

PROGRAM

Sunday, March 23, 2003

Registration

Noon – 6:00 pm

NCB Executive Committee

Business Meeting

8:00 – noon, Conference Room II

Biological Control in Home Gardens Workshop

Organizer: Cliff Sadof

Senate Room

Insect Photo Salon

4:00 – 6:00 pm

Capitol Ballroom

Poster Set-Up

4:00 – 8:00 pm , University Room

Linnaean Games Opening Round

6:00 – 8:00 pm

Gamesmaster: Marlin Rice

Capitol Ballroom

Student Opportunities Mixer

8:00 – 10:00 pm

Madison/Wisconsin Ballrooms

March 24, 2003
Monday Morning

Registration

7:30 am – 5:00 pm

Continental Breakfast

7:00 – 8:30 am

NCA-15 Meeting

7:00 – 8:30 am

Conference Room II

Opening Session and Preliminary Business Meeting

8:30 – 10:00 am

Madison Ballroom

Welcome

Call to Order

Mike Gray, President

North Central Branch

Entomological Society of America

Local Arrangements Update

John Wedberg

Opening Remarks

Kevin L. Steffey

Vice-President

Entomological Society of America

ESA Governing Board Report

Scott Hutchins

NCB Representative to Governing Board

President's Address

Mike Gray

Preliminary Business Meeting

March 24, 2003

Monday Morning

BS/MS Student Competition Papers

Sections A, Cd, D

10:30 am – 12:00 pm

Assembly Room

- 10:30 001 The Wisconsin distribution of the tiger beetle *Cicindela patruela* relates to glacial features.
Mathew L. Brust, University of Nebraska at Kearney, Kearney, NE 68847, and Harold Willis, Adams, WI.
- 10:42 002 A test of trapping methods for *Strigoderma arboricola* to establish phenology.
Ben J. Zechmann, W. W. Hoback and Jesse Ziems, 905 W. 25th St, University of Nebraska at Kearney, Kearney, NE 68849
- 10:54 003 The influence of riparian areas on Hymenoptera communities: possible impacts on biological control of pest insects.
Johnathan G. White, Dianne L. Hall and Robert W. Sites, 1-87 Ag Bldg., University of Missouri, Columbia, MO 65211
- 11:06 004 Mercury vapor and UV lights affect both diurnal and nocturnal carrion beetle species.
Daniel G. Sneathen, Jonathan Doyle and Louis Whirlwind Horse III, RR 3, Box 67, Colome, SD 57528; and William W. Hoback, University of Nebraska Kearney, Kearney, NE 68849
- 11:18 005 How western corn rootworm, *Diabrotica virgifera virgifera* LeConte, behavior in soybean varieties is affected by soybean cyst nematode, *Heterodera glycines* Ichinohe, infestations.
Erica K. Carlson, Michael E. Gray, Kevin L. Steffey and Gregory R. Noel, AW-101 Turner Hall, 1102 S. Goodwin Ave., University of Illinois at Urbana-Champaign, Urbana, IL 61801; and Joseph L. Spencer, 1816 S Oak St, MC-652, Illinois Natural History Survey, Champaign, IL 61820
- 11:30 006 Effect of diet on female reproduction in the harvestman *Phalangium opilio* (Opiliones: Phalangiidae).
Cora M. Allard and Kenneth V. Yeargan, S-225 Ag Science North, University of Kentucky, Lexington, KY 40546
- 11:42 007 The effect of egg age on the infectivity of *Moniliformis moniliformis* to the intermediate host, *Periplaneta americana*.
Terry R. Haverkost, 905 W. 25th St. Bruner Hall, University of Nebraska-Kearney, Kearney, NE 68849

March 24, 2003

Monday Morning

BS/MS Student Competition Papers

Sections Cc, F, Fa

10:30 am – 12:00 pm

Senate A/B

- 10:30 008 Seasonal fluctuations in population densities of the corn flea beetle and their impact on the incidence of Stewart's wilt in sweet corn.
Kelly A. Cook, Richard A. Weinzierl and Jerald K. Pataky, Turner Hall, 1102 South Goodwin, University of Illinois, Urbana, IL 61801; Paul D. Esker and Forrest W. Nutter, Jr., Plant Disease Epidemiology, 251 Bessey Hall, Iowa State University, Ames, IA 50011
- 10:42 009 Soybean aphid (*Aphis glycines* Matsumura) is a vector of PVY.
Jeffrey A. Davis, David W. Ragsdale and Edward B. Radcliffe, 290 Hodson Hall, 1980 Folwell Ave., University of Minnesota-St. Paul, St. Paul, MN 55108
- 10:54 010 Insect-Virus Complex of *Aphis glycines* and Alfalfa Mosaic Virus in Soybeans
Emily E. Mueller, Craig R. Grau, and David B. Hogg, Department of Entomology, 1630 Linden Dr, University of Wisconsin, Madison, WI 53706
- 11:06 011 Within-field distribution of the soybean aphid, *Aphis glycines* (Homoptera: Aphididae) in North Dakota soybean.
Inderjit S. Saini and Phillip A. Glogoza, 202, Hultz Hall, PO Box 5346, North Dakota State University, Fargo, ND 58105-5346
- 11:18 012 Resistance mechanisms of sunflower hybrids to sunflower midge, *Contarinia schulzi* (Diptera: Cecidomyiidae).
John A. Fajardo and Gary J. Brewer, Department of Entomology, Hultz Hall, North Dakota State University, Fargo, ND 58102
- 11:30 013 Interactions between potato leafhoppers, glandular-haired alfalfa and insecticide timing.
Reid B. Durtschi, David B. Hogg, John L. Wedberg and Dan J. Undersander, 353 Moore Hall, 1575 Linden Drive, University of Wisconsin-Madison, Madison, WI 53706

March 24, 2003

Monday Morning

PhD Student Competition Papers

Sections Cc, F, Fa

10:30 am – 12:00 pm

Madison Ballroom

- 10:30 014 Landscape-based threat index for the aphid vectored virus potato virus Y.
Matthew W. Carroll, Ian V. MacRae, Robert A. Suranyi, Edward B. Radcliffe and David Ragsdale, 219 Hodson Hall, 1980 Folwell Ave, University of Minnesota, St. Paul, MN 55108
- 10:42 015 Expression and characterization of a soluble form of tomato spotted wilt virus Gn glycoprotein.
Anna E. Whitfield and Thomas L. German, 1630 Linden Dr, University of Wisconsin, Madison, WI 53706
- 10:54 016 Dissemination of soybean mosaic virus by aphids is altered by insecticides and herbicides.
Mary E. Lee, Chris M. Boerboom and Craig R. Grau, 1630 Linden Drive, University of Wisconsin-Madison, Madison, WI 53706
- 11:06 017 Japanese beetle dispersal: a mark, release, and recapture study.
Randy M. Hamilton, Rick E. Foster, Timothy J. Gibb and Cliff S. Sadof, Department of Entomology, Purdue University, West Lafayette, IN 47907
- 11:18 018 Oil-soluble dyes in larval diet of southwestern corn borer (Lepidoptera:Crambidae) as adult markers for dispersal studies.
Jawwad A. Qureshi and Lawrent L. Buschman, Department of Entomology, Kansas State University, Manhattan, KS 66506; James E. Throne, USDA-ARS Grain Marketing and Production Research Center, Manhattan, KS 66502; Sonny B. Ramaswamy, Department of Entomology, Kansas State University, Manhattan, KS 66506
- 11:30 019 Summer alatae production of soybean aphid in Minnesota.
Erin W. Hodgson, Robert C. Venette and David W. Ragsdale, 219 Hodgson, 1980 Folwell Ave., University of Minnesota, St. Paul, MN 55108

March 24, 2003

Monday Morning

PhD Student Competition Papers

Sections Cd, Cf

10:30 am – 12:00 pm

Wisconsin Ballroom

- 10:30 020 Corn rootworms in space and time.
Yong-Lak Park and Jon J. Tollefson, 13
Insectary Bldg., Iowa State University,
Ames, IA 50011
- 10:42 021 Field distribution and effects of *Bt*-corn
anthers on monarch butterfly larvae.
Patricia L. Anderson, Insectary, Iowa State
University, Ames, IA 50011; Richard L.
Hellmich and Leslie C. Lewis, Genetics
Laboratory, USDA-ARS Corn Insects and
Crop Genetics Research Unit, Ames, IA
50011
- 10:54 022 Influence of gall wasps and their parasitoids
on fitness of native prairie perennials
(Asteraceae: Silphium).
John F. Tooker and Lawrence M. Hanks,
320 Morrill Hall, 505 S. Goodwin Ave.,
University of Illinois at Urbana-Champaign,
Urbana, IL 61801
- 11:06 023 Cold hardiness of an exotic coccinellid,
Harmonia axyridis (Pallas).
Robert L. Koch, Mario Carrillo, Colleen
Cannon, Robert C. Venette and William D.
Hutchison, 219 Hodson Hall, 1980 Folwell
Ave., University of Minnesota, St. Paul, MN
55108
- 11:18 024 Effects of popcorn refuge on *Ostrinia*
nubilalis (Hübner) distribution and the
timing of *Diabrotica* beetle emergence.
Colothdian D. Tate, 118 Genetics Lab,
Iowa State University, Ames, IA 50014;
Richard L. Hellmich and Leslie C. Lewis,
USDA-ARS, Iowa State University, Ames,
IA 50011
- 11:30 025 (Z)-9-Pentacosene: contact pheromone of the
longhorned beetle *Megacyllene robiniae*.
Matthew D. Ginzel, Department of
Entomology, University of Illinois, Urbana,
IL 61801; Jocelyn G. Millar, Department of
Entomology, University of California,
Riverside, CA 91521; and Lawrence M.
Hanks, Department of Entomology,
University of Illinois, Urbana, IL 61801

March 24, 2003

Monday Afternoon

Award Luncheon
Capitol Ballroom
Michael Gray, Master of Ceremonies

March 24, 2003
Monday Afternoon
Symposium
Management Alternatives in Ornamental Entomology
1:30 – 5:00 pm
Madison Ballroom

Organizers and Moderators:

Clifford S. Sadof
Department of Entomology
Purdue University
West Lafayette, IN 47907

Lawrence M. Hanks
Department of Entomology
University of Illinois
Urbana, IL 61801

- 1:35 026 Introduction.
Clifford S. Sadof, Department of Entomology, Purdue University, West Lafayette, IN 47907
- 1:40 027 Compatibility of the citrus mealybug parasitoid, *Leptomastix dactylopii*, with low-risk insecticides.
Katharina B. Rothwangl, Department of Entomology, University of Illinois, Urbana, IL 61801; **Raymond A. Cloyd**, Department of Natural Resources and Environmental Sciences, University of Illinois, Urbana, IL 61801; and **Robert N. Wiedenmann**, Center for Economic Entomology, Illinois Natural History Survey, Champaign, IL 61820
- 2:00 028 Interactions between soil applications of insecticides and *Tiphia vernalis*, a biological control agent for Japanese beetle.
Michael E. Rogers and **Daniel A. Potter**, Department of Entomology, S-225 Agric. Sci. Bldg. N., University of Kentucky, Lexington, KY 40546-0091
- 2:20 029 Natural enemies of calico scale and effects of commonly used pesticides.
Jamee L. Hubbard and **Daniel A. Potter**, Department of Entomology, S-225 Agric. Sci. Bldg. N., University of Kentucky, Lexington, KY 40546-0091
- 2:40 030 Evaluation of lethal and sub-lethal effects of

greenhouse pesticides on the soil-dwelling predatory mite, *Hypoaspis miles*.
Ana R. Cabrera and Raymond A. Cloyd,
Department of Natural Resources and
Environmental Sciences, University of
Illinois, Urbana, IL 61801; and Edmond R.
Zaborski, Center for Economic Entomology,
Illinois Natural History Survey, Champaign,
IL 61820

3:00

BREAK

3:20

031 Comparison of *Beauveria bassiana*,
Marathon, and Talstar on survivorship of
black vine weevil adults, *Otiorhynchus*
sulcatus (Coleoptera: Curculionidae).
Vera A. Krischik and Lina Flor, 219
Hodson Hall, 1980 Folwell Ave., University
of Minnesota, St. Paul, MN 55108

3:40

032 Potential effects of geranium and other
flower plantings to control Japanese beetles.
David W. Held and Daniel A. Potter,
Department of Entomology, S-225 Agric.
Sci. Bldg. N., University of Kentucky,
Lexington, KY 40546-0091

4:00

033 Alternatives to pesticides for the control of
black cutworm in golf courses.
Steve Hong and Chris Williamson,
Department of Entomology, 246 Russell
Labs, 1630 Linden Dr., University of
Wisconsin, Madison, WI 53706

4:20

034 Use of conservation biological control to
manage euonymus scale.
Eric J. Rebek and Clifford S. Sadof,
Department of Entomology, Purdue
University, West Lafayette, IN 47907

4:40

035 Conservation biological control of pine
needle scale.
Ashley Bennett, Department of
Entomology, 320 Morrill Hall, 505 S.
Goodwin Ave., University of Illinois,
Urbana, IL 61801; Clifford S. Sadof,
Department of Entomology, Purdue
University, West Lafayette, IN 47907; and
Lawrence M. Hanks, Department of
Entomology, 320 Morrill Hall, 505 S.
Goodwin Ave., University of Illinois,
Urbana, IL 61801

March 24, 2003
Monday Afternoon

Symposium
Urban Entomology in the North Central Region
1:30 – 5:00 pm
Senate A/B

Organizers and Moderators:

Suresh K. Prabhakaran

Dow AgroSciences
5966 East Kitchen Lane
Mooresville, IN 46158

and

Shripat T. Kamble

Department of Entomology
University of Nebraska
Lincoln, NE 68583

- 1:30 036 Introduction.
Suresh Prabhakaran, Dow AgroSciences,
5966 E. Kitchen Ln., Mooresville, IN 46158
- 1:35 037 Tergal gland-related biology in the German
cockroach.
Kurt D. Saltzmann, Kristin A. Saltzmann,
Jonathan J. Neal and Gary W. Bennett,
Department of Entomology, Purdue
University, West Lafayette, IN 47907
- 1:50 038 As the crow flies: spread of West Nile Virus.
Phillip A. Glogoza, North Dakota State
University, P O Box 5346, Fargo, ND 58105
- 2:05 040 Effects of environmental factors on
arthropods associated with landscape
mulches.
Kyle K. Jordan and Susan C. Jones,
Department of Entomology, 1991 Kenny
Road, The Ohio State University, Columbus,
OH 43210
- 2:20 041 Stored-product insects in urban
environments: observations from sampling
and trapping.
Subramanyam Bhadriraju, 201
Shellenberger Hall, Kansas State University,
Manhattan, KS 66506
- 2:35 042 Efficacy of DeltaGard G, Talstar EZ G, and
Viper G against selected nuisance ants in
Nebraska when applied as a perimeter
treatment.
Neil A. Spomer and Shripat T. Kamble,
Department of Entomology, University of
Nebraska-Lincoln, Lincoln, NE 68583
- 2:50 043 The annual ant invasion experience: control

strategies for a homeowner.

Venkat Pedibhotla, Casey McDonald, Rami Soufi and Bruce Augustin, The Scotts Company, 14111 ScottsLawn Rd., Marysville, OH 43041

3:05

BREAK

3:20

044

Termite activity and distribution on the University of Iowa campus.

Robert R. Setter and Kasey J. Hutchinson, Univ of Iowa, Iowa City, IA 52242

3:35

045

Research on molecular phylogeny and caste differentiation in Indiana *Reticulitermes* spp.

Michael E. Scharf, Jody M. Aleong, Gary W. Bennett and Jesse R. Hoteling, Department of Entomology, Purdue University, West Lafayette, IN 47907; Chow-Yang Lee, 11800 Penang, Universiti Sains Malaysia, Penang, Malaysia, 11800; and Barry R. Pittendrigh, Catina R. Ratliff, Dancia Wu-Scharf, Changlu Wang and Weimin Ye, Dept. of Entomology, Purdue University, West Lafayette, IN 47907

3:50

046

First record of *Microcerotermes* (Isoptera: Termitidae: Amitermitinae) from the Continental USA.

Robert R. Setter, 260 USB, University of Iowa, Iowa City, IA 52242; and Timothy G. Myles, 33 Willcocks St., Faculty of Forestry, Univ. of Toronto, Toronto, ON M5S 3B3

4:05

047

Nest evacuation behavior in *Reticulitermes flavipes* (Isoptera: Rhinotermitidae).

Margaret A. Schwinghammer and Richard M. Houseman, 1-87 Agriculture Bldg., University of Missouri - Columbia, Columbia, MO 65211

4:20

048

Field efficacy of Noviflumuron for control of the Eastern subterranean termite, *Reticulitermes flavipes* (Kollar).

Michelle S. Smith, 1950 E. Greyhound Pass #18, Dow AgroSciences, Carmel, IN 46033; and Suresh Prabhakaran, Dow AgroSciences, 5966 East Kitchen Lane, Mooresville, IN 46158

4:35

049

Field performance of noviflumuron to control subterranean termites in Nebraska.

Shripat T. Kamble, 201 PI, Department of Entomology, University of Nebraska, Lincoln, NE 68583; and Suresh K. Prabhakaran, 5966 East Kitchen Lane, Dow AgroSciences, Mooresville, IN 4615

4:50

050

Targeting termites: placement considerations for bait stations.

Susan C. Jones, 1991 Kenny Rd., Extension

Entomology Building, Ohio State
University, Columbus, OH 43210

- 5:05 051 Perimeter treatments for subterranean termite control.
Robert W. Davis, Bayer Environmental Sciences, Pflugerville, TX 78660; and Mark Coffelt, Bayer Environmental Sciences, 7016 Mercier Ct., Kansas City, MO 64118

March 24, 2003 Monday Afternoon

Submitted Papers Sections A, C, D, F 1:30 – 5:00 pm Wisconsin Ballroom

- 1:40 052 Geographical differentiation and speciation in *Eurosta solidaginis*.
Timothy P. Craig and Joanne K. Itami, 10 University Drive, University of Minnesota Duluth, Duluth, MN 55812
- 1:52 053 Application of Powdered Sugar to Adult Honey Bees (*Apis mellifera* L.) for Varroa Mite Control.
Nicholas P. Aliano and Marion D. Ellis, 202 Plant Industry Bldg., Department of Entomology, University of Nebraska, Lincoln, NE, 68583
- 2:04 054 Biological Control of *Lygus lineolaris* by *Peristenus* spp. in Strawberry.
Kelley J. Tilmon, 430 Lincoln Drive, Univ. of Wisconsin, Madison, WI 53706; Michael P. Hoffmann, Department of Entomology, Cornell University, Ithaca, NY, 14853
- 2:16 055 On-farm evaluation of a reduced-risk insect management program for blueberry.
Rufus Isaacs, Keith S. Mason, Vicki Morrone and John C. Wise, Michigan State Univ., 202 CIPS, East Lansing, MI 48824
- 2:28 056 Resistance to diatomaceous earth by three stored-product insects.
Paul G. Fields, 195 Dafoe Rd., Agriculture and Agri-Food Canada, Winnipeg, ME, R2M 2K2
- 2:40 057 Performance of *Ostrinia nubilalis* families on diet containing lyophilized *Bt* corn tissue.
Douglas V. Sumerford, Genetics Bldg., Iowa State University, USDA-ARS, Ames, IA 50011; Craig A. Abel, USDA-ARS-SIMRU, Stoneville, MS 38776, Richard L.

- Hellmich, Genetics Bldg., Iowa State University, USDA-ARS, Ames, IA 50011
- 2:52 **BREAK**
- 3:12 058 Mate location by the longhorn beetle, *Neoclytus acuminatus*.
Emerson S. Lacey and Lawrence M. Hanks, Department of Entomology, University of Illinois, Urbana, IL 61801; Jocelyn G. Millar, 102 Entomology, University of California, Riverside, CA 92521
- 3:24 059 Stable isotope evidence of restoration of arthropod food web interactions following invasive plant removal.
Claudio Gratton, 444 Russell Labs, 1630 Linden Dr., University of Wisconsin, Madison, WI 53706; Robert F. Denno, Dept. of Entomology, 4112 Plant Science Bldg, Univ. of Maryland, College Park, MD 20742
- 3:36 060 Insect populations on four species of Solanaceae planted in covered and uncovered soil.
Mark E. Headings, 1328 Dover Road, The Ohio State University Agric. Tech. Institute, Wooster, OH 44691
- 3:48 061 Refining regional monitoring of sugarbeet root maggot using historical data.
Ian V. MacRae, University of Minnesota, UMN NWROC, 2900 University Ave, Dept. of Entomology, Crookston, MN 56716; Mark Boetel, Dept. of Entomology, North Dakota State University, Fargo, ND 58105
- 4:00 062 Assessment of tarnished plant bug (Heteroptera: Miridae) feeding injury and impacts on sugarbeet yield.
Justin O. Knott, Mark A. Boetel and Phillip A. Glogoza, 202 Hultz Hall, Department of Entomology, North Dakota State University, Fargo, ND 58105
- 4:12 063 Evaluation of a potential stable fly repellent for horses and beef cattle.
David J. Boxler and John B. Campbell, 461 West University Dr., University of Nebraska, WCREC, North Platte, NE 69101

March 24, 2003
Monday Afternoon

Student Competition Posters
All BS, MS and PhD Posters
1:30 – 5:00 pm
University Room

(Authors present 3:00 – 4:00 pm)

- D064 Impact of Cry3Bb1 transgenic and conventionally treated maize on coccinellids in South Dakota.
Bradley L. McManus and Billy W. Fuller, Plant Science Department, South Dakota State University, Brookings, SD 57006; and Mark Boetel, 256 Hultz Hall, Dept. of Entomology, North Dakota State University, Fargo ND 58105
- D065 Catnip, *Nepeta cataria* (Lamiales: Lamiaceae), a closer look: comparative repellents and seasonal ecology.
Gretchen E. Schultz, Erica Simbro, Jason B. Belden, Junwei Zhu and Joel Coats, Department of Entomology, Iowa State University, Ames, IA 50011
- D066 Development of fluorescence assay for receptor characterization.
Emily-Jean K. Gartrell, Man-Yeon Choi and Russell A. Jurenka, Department of Entomology, 428 Science II, Iowa State University, Ames, IA 50011
- D067 Additive effects of juvenile hormone homologues in *Heliothis virescens*.
Angela M. Tucker, Department of Entomology, 123 West Waters Hall, Kansas State University, Manhattan, KS 66506-4004; Anna Rachinsky, Department of Biology, 10 University Drive, University of Minnesota at Duluth, Duluth, MN 55812-2496; and Sonny B. Ramaswamy, Department of Entomology, 123 West Waters Hall, Kansas State University, Manhattan, KS 66506-4004
- D068 Garlic mustard population ecology in Indiana: opportunities for biological control.
Kimberly A. Rebek and Robert J. O'Neil, Department of Entomology, Purdue University, West Lafayette, IN 47907
- D069 Patch Effects on Coccinellidae (Coleoptera) in Alfalfa Fields in Eastern Nebraska, USA.
James C. Kriz and Stephen D. Danielson, 211 Plant Industry Building, University of Nebraska - Lincoln, Lincoln, NE 68583; Jim R. Brandle, 3B Plant Industry Building, University of Nebraska - Lincoln, Lincoln, NE 68583; and Erin Blankenship and Geoff

- M. Henebry, 113 Nebraska Hall, University of Nebraska - Lincoln, Lincoln, NE 68588
- D070 Potential for biological control of chinch bug *Blissus occiduus* Barber, in buffalograss. **Jeffrey D. Carstens**, Frederick P. Baxendale and Tiffany M. Heng-Moss, 202 Plant Industry Building, University of Nebraska-Lincoln, Lincoln, NE 68583
- D071 Who done it? Exploring forensic entomology with young detectives. **Timothy E. Huntington**, William J. Allgeier, Frederick P. Baxendale and Leon G. Higley, Department of Entomology, 202 Plant Industry, University of Nebraska-Lincoln, Lincoln, NE 68583
- D072 The effect of corn phenology on establishment success of western corn rootworm larvae. **Yvonne M. Schweikert** and Bruce E. Hibbard, 204 Curtis Hall, University of Missouri, Columbia, MO 65211
- D073 Influence of destruction of male corn plants on movement of *Ostrinia nubilalis* (Hübner) larvae in *Zea mays* L. hybrid seed production fields. **Kate T. Kronback**, Iowa State University, Ames, IA 50011; and Richard L. Hellmich and Leslie C. Lewis, USDA-ARS Corn Insect and Crop Genetics Research Unit, Ames, IA 50011
- D074 Soil invertebrates as bioindicators of the effectiveness of wet meadow restoration. **John J. Riggins** and Wyatt W. Hoback, Department of Biology, 905 W 25th Street, University of Nebraska at Kearney, Kearney, NE 68849; and Craig A. Davis, Department of Zoology, 430 Life Sciences West, Oklahoma State Univ., Stillwater, OK 74078
- D075 Host sequence for Red River Valley *Lygus* Bugs (Heteroptera: Miridae): a two-year investigation. **Justin O. Knott**, Mark A. Boetel and Phillip A. Glogoza, Department of Entomology, 202 Hultz Hall, North Dakota State University, Fargo, ND 58105
- D076 Influence of Cry3Bb1 hybrid on lacewing and minute pirate bug predators in South Dakota. **Michelle L. Harland** and Billy W. Fuller, Room 248 C NPB, Plant Science Department, South Dakota State University, Brookings, SD 57006
- D077 Resistance to multiple chinch bug species in buffalograss and sorghum. **Wyatt G. Anderson**, Tiffany M. Heng-Moss and Frederick P. Baxendale, 202 Plant

- D078 Industry, Department of Entomology,
University of Nebraska, Lincoln, NE 68586
Baseline toxicity for sunflower-labeled
insecticides to control sunflower moth
Homoeosoma electellum (Hulst)
(Lepidoptera: Pyralidae).
Jared A. Hopper, Gerald E. Wilde and Kun
Yan Zhu, Department of Entomology,
Kansas State Univ., Manhattan, KS 66506
- D079 Biology and control of the mint bud mite.
Chris C. Perry and Jeffrey A. Wyman,
Department of Entomology, 537 Russell
Labs, 1630 Linden Dr, UW-Madison,
Madison, WI 53703
- D080 Generic limits in the Cenocoeliinae
(Hymenoptera: Braconidae).
Kevin M. Pitz and Michael J. Sharkey, S-
225 Agriculture Science Center North,
Department of Entomology, University of
Kentucky, Lexington, KY 40546
- D081 Comparison of Cry toxin binding to brush
border membranes in *Bacillus thuringiensis*-
resistant and -susceptible *Ostrinia nubilalis*.
Huarong Li, Department of Entomology,
Kansas State University, Manhattan, KS
66506; Joel Gonzalez-Cabrera and Juan
Ferré, Department of Genetics, University of
Valencia, 46100-Burjassot(Valencia), Spain;
Brenda Oppert, Grain Marketing and
Production Research Center, USDA-ARS,
Manhattan, KS 66502; Randall A. Higgins,
Lawrent L. Buschman and Kun Yan Zhu,
Department of Entomology, Kansas State
University, Manhattan, KS 66506; and
Fangneng Huang, Department of Grain
Science and Industry, Kansas State
University, Manhattan, KS 66506
- D082 The effect of snow cover on overwintering
of *Aphthona* flea beetles.
Ankush Joshi and Denise L. Olson, Hulz
Hall, Dept. of Entomolgy, North Dakota
State University, Fargo, ND 58105
- D083 Comparing the effects of floral nectar and
aphid honeydew on a parasitoid.
Jana C. Lee and George E. Heimpel, 219
Hodson Hall, 1980 Folwell Ave., University
of Minnesota, St. Paul, MN 55108; and Gary
L. Leibee, University of Florida, Apopka, FL
32703

- D084 Growth, development, and survival of *Nosema pyrausta*-infected European corn borers (Lepidoptera: Crambidae) reared on meridic diet and Cry1Ab.
Brendon J. Reardon, Iowa State University, Ames, IA 50011; and Richard L. Hellmich and Leslie C. Lewis, Genetics Laboratory, USDA-ARS, Iowa State University, Ames, IA 50011
- D085 **Ayanave Majumdar** and Mark A. Boetel, Department of Entomology, 202 Hultz Hall, North Dakota State University, Fargo, ND 58105; Stefan T. Jaronski, Northern Plains Agricultural Research Laboratory, USDA-ARS, 1500 North Central Avenue, Sidney, MT, 59270; and Robert J. Dregseth and Allen J. Schroeder, Department of Entomology, 202 Hultz Hall, North Dakota State University, Fargo, ND 58105
- D086 AFLP analysis of screwworm *Cochliomyia hominivorax* (Diptera: Calliphoridae) from a recent outbreak in Mexico.
Sasi Maliphan, Steven R. Skoda, Jeff T. Krumm and John E. Foster, 202 Plant Industry Bldg., University of Nebraska - Lincoln, Lincoln, NE 68583-0816
- D087 BLAST analysis of primers for amplifying regions of mtDNA in *Cochliomyia hominivorax* (Diptera: Calliphoridae).
Jeffrey T. Krumm, 013 Plant Industry Bldg., University of Nebraska – Lincoln, Lincoln, NE 68583-0816; Steven R. Skoda, 305A Plant Industry Bldg., USDA-ARS, Lincoln, NE 68583-0816; Sasi Maliphan and John E. Foster, 312F Plant Industry Bldg., University of Nebraska - Lincoln, Lincoln, NE 68583-0816
- D088 Learning assessment: evaluating performance between students taking Host Plant Resistance through distance education and students taking Host Plant Resistance on campus.
Pete L. Clark, Connie I. Reimers-Hild and John E. Foster, 312 F Plant Industry Building, University of Nebraska - Lincoln, Lincoln, NE 68583-0816
- D089 Efficacy of seed- and foliar-applied insecticides for bean leaf beetle and bean pod mottle virus management.
Jeffrey D. Bradshaw and Marlin E. Rice, Department of Entomology, Iowa State University, Ames, IA 50011; and John H. Hill, Department of Plant Pathology, Iowa State University, Ames, IA 50011

- D090 Seasonal oviposition of the western corn rootworm: does crop phenology play a role?
Christopher M. Pierce and Michael E. Gray, Department of Crop Sciences, 1102 S. Goodwin Avenue, University of Illinois, Urbana, IL 61801
- D091 The effects of age on mating, egg laying patterns, fecundity and fertility of banded sunflower moth (Lepidoptera: Cochylidae).
Maboko S. Mphosi, Stephen P. Foster and Bruce D. Morris, 202 Hultz Hall, North Dakota State University, Fargo, ND 58105
- D092 Development of a simple heat accumulation model for predicting mortality of *Tribolium castaneum* (Herbst) life stages exposed to elevated temperatures.
Rizana M. Mahroof and Bhadriraju Subramanyam, 201 Shellenberger Hall, Department of Grain Science and Industry, Kansas State University, Manhattan, KS 66506; and Paul W. Flinn, Grain Marketing and Production Research Center, USDA-ARS, Manhattan, KS 66502
- D093 The efficacy of biorational versus chemical insecticides against the crucifer flea beetle, *Phyllotreta cruciferae* (Coleoptera: Chrysomelidae), on canola.
Frank B. Antwi, Denise L. Olson and Donald R. Carey, 202 Hultz Hall, Department of Entomology, North Dakota State University, Fargo, ND 58105
- D094 Influence of adjacent habitats and natural host on grape berry moth, *Endopiza viteana* Clemens (Lepidoptera: Tortricidae), impact on vineyards.
Natalia Botero-Garces and Rufus Isaacs, 202 CIPS, Michigan State University, East Lansing, MI 48824
- D095 Studies on the impact of alternate host phenology on the development and survivorship of western corn rootworm.
Peter G. Chege and Thomas L. Clark, Department of Entomology, 1-87 Agriculture Building, University of Missouri, Columbia, MO 65211; and Bruce E. Hibbard, USDA-ARS, 204 Curtis Hall, University of Missouri, Columbia, MO 65211
- D096 Economic injury levels for the European corn borer and corn leaf aphid in high-oil maize.
Scott E. Quinton, G. C. Brown, D. W. Johnson and R. T. Bessin, 1167 Turkey Foot Rd. Unit 20, Univ. of Kentucky, Lexington, KY 40502

- D097 No adverse effect of coleopteran-specific Cry3Bb1 toxin released from root exudates and biomass of transgenic corn on earthworms.
Aqeel Ahmad and Gerald E. Wilde,
Department of Entomology, 123 West Water Hall, Kansas State University, Manhattan, KS 66506
- D098 Ecological assessment of arthropod populations in relation to different tillage and Roundup-Ready cropping systems.
Michal Roberts and Gerald E. Wilde,
Department of Entomology, 123 West Waters Hall, Kansas State University, Manhattan, KS 66506

March 24, 2003

Monday Evening

6:00 – 8:00 pm.

Capitol Ballroom

Photo Salon

March 24, 2003

Monday Evening

8:00 – 10:00 pm.

Capitol Ballroom

Linnaean Games Semi-Final and Final Rounds

Moderator:

Marlin Rice, Gamesmaster

Iowa State University

March 25, 2003

Tuesday Morning

Registration

7:30 am – 5:00 pm

March 25, 2003

Tuesday Morning

Continental Breakfast

7:00 – 8:00 am

Sponsored by Bayer Crop Sciences

March 25, 2003

Tuesday Morning

BCE Symposium

Enhancing Entomology through Digital Technology

8:00 – 11:30 am

Capitol B

Organizer and Moderator:

Shripat T. Kamble

Department of Entomology

University of Nebraska

Lincoln, NE 68583

- 8:00 099 Introduction: Enhancing Entomology through digital technology.
Shripat T. Kamble, 201 Plant Industry, Department of Entomology, University of Nebraska, Lincoln, NE 68583-0816
- 8:05 100 Educating with 3D graphics
Vishal M. Singh, 002 ACB, University of Nebraska - Lincoln, Lincoln, NE 68583
- 8:35 101 Tricks and techniques in enhancing digital images.
James A. Kalisch, Department of Entomology, 210 Plant Industry Bldg., University of Nebraska, Lincoln, NE 68583
- 9:05 102 Using microscopy in digital imaging of insects.
Scott A. Payne and Thomas Freeman, 1307 North 18th Street - NCSL, North Dakota State University, Fargo, ND 58105
- 9:35 **BREAK**
- 9:55 103 Selecting digital cameras and accessories.
Roy E. Larimer, Microoptics, Inc, 133 Sagamore Rd #B-8, Tuckahoe, NY 10707

- 10:25 104 Morphological, physiological, molecular illustrations and future trends in the digital imaging of insects.
Roy E. Larimer, Microoptics, Inc, 133 Sagamore Rd #B-8, Tuckahoe, NY 10707
- 10:55 105 Practical digital videography in entomology.
Vishal M. Singh and Bradley A. Mills, East Campus 0918, University of Nebraska - Lincoln, Lincoln, NE 68583

March 25, 2003
Tuesday Morning

Symposium

Gene-for-Gene Interactions in the Wheat-Hessian Fly System

8:00 – 11:30 am

Assembly Room

Organizer and Moderator:

Christie E. Williams

Department of Entomology

USDA/ARS

Purdue University

West Lafayette, IN 47907

- 8:00 106 Introduction.
Christie E. Williams, USDA-ARS, Department of Entomology, Purdue University, West Lafayette, IN 47907-0535
- 8:05 107 What is in a biotype? The tug of war between the Hessian fly and resistant wheat.
Roger H. Ratcliffe, USDA-ARS, Lafayette, IN, 47909; Nilsa A. Bosque-Perez, Dept. of Plant, Soil & Entomological Sciences, Univ. of Idaho, Moscow, ID 83844; and Herbert W. Ohm, Department of Agronomy, Purdue University, West Lafayette, IN 47905
- 8:40 108 Hessian fly resistance and management in the Southeastern United States.
G. David Buntin and Jerry Johnson, Georgia Station, 1109 Experiment Street, University of Georgia, Griffin, GA 30223
- 9:10 109 Fitness costs of major gene resistance to the Hessian fly.
Kirk M. Anderson and Marion O. Harris, Department of Entomology, 202 Hultz Hall, North Dakota State University, Fargo, ND

- 58105
- 9:40 **BREAK**
- 10:00 110 Microscopy studies of plant reactions to attack by virulent and avirulent Hessian fly larvae.
Karin M. Gross, Department of Entomology, 202 Hultz Hall, North Dakota State University, Fargo, ND 58105; Odette Rohfritsch, C.N.R.S., Institut de Biologie Moleculaire des Plantes, Strasbourg, France; and Thomas Freeman and Marion O. Harris, Department of Entomology, 202 Hultz Hall, North Dakota State University, Fargo, ND 58105
- 10:30 111 Expression of Hessian fly genes during compatible interactions with wheat.
Richard H. Shukle and Alisha Johnson, USDA-ARS, Department of Entomology, Purdue University, West Lafayette, IN 47907-0535; and Mikio Yoshiyama, Department of Entomology, Purdue University, West Lafayette, IN 47907-0535
- 11:00 112 Molecular characterization of wheat responses to attack by the Hessian fly.
Christie E. Williams, USDA-ARS, Department of Entomology, Purdue University, West Lafayette, IN 47907-0535

March 25, 2003
Tuesday Morning

NCR-125 Symposium
Risk Assessment in Biological Control
8:00 – 11:30 am
Senate A/B

Organizers and Moderators:

David J. Horn

Department of Entomology
Ohio State University
Columbus, OH 43210

J. Steven Yaninek

Department of Entomology
Purdue University
West Lafayette, IN 47907

- 8:00 113 Introduction.
J. S. Yaninek, Department of Entomology, Purdue Univ., West Lafayette, IN 47907

- 8:05 114 From safe to sorry? Changing perceptions of biological control from the 1960s to the present.
David J. Horn, Department of Entomology, 1735 Neil Ave., Ohio State University, Columbus, OH 43210
- 8:35 115 The power of a paradigm: risk assessment and biological control.
Robert K. Peterson, 333 Leon Johnson Hall, Montana State University, Bozeman, MT 59717; and **Sharlene E. Sing**, USDA Forest Service, Forestry Sciences Laboratory, Montana State University, Bozeman, MT 59717
- 9:05 116 Risk assessment in classical biological control: are non-target effects the only concern?
J.P. Michaud, 1232 240th Ave, Kansas State University, Hays, KS 67601
- 9:35 **BREAK**
- 9:50 117 The costs and benefits of qualitative risk assessments for biocontrol agents.
Robert C. Venette and **George E. Heimpel**, 1980 Folwell Ave., 219 Hodson Hall, Department of Entomology, University of Minnesota, St. Paul, MN, 55108; and **Deborah McCullough**, 243 Natural Science Bldg., Dept. of Entomology, Michigan State University, East Lansing, MI 48824
- 10:20 118 The multicolored Asian lady beetle, *Harmonia axyridis*: friend or foe?
Joseph Kovach, **Margaret Huelsman** and **Todd Steiner**, 1689 Madison Ave., Ohio State University, Wooster, OH 44691
- 10:50 119 Federal regulatory requirements - plant pest, environmental and legal assessments for biological control agents of invertebrates.
Robert V. Flanders, USDA APHIS PPQ, 4700 River Rd. Unit 133, Riverdale, MD 20737
- 11:20 120 Conclusions and discussion.
David J. Horn, Department of Entomology, 1735 Neil Ave., Ohio State University, Columbus, OH 43210

March 25, 2003
Tuesday Morning

Submitted Papers
Sections C & F
8:30 – 11:30 am
Capitol A

- 8:30 121 *Chrysomela confluens* performance is affected by tannins and nutrients but not phenolic glycosides.
Brian J. Rehill, Russell Laboratories, 1630 Linden Drive, University of Wisconsin, Madison, WI 53706; Jen Schweitzer, Biology Department, Northern Arizona University, Flagstaff, AZ 86011; Richard L. Lindroth, Russell Laboratories, 1630 Linden Drive, University of Wisconsin, Madison, WI 53706; Gregory Martinsen and Thomas G. Whitham, Biology Department, Northern Arizona University, Flagstaff, AZ 86011
- 8:42 122 Western bean cutworm behavior in a corn/dry beans rotation in western Nebraska.
Gary L. Hein, 512 E. 35th St, Univ. Nebraska, Scottsbluff, NE, 69361
- 8:54 123 Influence of potassium availability on soybean aphid population dynamics.
Scott W. Myers and John L. Wedberg, 536 Russell Labs, UW, Madison, WI, 53706
- 9:06 124 Redistribution of *Aphelinus albipodus* for biological control of soybean aphid.
Bob A. Ellingson and David B. Hogg, Department of Entomology, University of Wisconsin-Madison 1630 Linden Dr., Madison, WI 53706
- 9:18 125 Efficacy of Cruiser 5FS for control of bean leaf beetle and soybean aphid in soybean.
Christopher Clemens, Syngenta Crop Protection, Northern Region Technical Center, 495 County Rd. 1300N, Champaign, IL 61822; and Cliff Watrin, Syngenta Crop Protection, 21315 Viking Blvd, Wyoming, MN 55092

- 9:30 126 Efficacy of Cruiser 5FS0 for control of secondary corn insects.
Steve Mroczkiewicz and Cliff Watrin, 21315 Viking Blvd, Syngenta Crop Protection, Wyoming, MN 55092
- 9:42 **BREAK**
- 10:00 127 Thinking outside the insecticide box: Predicting the agronomic, economic and environmental benefits of transgenic rootworm corn.
Marlin E. Rice, 103 Insectary, Iowa State University, Ames, IA 50011
- 10:12 128 YieldGard® Rootworm - A new technology for the control of western and northern corn rootworm (*Diabrotica* spp.).
Robert J. Starke, Todd DeGooyer and Wilmar Morjan, 800 N Lindbergh, Monsanto Company, St. Louis, MO 63167
- 10:24 129 Using Bt's to achieve economic levels of hostplant non-preference: Herculexä vs. black cutworm.
Steve A. Lefko, Bryon Van Ballegooyen and Marc Harper, 7250 NW 62nd Ave., Pioneer Hi-Bred Int'l Inc., Johnston, IA 50131
- 10:36 130 An overview of the performance of Mustang Max from FMC.
Kathy A. Leiferman, Keith Evans, Howard Guscar, Brent Neuberger, Robert Perry and Samuel Tutt, 1735 Market Street, FMC Corporation, Philadelphia, PA 19103
- 10:48 131 Introduction of Mustang Max and efficacy studies on *Cerotoma trifurcata*.
Brent A. Neuberger, FMC, 500 31st Street, West Des Moines, IA 50265; **Marlin E. Rice** and **Jeffrey D. Bradshaw**, Department of Entomology, Iowa State University, Ames, IA, 50011
- 11:00 132 Effects of soil insecticides on field corn tolerance to postemergence applications of Mesotrione.
Scott C. Ditmarsen, 9376 Braun Rd., Cross Plains, WI 53528; **Steven Nolting** and **Mark Peterson**, 9330 Zionsville Rd., Indianapolis, IN 46268; **Sarah Taylor-Lovell**, 1217 E. Windwood Lane, Mahomet, IL 61853; **Larry G. Thompson**, 21390 S. Oakleaf Dr., Bucyrus, KS 66013; and **Jon Babcock**,

March 25, 2003

Tuesday Morning and Afternoon

Submitted Posters

All Sections

8:00 am – 5:00 pm

University Room

(Authors present 4:00 – 5:00 pm)

- D133 Stage-specific expression of actin genes in the Yellow Fever mosquito, *Aedes aegypti*.
Irina Vyazunova and Que Lan, 1630 Linden Drive, University of Wisconsin, Madison, WI 53706
- D134 Suppression of soybean aphid by the minute pirate bug.
Claire E. Rutledge and Robert J. O'Neil, Department of Entomology, Purdue University, West Lafayette, IN 47907-2089
- D135 Biological control of purple loosestrife in Illinois.
Robert N. Wiedenmann, Susan L. Post, Charles G. Helm, David J. Voegtlin, Michael R. Jeffords and Dylan Maddox, Center for Economic Entomology, Illinois Natural History Survey, Champaign, IL 61820
- D136 Impact of fire ants on soybean arthropods.
Michael P. Seagraves, S-225 Ag. Sci. North, Department of Entomology, Univ. of Kentucky, Lexington, KY 40546
- D137 Effects of flowering strips on Lepidoptera and their natural natural enemies in an organic apple orchard.
Paul M. Whitaker, 518 South Seventh Ave., University of Wisconsin-Marathon County, Wausau, WI 54401; and Daniel L. Mahr, Department of Entomology, 1630 Linden Drive, University of Wisconsin-Madison, Madison, WI 53706
- D138 Imperfect spatio-temporal synchrony of corn leaf aphids and lady beetles in cornfields.
Yong-Lak Park, Dept. of Entomology, Iowa State University, Ames, IA 50011
- D139 Pea protein combined with parasitoids to control stored-product insects.
Xingwei Hou and Paul G. Fields, 195 Dafoe Rd., Agriculture and Agri-Food Canada, Winnipeg, MB R2M 2K2; and Paul Flinn, Joel Perez-Mendoza and Jim Baker, U.S.

- Grain Marketing Research Lab., USDA-ARS, Manhattan, KS 66502
- D140 Using GIS to analyze spatial interactions between landscape attributes and adult corn rootworm population dynamics at the South Dakota areawide management site from 1997-2001.
Amber A. Beckler and Bryan W. French, USDA/ARS-Northern Grain Insects Research Lab, 2923 Medary Avenue, Brookings, SD 57006; Laurence D. Chandler, USDA/ARS-Northern Crop Science Lab, 1307 18th Street, Fargo, ND 58105; and Dave A. Beck, USDA/ARS-Northern Grain Insects Research Lab, 2923 Medary Avenue, Brookings, SD 57006
- D141 Transition to organic: Implications for pest management and soil biology.
Catherine E. Eastman, Edmond R. Zaborski and John T. Shaw, Center for Economic Entomology, Illinois Natural History Survey, Champaign, IL 61820; Michelle Wander, John Masiunas and Daniel Anderson, University of Illinois, Urbana, IL 61801; and Leslie Cooperband, University of Wisconsin, Madison, WI 53706
- D142 Predicting the spread of West Nile Virus in the U.S. using ecological niche modeling of infected mosquitoes.
Rodney S. Hanley and Grant M. Casady, Box 9007, Earth Systems Science Institute, University of North Dakota, Grand Forks, ND, 58202-9007
- D143 The effect of stable flies, *Stomoxys calcitrans* L., in the U.S. on weight gains of both confined beef cattle and on steers grazing on rangeland.
John B. Campbell, 461 West University Drive, University of Nebraska-WCREC, North Platte, NE 69101
- D144 Research on the management of the soybean stem borer in Kansas.
Phillip E. Sloderbeck, Lawrent L. Buschman and Randall A. Higgins, 123 Umberger Hall, Kansas State University, Manhattan, KS 66506
- D145 Educating the public about exotic species through an interactive website.
William W. Hoback and Kerri M. Skinner, 904 S. 25th Street, University of Nebraska-Kearney, Kearney, NE 68849
- D146 Community outreach through a local children's museum.
Shelly K. Kellogg, Blake Newton and Lynne Rieske-Kinney, S-225 Agricultural

- D147 Science Center North, University of Kentucky, Lexington, KY 40546
Crop profiles for U.S. agriculture: a searchable database on the World Wide Web.
Lowell Sandell and Douglas Johnson, S-225
Ag. Science Center North, University of Kentucky, Lexington, KY 40546-0091
- D148 Insecticide seed treatment effect on the severity of the corn (*Zea mays*) virus complex transmitted by the blackfaced leafhopper (*Graminella nigrifrons*).
Lowell Sandell and Ricardo Bessin, S-225
Ag. Science Center North, University of Kentucky, Lexington, KY 40546-0091
- D149 “Soybean” stem borer: an outbreak in Kentucky during the 2002 season.
Douglas W. Johnson, P.O. Box 469, 1205 Hopkinsville St., University of Kentucky, Princeton, KY 42445-0469
- D150 Corn response to mesotrione as affected by soil-applied organophosphate insecticides.
James J. Kells, Christina D. DiFonzo, Michael R. Jewett and Corey J. Guza, Entomology and Crop & Soil Sciences Departments, Michigan State University, East Lansing, MI 48824
- D151 Insecticide seed treatments for managing secondary insect pests in corn.
Murdick J. McLeod, 3850 N. 100 E., Pioneer Hi-Bred International, Windfall, IN 46076
- D152 Transcription profiling of wheat defense responses: Hessian fly versus microbial pathogens.
Christie E. Williams, Stephen B. Goodwin, Herbert W. Ohm, Joseph M. Anderson, Charles F. Crane, Stephen R. Scofield, Timothy A. Lohret and Oswald R. Crasta, USDA-ARS, Purdue University, West Lafayette, IN 47907
- D153 Control of black cutworm in Herculex I hybrid corn.
Jon Babcock, Dow AgroSciences, 13668 Magic Stallion Dr., Carmel IN 46032; James Bing, Mycogen Seeds, 301 Campus Dr., Huxley, IA 50124, Sarah Taylor-Lovell, 1217 E. Windwood Lane, Mahomet, IL 61853; Brian Olson, Dow AgroSciences, 22 Delancy Dr., Geneva, NY 14456; Scott Ditmarsen, Dow AgroSciences, 9376 Braun Rd., Cross Plains, WI 53528; Larry Thompson, 21390 S. Oakleaf Dr., Bucyrus, KS 66013; Terry

Wright, Dow AgroSciences, 9330 Zionsville Rd., Indianapolis, IN 46268; Randy Huckaba, Dow AgroSciences, 300 Frying Pan Hollow, Ferrum, VA 24088; and Ralph Lassiter, Dow AgroSciences, 10 Cherry Creek Cove, Little Rock, AR 72212

- D154 Proaxis: Midwest crop efficacy and commercialization update.
Jon Babcock, Dow AgroSciences, 13668 Magic Stallion Dr., Carmel, IN, 46032; Mark Hertlein, Dow AgroSciences, 9330 Zionsville Rd., Indianapolis, IN 46268; Sarah Taylor-Lovell, 1217 E. Windwood Lane, Mahomet, IL 61853; Brian Olson, Dow AgroSciences, 22 Delancy Dr., Geneva, NY 14456; Scott Ditmarsen, Dow AgroSciences, Cross Plains, WI 53528; and Larry Thompson, 21390 S. Oakleaf Dr., Bucyrus, KS 66013
- D155 The YieldGard® corn borer *Bt* corn insect resistance management (IRM) plan.
Todd A. DeGooyer and Robert J. Starke, Monsanto Company, 800 N. Lindbergh, St. Louis, MO 63167
- D156 An introduction to the YieldGard® rootworm *Bt* corn insect resistance management (IRM) plan.
Todd A. DeGooyer and Robert J. Starke, 800 N. Lindbergh, Monsanto Company, St. Louis, MO 63167
- D157 Effect of *Bt* corn expressing Cry3Bb1 protein for corn rootworm control on nontarget organisms.
Mohammad A. Al-Deeb and Gerald E. Wilde, 123 Waters Hall, Kansas State University, Manhattan, KS 66506
- D158 Quantifying western corn rootworm (Coleoptera: Chrysomelidae) intrafield movement with a rubidium marking technique.
Timothy M. Nowatzki, Blair D. Siegfried and Lance J. Meinke, 202 Plant Industry Bldg., Dept. of Entomology, University of Nebraska-Lincoln, Lincoln, NE 68583-0816
- D159 Corn rootworms, resistant transgenic corn, and weedy grasses: A recipe for resistance evolution?

- D160 **Ann M. Journey** and Kenneth R. Ostlie, 219 Hodson Hall, , Dept. of Entomology, University of Minnesota, St. Paul, MN 55108; and Gregg A. Johnson, Southern Research & Outreach Center, 35838 120th St., Univ. of Minnesota, Dept. of Agronomy & Plant Genetics, Waseca , MN 56093
- Effect of transgenic rootworm resistant corn and grassy weeds on western corn rootworm.
- Isaac O. Oyediran**, 1-87 Agriculture Bldg., Univ. of Missouri, Columbia, MO 65211; Bruce E. Hibbard, 204 Curtis Hall, Univ. of Missouri, Columbia, MO 65211; and Thomas L. Clark, 1-87 Agriculture Building, Univ. of Missouri, Columbia, MO 65211

March 25, 2003
Tuesday Afternoon

Student Affairs Symposium
The effects of crop plants on the third trophic level
1:15 – 5:00 pm
Senate A/B

Organizers and Moderators:

Jonathan G. Lundgren
Department of Entomology
University of Illinois
Urbana, IL 61801

Robert Ellingson
Department of Entomology
University of Wisconsin
Madison, WI 53706

- 1:15 161 Introduction.
Jonathan G. Lundgren, Department of Entomology, 320 Morrill Hall, University of Illinois, Urbana, IL
- 1:20 162 Host-mediated changes in parasitoid impact on *Bemisia tabaci* biodemography in comparative agroecosystems in Arizona.
Luis A. Canas, 37860 W Smith-Enke Rd, University of Arizona, Maricopa, AZ 85239; Steven E. Naranjo, 4135 E Broadway Rd, USDA-ARS Western Cotton Research Lab, Phoenix, AZ 85040; and Peter C. Ellsworth, 37860 W Smith-Enke Rd, University of Arizona, Maricopa, AZ 85239
- 1:40 163 Determining the impact of predators on a new invasive species: plant influences on predator-prey dynamics.

- Robert J. O'Neil** and Claire E. Rutledge,
Department of Entomology, Purdue
University, West Lafayette, IN 47907
- 2:00 164 Risk associated with predation on prey fed
crops with insecticidal properties.
Jonathan G. Lundgren, Department of
Entomology, 320 Morrill Hall, University of
Illinois, Urbana, IL 61801; and Robert N.
Wiedenmann, Center for Economic
Entomology, Illinois Natural History Survey,
Champaign, IL 61820
- 2:20 165 *Beauveria bassiana*, an endophyte of corn,
Zea mays.
Leslie C. Lewis, USDA-ARS, Iowa State
University, Ames, IA 50011
- 2:40 166 The impact of rootworm-resistant maize on
the abundance of selected non-target insects
in Nebraska.
Pete L. Clark, Department of Entomology,
13 Plant Industry Building, University of
Nebraska - Lincoln, Lincoln, NE 68583
- 3:00 **BREAK**
- 3:20 167 Biological control in interior plantscapes:
does plant size affect natural enemy success?
Raymond A. Cloyd, 384 National Soybean
Research Laboratory, 1101 West Peabody
Drive, University of Illinois, Urbana, IL
61801
- 3:40 168 Out of sight, out of mind: *Anagrus*, potato
leafhopper, and glandular trichomes.
William O. Lamp, Aaron Lovinger and
David Liewehr, Department of Entomology,
4112 Plant Sciences Bldg, University of
Maryland, College Park, MD 20742
- 4:00 169 Interactions between natural enemies and
transgenic insecticidal crops.
John J. Obrycki, Department of
Entomology, Iowa State University, Ames,
IA 50011; and John R. Ruberson,
Department of Entomology, University of
Georgia, Tifton, GA 31794
- 4:20 170 Can we manipulate pest-induced plant
volatiles to enhance biological control?
David C. Margolies, Department of
Entomology, Waters Hall, Kansas State
University, Manhattan, KS 66506-4004
- 4:40 171 Discussion and wrap-up.
Bob Ellingson, Department of Entomology,
University of Wisconsin, Madison WI 53706

March 25, 2003
Tuesday Afternoon

Joint ESA-ASA Symposium
Areawide Management of Corn Rootworm
1:15 – 5:00 pm
Capitol Ballroom

Organizers and Moderators:

Gerald Wilde

Department of Entomology
Kansas State University
Manhattan, KS 66056

Andy Seibert

John Deere Seeding Group
Moline, IL

- 1:15 172 Introduction.
G. Wilde, Department of Entomology,
Kansas State University, Manhattan, KS
66056
- 1:20 173 Corn rootworm areawide management: what
was the real impact of the program?
Laurence D. Chandler, USDA-ARS, Red
River Valley Agricultural Research Center,
Fargo, ND 58105
- 1:40 174 Corn rootworm area-wide management: an
experiment in how to do a program in a
different way.
Eldon E. Ortman, Department of
Entomology, Purdue University, West
Lafayette, IN 47907
- 2:00 175 Deliverable products from the Iowa area-
wide corn rootworm management project.
Jon Tollefson and Ed Berry, Department of
Entomology, Iowa State University, Ames,
IA 50011
- 2:20 176 Corn rootworm areawide management using
semiochemical bait insecticides in Kansas:
what we learned.
Gerald E. Wilde and Jeff Whitworth,
Department of Entomology, 123 West
Waters Hall, Kansas State University,
Manhattan, KS 66502; Phil Sloderbeck,
4500 E. Mary, Bldg 924, Kansas State
University Extension, Garden City, KS
67846; and Randall A. Higgins, Department
of Entomology, 123 West Waters Hall,
Kansas State University, Manhattan, KS

- 66502
- 2:40 177 Managing the western corn rootworm variant in the eastern corn belt: an economic assessment of areawide pest management. **Amelia A. West** and Marshall A. Martin, 403 W State St, Purdue University, West Lafayette, IN 47906
- 3:00 **BREAK**
- 3:20 178 Adult movement within an areawide site. **Bryan W. French**, 2923 Medary Ave., USDA-ARS, NGIRL, Brookings, SD 57006
- 3:40 179 Area-wide management using semiochemical baits: effects on non-target organisms. **Corey Gerber**, C. R. Edwards and Larry Bledsoe, Purdue University, Department of Entomology, West Lafayette, IN, 47907; and Michael E. Gray and Kevin L. Steffey, University of Illinois, Department of Crop Sciences, Urbana, IL 61801
- 4:00 180 Potential resistance issues related to corn rootworm areawide management. **Lance J. Meinke** and Srinivas Parimi, Department of Entomology, University of Nebraska, Lincoln, NE 68583; Michael E. Scharf, Department of Entomology, Purdue University, West Lafayette, IN 47907; Laurence D. Chandler, Red River Valley Experiment Station, USDA-ARS, Fargo, ND 58105; and Blair D. Siegfried, Department of Entomology, University of Nebraska, Lincoln, NE 68583
- 4:20 181 Understanding and managing the rotation-resistant western corn rootworm: simulated analysis. **David W. Crowder**, David W. Onstad and Charles Guse, 1201 S. Dorner Dr., University of Illinois, Urbana, IL 61801; and Paul Mitchell, Texas A&M University, College Station, TX 77843
- 4:40 Discussion and Wrap-up

March 25, 2003
Tuesday Afternoon

Joint ESA-ASA Symposium
Arthropods as Vectors of Plant Diseases
1:15 – 5:00 pm

Organizers and Moderators:

David J. Voegtlin
Center for Economic Entomology
Illinois Natural History Survey
Champaign, IL, 61820

Joseph G. Lauer
Department of Entomology
University of Wisconsin
Madison, WI 53706

- 1:15 182 Introduction.
David J. Voegtlin, 607 E. Peabody, Illinois
Natural History Survey, Champaign, IL
61820
- 1:20 183 Bug spit: the ideal way to get around.
Stewart M. Gray, USDA-ARS, Dept. of
Plant Pathology, 334 Plant Science, Cornell
University, Ithaca, NY 14853
- 2:00 184 Thrips as vectors of tospoviruses.
Thomas L. German and Anna Whitfield,
1630 Linden Drive, Department of
Entomology, University of Wisconsin,
Madison, WI, 53706
- 2:20 185 Predicting the risk of current season spread
of the aphid-transmitted viruses, potato
leafroll virus and potato virus Y, in seed
potatoes.
Edward B. Radcliffe, Robert A. Suranyi
and David W. Ragsdale, 219 Hodson Hall,
1980 Folwell Ave., University of Minnesota,
St. Paul, MN, 55108
- 2:40 186 Migration, local dispersal and colonization
behavior of green peach aphid, *Myzus*
persicae.
Matthew W. Carroll, Min Zhu, Edward B.

- Radcliffe, Ian V. MacRae, David W. Ragsdale and Robert A. Suranyi, 219 Hodson Hall, 1980 Folwell Ave., University of Minnesota, St. Paul, MN, 55108
- 3:00 **BREAK**
- 3:20 187 Control of bean pod mottle virus through vector management.
John H. Hill, Department of Plant Pathology, Iowa State University, Ames, IA 50011; Rayda Krell, Department of Entomology, University of California, Riverside, CA; Marlin Rice and Larry Pedigo, Department of Entomology, Iowa State University, Ames, IA 50011
- 3:40 188 Transmission of CMV to snap beans by soybean aphid.
Jeffrey A. Wyman, Dept. of Entomology, Univ. of Wisconsin, Madison, WI 53706
- 4:00 189 Leafhoppers as vectors of mollicutes.
Saskia A. Hogenhout, 1680 Madison Avenue, Ohio State University-OARDC, Wooster, OH 44691
- 4:20 190 Observations on the biology of CMV vectors in Southern Illinois.
David J. Voegtlin, 607 E. Peabody, Illinois Natural History Survey, Champaign, IL 61820
- 4:40 191 Aster leafhopper transmission of aster yellows phytoplasma to wheat.
Ian V. MacRae, Department of Entomology, University of Minnesota, St. Paul, MN 55108; and Charla Hollingsworth, Department of Plant Pathology, University of Minnesota, St Paul, MN 55108
- 4:50 192 Discussion and wrap-up.
David J. Voegtlin, 607 E. Peabody, Illinois Natural History Survey, Champaign, IL 61820

March 25, 2003

Tuesday Afternoon

6:00 – 8:00 pm.

ESA-NCB Executive Committee Meeting
Conference Room II

March 25, 2003

Tuesday Evening

6:00 – 8:00 pm.

Madison/Wisconsin Ballroom

Joint ESA-ASA Mixer

Linnaean Games Champion vs. Old Masters

Capitol Ballroom

Moderator:

Marlin Rice, Gamesmaster

Iowa State University

ESA Student Award Ceremony

Capitol Ballroom

Moderator:

Billy W. Fuller, Chair

South Dakota State University

March 26, 2003
Wednesday Morning
7:30 – 9:30 am
Continental Breakfast

March 26, 2003
Wednesday Morning
8:00 – 9:00 am
Capitol Ballroom

Final ESA Business Meeting
Mike Gray
ESA-NCB President

Wednesday Morning
8:00 – 9:00 am
Wisconsin Ballroom

Final ASA Business Meeting
Joe Lauer
ASA-NCB President

March 26, 2003
Wednesday Morning

Joint ESA-ASA Symposium
Transgenic Corn Product Stewardship: Pathways to Compliance
9:25 am – 12:00 pm
Capitol Ballroom

Organizers and Moderators:

Von J. Kaster

Garst Seed Co.
Slater, IA 50224

Clinton D. Pilcher

Corn States Hybrid Service L.L.C.
Des Moines, IA 50321

Andrew Seibert

John Deere Seeding Group
Moline, IL

- 9:25 193 Welcome and Introduction.
Von Kaster, Garst Seed Company, P.O. Box 500, Slater, IA 50244
- 9:30 194 Transgenic stewardship: networking for success.
Clinton D. Pilcher, 9820 McWilliams Dr., Monsanto Company, Johnston, IA 50131
- 9:55 195 Working together to preserve the benefits of *Bt* corn technology: a registrant's perspective on IRM.
John M. Headrick, Monsanto Co., 700 Chesterfield Parkway West, Chesterfield, MO 63017
- 10:20 196 An agronomist's perspective on stewardship of transgenic crops.
Bruce Battles, J. C. Robinson Seed Co. Golden Harvest, Council Bluffs, IA
- 10:45 197 A grower's perspective on voluntary stewardship of transgenic corn.
James Zimmerman, Evergreen Growers, Rosendale, Madison, WI, 53706
- 11:10 198 Extension in the pathway to compliance: education or mandate? (Subtitle: When you come to a fork in the road....take it.).
Kevin L. Steffey, Department of Crop Sciences, 1102 South Goodwin Avenue, University of Illinois, Urbana, IL 61801
- 11:35 199 Panel discussion and wrap-up.
Andrew Seibert, John Deere Seeding Group, Moline, IL

March 26, 2003

Wednesday Morning

Joint ESA-ASA Symposium
Emerging Issues in Crop Pest Management
9:25 am – 12:00 pm
Wisconsin Ballroom

Organizers and Moderators:

John Sawyer

Department of Agronomy
Iowa State University
Ames, IA 50011

Robert N. Wiedenmann

Center for Economic Entomology
Illinois Natural History Survey
Champaign, IL 61820

- 9:25 200 Introduction.
John Sawyer, Department of Agronomy,
Iowa State University, Ames, IA 50011
- 9:30 201 Risk assessment and plant-based
pharmaceuticals.
Robert K. Peterson, 333 Leon Johnson
Hall, Montana State University, Bozeman,
MT 59717
- 9:55 202 Considerations of in-season sensing corn for
nitrogen management.
Dennis Francis, Department of Agronomy,
University of Nebraska, Lincoln, NE 68583
- 10:20 203 Contrasting spatial and temporal variability
in extended-diapause Northern Corn
Rootworms: a tale of two fields.
Michael Ellsbury, 2923 Medary Avenue,
USDA Agricultural Research Service,
Brookings, SD 57006
- 10:45 204 Genetically modified crop and weed
management issues.
Micheal D. Owen, 2104 Agronomy Hall,
Iowa State University, Ames, IA 50011
- 11:10 205 Insect resistance management for transgenic
corn hybrids: lessons learned and future
options.
Richard L. Hellmich, Genetics Laboratory
c/o Insectary, Iowa State University, USDA-
ARS Corn Insects & Crop Genetics
Research Unit, Ames, IA 50011
- 11:35 206 Discussion and wrap-up.
John Sawyer, Department of Agronomy,
Iowa State University, Ames, IA 50011