harlan P. Palm - Industry James F. Lux - Professional Staff Gary E. Powell - Professional Staff David A. Vox - Professional Staff William G. Johnson - Young Scientist
2001	John B. Masiunas - Education Bernard H. Zandstra - Education Patrick W. Geier - Professional Staff Douglas J. Maxwell - Professional Staff Kassin Al-Khatib - Research
2002	Paul L. Sprankle - Industry Thomas B. Threewitt - Industry Monica Elmes - Professional Staff John L. Luecke - Professional Staff Bryan Young - Young Weed Scientist
2003	Mark Loux - Education Kenneth Carlson - Industry Daniel E. Schroeder - Industry Andrew Chomas - Professional Staff Jeffrey Stachler - Professional Staff

North Central Weed Science Society Information
Distinguished Achievement Award Continued

2004	Gordon Roskamp - Education
	Robert N. Klein - Education
	David Stoltenberg - Research
	Robert E. Wolf - Service
	Patrick J. Tranel - Young Weed Scientist
2005	Chris Boerboom - Education
	Dennis Belcher - Industry
	Anthony F. Dobbels - Professional Staff
	Curtis R. Thompson - Service
	Christy Sprague - Young Scientist
2006	Richard K. Zollinger - Education
	John R. Hinz - Industry
	Christy Shropshire - Professional Staff
	Glenn Nice - Service
	Dean E. Riechers - Young Scientist
2007	Douglas Doohan - Education
	Kevin Gibson – Young Scientist
	Martin M. Williams II – Young Scientist

Herbicide Index

Common Name	Trade Name(s)	Manufacturer/Formulator
2,4-D	Several	Several
2,4-D + triclopyr	Crossbow	Dow AgroSciences
2,4-DB	Butyrac	Albaugh
acetochlor	Harness	Monsanto
acetochlor	Surpass, Topnotch, Breakfree	Dow AgroSciences, DuPont
acetochlor + atrazine	Harness Xtra	Monsanto
acetochlor + atrazine	Keystone, Breakfree ATZ, Breakfree ATZ Lite	Dow AgroSciences, DuPont
acetochlor + atrazine + glyphosate	Field Master	Monsanto
acetochlor + flumetsulam + clopyralid	SureStart	Dow AgroSciences
acifluorfen	Ultra Blazer	United Phosphorus
acifluorfen + bentazon	Storm	United Phosphorus
alachlor	Lasso, Micro Tech, Partner	Monsanto
ametryn	Evik	Syngenta
aminocyclopyrachlor	None	DuPont
aminopyralid	Milestone	Dow AgroSciences
aminopyralid + 2,4-D	Forefront	Dow AgroSciences
atrazine	Several	Several
atrazine + s-metolachlor	Bicep II Magnum, Bicep Lite II Magnum	Syngenta
atrazine + s-metolachlor	Cinch, Cinch ATZ, Cinch ATZ Lite	DuPont
benefin	Balan	UAP
bensulfuron-methyl	Londax	DuPont
bensulide	Prefar	Gowan
bentazon	Basagran	Arysta LifeScience
bentazon + atrazine	Laddok S-12	
bromacil	Hyvar	DuPont
bromacil + diuron	Krovar I	DuPont
bromoxynil	Buctril	Bayer CropSciences
bromoxynil + MCPA	Bronate Advanced	Bayer CropSciences
butachlor	Machete	Monsanto
butylate	Sutan+	Cedar
carfentrazone-ethyl	Aim, Avalanche	FMC, Agrilience
chlorimuron-ethyl	Classic	DuPont
chlorimuron + metribuzin	Canopy	DuPont
chlorimuron + thifensulfuron	Synchrony XP	DuPont
chlorimuron + tribenuron	Canopy EX	DuPont
chlorsulfuron	Glean, Telar	DuPont
chlorsulfuron + metsulfuron	Finesse	DuPont
chlorsulfuron + flucarbazone	Finesse Grass & Broadleaf	DuPont
chlorsulfuron + sulfometuron + sulfentrazone	Throttle	DuPont
clethodim	Select	Valent
clodinafop	Discover	Syngenta
clomazone	Command	FMC
clopyralid	Stinger, and others	Dow AgroSciences
clopyralid + MCPA	Commando M	Albaugh
clopyralid + MCPA	Cutback M	Dow AgroSciences
cloransulam-methyl	FirstRate	Dow AgroSciences
cloransulam-methyl + flumetsulam	Frontrow	Dow AgroSciences
cycloate	Ro-Neet	Cedar
DCPA	Dacthal	Amvac Chemical Co.
DE-742		Dow AgroSciences
desmedipham	Betanex	Bayer CropSciences
desmedipham + henmedipham + ethofumesate	Progress	Bayer Crop Science
dicamba	Banvel and others	Micro Flo
dicamba + atrazine	Marksman	BASF
dicamba + diflufenzopyr	Distinct, Overdrive, Status	BASF
dicamba + diflufenzopyr + nicosulfuron	Celebrity Plus	BASF
dichlobenil	Casoron, Dyclomec	Crompton/Uniroyal, PBI Gordon
dichlorprop (2,4-DP)	Several	Several

Herbicide Index

Common Name	Trade Name(s)	Manufacturer/Formulator
diclofop	Hoelon	Bayer CropSciences
diclosulam	Strongarm	Dow AgroSciences
difenzoquat	Avenge	
diflufenzopyr	BAS 654	BASF
dimethenamid + dicamba	OpTill	
dimethenamid-P	Outlook	BASF
dimethenamid-P + atrazine	Guardsman Max, Gmax Lite	BASF
dimethipin	Harvade	Crompton/Uniroyal
diquat	Reglone	Syngenta
dithiopyr	Dimension	Dow AgroSciences
diuron	Karmex, Direx	Several
endothall	Several	Elf Atochem
EPTC	Eptam, Eradicane	Syngenta, Gowan
ethalfuralin	Curbit	UAP/Loveland
ethalfuralin + clomazone	Strategy	UAP
ethametsulfuron	Muster	DuPont
ethofumesate	Nortron	Bayer CropSciences
fenoxaprop	Whip, Acclaim, Option II, Excel, Puma	Bayer CropSciences
floransulam	Primus, Boxer	Dow AgroSciences
florasulam + MCPA-Ester	Orion	Syngenta
fluazifop + fenoxaprop	Fusion	Syngenta
fluazifop-P	Fusilade DX	Syngenta
fluazifop-P + fenoxaprop	Fusion	Syngenta
flucarbazone	Everest	Bayer CropSciences
flufenacet	Define	Bayer CropSciences
flufenacet + metribuzin	Axiom, Domain	Bayer CropSciences
flumetsulam	Python	Dow AgroSciences
flumetsulam + clopyralid	Hornet	Dow AgroSciences
flumeturon	Cotoran, Meturon	Syngenta, Griffin
flumiclorac	Resource	Valent
flumioxazin	Valor	Valent
flumioxazin + cloransulam-methyl	Gangster	Valent
fluridone	Sonar	SePRO
fluroxypyr	Starane, Starane Ultra, Vista	Dow AgroSciences, UAP
fluroxypyr + 2,4-D	Starane + Salvo	Dow AgroSciences
fluroxypyr + aminopyralid	CleanWave	Dow AgroSciences
fluroxypyr + bromoxynil	Starane NXT	Dow AgroSciences
fluroxypyr + clopyralid	WideMatch	Dow AgroSciences
fomesafen	Flexstar, Reflex	Syngenta
foramsulfuron	Option	Bayer CropSciences
foramsulfuron + iodosulfuron	Equip	Bayer CropSciences
fosamine	Krenite	DuPont
glufosinate	Liberty, Ignite, Finale, Rely	Bayer CropSciences
glyphosate	Several	Several
glyphosate + 2,4-D	Landmaster BW	Monsanto
glyphosate + atrazine	Ready Master ATZ	Monsanto
halosulfuron	Permit, Manage, Sempra	Monsanto
halosulfuron + dicamba	Yukon	Monsanto
hexazinone	Velpar, Pronone	DuPont, Pro-Serve
hexazinone + diuron	Velpar Alfamax	DuPont
hexazinone + sulfometuron	Westar	DuPont
imazamethabenz	Assert	Micro Flo
imazamox	Raptor, Beyond	BASF
imazapic	Plateau	BASF
imazapyr	Arsenal, Chopper, Habitat	BASF
imazapyr + imazethapyr	Lightning	BASF
imazapyr + sulfometuron + metsulfuron	Lineage HWC, Lineage Prep	DuPont
imazapyr + metsulfuron	Lineage Clearstand	DuPont
imazaquin	Scepter, Image	BASF
imazethapyr	Pursuit	BASF
imazethapyr + glyphosate	Extreme	BASF
imazethapyr + pendimethalin	Pursuit Plus	BASF
iodosulfuron	Autumn	Bayer Crop Sciences
isoxaben	Gallery	Dow AgroSciences
isoxaflutole	Balance Pro	Bayer CropSciences

Herbicide Index

Common Name	Trade Name(s)	Manufacturer/Formulator
isoxaflutole + flufenacet	Epic	Bayer CropSciences
lactofen	Cobra, Phoenix	Valent
linuron	Lorox, Linex	DuPont
MCPA	Several	Several
MCPB	Thistrol	NuFarm
mecoprop (MCP)	Several	Several
mesosulfuron	Osprey, Silverado	Bayer CropSciences
mesosulfuron + propoxycarbazone	Olympus Flex	Bayer Crop Science
mesosulfuron-methyl	Osprey, Silverado Wild Oat	Bayer Crop Science
mesotrione	Callisto, Tenacity	Syngenta
mesotrione + s-metolachlor	Camix	Syngenta
mesotrione + s-metolachlor + atrazine	Lumax	Syngenta
mesotrione + s-metolachlor + glyphosate	Halex GT	Syngenta
metribuzin	Sencor	Bayer CropSciences
metsulfuron	Ally, Escort, Cimarron	DuPont
metsulfuron + chlorsulfuron	Cimarron Plus, Cimarron X'tra	DuPont
metsulfuron + 2,4-D + dicamba	Cimarron Max	DuPont
metsulfuron + tribenuron + thifensulfuron	Ally Extra	DuPont
molinate	Ordram	Syngenta
MSMA	Several	Several
napropamide	Devrinol	Syngenta
naptalam	Alanap	Crompton/Uniroyal
nicosulfuron	Accent	DuPont
nicosulfuron + thifensulfuron	Stout	DuPont
nicosulfuron + rimsulfuron + atrazine	Basis Gold, Steadfast ATZ	DuPont
nicosulfuron + rimsulfuron + clopyralid + flumetsulam	Accent Gold	DuPont
norflurazon	Zorial, Solicam	Syngenta
oryzalin	Surflan	Dow AgroSciences
oxadiazon	Ronstar	Bayer Crop Science
oxasulfuron	Expert	Syngenta
oxyfluorfen	Goal	Dow AgroSciences
paraquat	Gramoxone Inteon	Syngenta
pendimethalin	Prowl and others	BASF
penoxsulam	LockUp	Dow AgroSciences
phenmedipham	Spin-aid	Bayer CropSciences
phenmedipham + desmedipham	Betamix	Bayer CropSciences
phenmedipham + desmedipham + ethofumesate	Progress	Bayer CropSciences
picloram	Tordon and others	Dow AgroSciences
pinoxaden	Axial XL	Syngenta
primisulfuron	Beacon	Syngenta
primisulfuron + dicamba	NorthStar	Syngenta
primisulfuron + prosulfuron (1:1)	Exceed	Syngenta
primisulfuron + prosulfuron (2:1)	Spirit	Syngenta
prodiamine	Barricade	Syngenta
prometon	Pramitol	Syngenta
prometryn	Caparol, Cotton-Pro	Syngenta, Griffin
pronamide	Kerb	Dow AgroSciences
propanil	Stam, Strel, Stampede	Dow AgroSciences
propoxycarbazone	Olympus	Bayer CropSciences
prosulfuron	Peak	Syngenta
pyrasulfotole	Huskie	Bayer Crop Science
pyrazon	Pyramin	Arysta LifeScience
pyrithiobac sodium	Staple	DuPont, Kumiai
pyroxasulfone	KIH-485	Kumiai
pyroxsulam	Powerflex	Dow AgroSciences
quinclorac	Facet, Drive, Paramount	BASF
quizalofop	Assure II, Targa	DuPont, Gowan
rimsulfuron	Matrix, Titus, Resolve	DuPont
rimsulfuron + nicosulfuron	Steadfast	DuPont
rimsulfuron + thifensulfuron	Basis, Resolve Q	DuPont
Saflufenacil	Kixor	BASF
sethoxydim	Poast, Poast Plus	BASF

Herbicide Index

Common Name	Trade Name(s)	Manufacturer/Formulator
sethoxydim + bentazon	Clearmax	BASF
siduron	Tupersan	DuPont, Gowan, PBI-Gordon
simazine	Princep	Syngenta
s-metolachlor	Dual Magnum, Dual II Magnum, Cinch	Syngenta, DuPont
s-metolachlor + metribuzin	Boundary	Syngenta
sodium chlorate	Several	Several
sulfentrazone	Authority, Spartan	FMC
sulfentrazone + cloransulam-methyl	Sonic, Authority First, Gauntlet	Dow AgroSciences, FMC
sulfometuron-methyl	Oust	DuPont
sulfometuron + chlorsulfuron	Landmark XP	DuPont
sulfometuron + metsulfuron	Oust Extra	DuPont
sulfometuron + hexazinone	Oustar	DuPont
sulfosulfuron	Maverick, Outrider	Monsanto
tebuthiuron	Spike	Dow AgroSciences
tembotrione	Laudis	Bayer Crop Science
terbacil	Sinbar	
thiazopyr	Visor, Mandate	Rohm and Haas, Co.
thidiazuron	Dropp	Bayer CropSciences
thiencarbazon-methyl	Corvus, Capreno	Bayer Crop Science
thifensulfuron-methyl	Harmony SG	DuPont
thifensulfuron-methyl + tribenuron	Harmony Extra XP, SG	DuPont
thifensulfuron-methyl + tribenuron-methyl	Affinity Broadspec, Affinity TankMix	DuPont
thifensulfuron + tribenuron + metsulfuron + dicamba	Agility SG	DuPont
thiobencarb	Bolero	Valent
topramezone	Impact	AmVac
Common Name	Trade Name(s)	Manufacturer/Formulator
tralkoxydim	Achieve	Syngenta
triallate	Far-Go	Monsanto
triasulfuron	Amber	Syngenta
triasulfuron + dicamba	Rave	Syngenta
tribenuron-methyl	Express	DuPont
triclopyr	Garlon, Remedy and others	Dow AgroSciences
triclopyr + fluroxypyr	PastureGard	Dow AgroSciences
trifloxysulfuron	Envoke, Monument	Syngenta
trifluralin	Treflan and others	Dow AgroSciences and others
triflursulfuron-methyl	UpBeet	DuPont

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Midwest Labs Inc

Monsanto Company

Nufarm Americas Inc.

PBI/Gordon Corporation

Precision Laboratories

Rhodia Inc.

Syngenta Crop Protection

Uniqema

Valent USA Corporation

Winfield Solutions LLC

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2008

63rd Annual Meeting

North Central Weed Science Society

www.ncwss.org

Midwest Invasive Plant Network

December 8 – 11, 2008

Hyatt Regency

Indianapolis, Indiana

Please bring this program to the conference

Time Schedule

Mark papers and meetings in the appropriate space.

Time	Tuesday	Wednesday	Thursday
8:00	Poster Session I		
8:15			
8:30			
8:45			
9:00			
9:15			
9:30			
9:45			
10:00	General Session		
10:15			
10:30			
10:45			
11:00			
11:15			
11:30		NCWSS Awards Luncheon	
11:45			
12:00			
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5:00	Poster Session II		
5:15			
5:30		Industry Mixer	
5:45			