

2024 NCERA222 Annual Meeting Report

BASIC INFORMATION

Project No. and Title: NCERA222 Integrated Pest Management

Period Covered: 01/01/2023 to 12/31/2023

Date of Report:

Annual Meeting Dates: 03/05/2024 to 03/06/2024

PARTICIPANTS

This year, NCERA222 met jointly with SERA3 on the afternoon of March 5. Each group met separately on March 6. **NCERA222 participants and affiliations were:** Patrick Beauzay, North Dakota State University; Mandy Bish, University of Missouri; Hannah Burrack, Michigan State University/Administrative Advisor; Emmanuel Byamukama, USDA-NIFA (virtual); Seth Dibblee, EPA (virtual); Jennifer Dobbs, EPA (virtual); Jared Fogue, University of Missouri; Anthony Hanson, University of Minnesota; Laura Iles, Iowa State University/NC IPM Center; Jim Jasinski, The Ohio State University; Lynnae Jess, Michigan State University/NC IPM Center; Amit Jheila, University of Nebraska; David Lane, Cornell University/NE IPM Center; Erin Lizotte, Michigan State University; Esneider Mahecha, University of Illinois; Mallory Marienfeld, Michigan State University; Frannie Miller, Kansas State University; Logan Minter, The Ohio State University; Daren Mueller, Iowa State University/NC IPM Center; Kelsey Mueller, Iowa State University/NC IPM Center (virtual); Diane Plewa, University of Illinois; Jacque Pohl, Iowa State University/NC IPM Center (virtual); Samuel Revolinski, University of Kentucky; Marissa Schu, University of Minnesota. **SERA3 participants and affiliations were:** Ric Bessin, University of Kentucky; Ashleigh Faris, Oklahoma State University; Janet Hurley, Texas A&M Agrilife; Heather Kelly, University of Tennessee; Joe LaForest, University of Georgia/Southern IPM Center; Norm Leppla, University of Florida; Roger Margarey, North Carolina State University/Southern IPM Center; Rebecca Melanson, Mississippi State University; Shelli Rampold, University of Tennessee; Francis Reay-Jones, Clemson University; Tegan Walker, North Carolina State University/Southern IPM Center; Kayla Watson, North Carolina State University/Southern IPM Center; Kiersten Wise, University of Kentucky.

BRIEF SUMMARY OF MINUTES OF ANNUAL MEETING

See attached agenda for the joint NCERA222/SERA3 and the separate NCERA222 meeting portions. For the joint meeting held from 3 to 6 PM on March 5, topics were selected that were pertinent to both regions. Detailed joint meeting notes were taken by Heather Kelly (see attached). A summary is provided here.

- The first topic was a presentation and discussion on a Regional IPM Reporting Tool by David Lane and Tegan Walker. The purposes of the Reporting Tool will be to bring consistency in NIMSS reporting across regions, increase visibility and usability through a report dashboard, reduce reporting redundancy. Much discussion on how this is to be achieved, but the idea was met with enthusiasm from IPM coordinators, and many coordinators indicated that they would provide input on this effort. David and Tegan will be contacting IPM coordinators for input, with potential Reporting Tool rollout in 2025.
- Emmanuel Byamukama provided a USDA-NIFA update. Changes to REEport are coming that will hopefully make the CPPM-EIP grant reporting process smoother and less burdensome. NIFA will try to incorporate changes suggested by IPM coordinators during the listening session on the CPPM-EIP grant in early 2024. There was discussion on how REEport and NIMSS reports are used.

- Seth Dibblee and Jennifer Dobbs provided an update from EPA, with special focus on pesticide registration updates including atrazine, sulfuryl fluoride, chlorpyrifos and dicamba, Endangered Species Act implementation, and a walk-through on how to use EPA's Bulletins Live! Two.
- Shelli Rampold presented on Surveying Success, outlining strategies to build successful survey tools by collaborating with others outside of our discipline areas, especially social sciences. Francis Reay-Jones provided an example of a corn insect IPM survey, the results of which are being used by researchers to address Bt corn issues.
- The joint meeting finished with a presentation from Daren Mueller on the IPM Infrastructure initiative led by the National IPM Coordinating Committee (NIPMCC).

After the joint meeting, both IPM groups participated in an informal social with plant pathology groups that also were meeting at the same hotel. This gave us all an opportunity to interact with others outside of our IPM committees and exchange research and extension ideas and forge new working relationships. The NCERA222 resumed at 8 AM on March 6.

- NCERA222 Administrative Advisor Hannah Burrack provided a general update on NCRA, the review process for Multistate Research Committees, and an update of the recent midterm review of NCERA222. Our review was positive, and noted that we need to update our overall priorities.
- Laura Iles provided an overview and update for the North Central IPM Center, including Steering Committee participants, the Center's overall functions and goals, efforts to increase diversity and inclusion in IPM, Working Groups and Critical Issues grants funded by the Center, a link to State Dashboards which contain a wealth of information on Working Groups and Critical Issues, North Central regional IPM evaluation efforts, and Center IPM communications.
- Several years ago, we moved away from presenting comprehensive state reports and now focus on 'One Big Thing' in which each state presents on a single successful IPM programming activity. Topics for each state are presented below under Objective 1.
- We held a brief business meeting to elect the incoming chair. Erin Lizotte was elected as the incoming chair. Current chair is now Diane Plewa, and Patrick Beauzay becomes the outgoing chair. Chair duties regarding reporting were defined - the outgoing chair writes the annual report. The 2025 NCERA222 annual meeting will be held in conjunction with the 11th International IPM Symposium on March 3-6, 2025 in San Diego, CA.
- We had a general discussion on broad IPM needs for the North Central region, including pesticide safety training efforts in light of recent registration decisions, ESA requirements, Bulletins Live! Two, whether we should restart Pest Management Strategic Plans for the NC region, collaborative efforts on regional IPM challenges.
- We adjourned at 12 PM before we had a chance to discuss other regional IPM priorities in detail. However, outgoing chair Beauzay asked each state's IPM coordinator to communicate IPM priorities to him when submitting state-specific information used in generating this report. Reported needs are summarized in Objective 2.

ACCOMPLISHMENTS

Objective 1: Increase the capacity of members to implement Extension based programs. Members from each state will share at least one innovative project or program that is currently being implemented.

- The University of Missouri launched the Mizzou Crop & Pest Text Alert System in 2023. Farmers and other agricultural stakeholders can opt in or out at any time. Text alerts include pest economic threshold status based on in-season trapping data via the MU IPM Pest Monitoring

Network, updates on pest management practices and pesticide registration status, and other relevant agricultural information.

- Iowa State University initiated several youth oriented IPM education projects to address the need to engage youth in IPM and agricultural awareness. Projects provide science based STEM education for youth. Projects include Crop Scouting Competition, Iowa Plant the Moon Challenge, Where the Grass is Greener, National Institute of Antimicrobial Resistance, Research and Education Curriculum, Ag Innovators Experience Challenge, Pesticide Safety for Youth, Monarchs on the Move and Native Bee Challenge, Pollinator Education and Action for Your, and Watch Me Grow. The latter project also addresses diversity and inclusion in IPM by targeting low-income, underserved and urban youth.
- Kansas State University launched an educational webinar series titled K-State Garden Hour. The webinars provide Kansas gardeners with research based information to improve garden productivity, support pollinators, improve environmental health, and enrich human nutrition health and well-being. Since it's launch, the webinar series has attracted participants from 37 US states, the District of Columbia, and 7 international countries.
- Michigan State University developed an IPM Response Team program to address critical and emerging IPM issues within the state. The Response Teams consists of relevant state, federal, and university partners to facilitate information exchange, resource sharing and education. Response Teams have been formed for box tree moth, balsam woolly adelgid, Bulletins Live! Two, and spotted lanternfly. MSU's online spotted lanternfly resources garnered 20,000 users in 2023.
- The University of Minnesota hosts the Strategic Farming Program, a weekly series with a strong IPM focus geared towards Minnesota farmers. The series is produced as webinars that allow participants to interact with UMN Extension experts, and also produced as podcasts so farmers and other stakeholders can listen to the program on their own schedules. In 2023, the program had over 13,000 direct vies and were used frequently by farm news media, which likely resulted in regional coverage beyond MN. The Fruit and Vegetable News blog features IPM and production content geared towards fruit and vegetable growers. The blog has over 1,750 subscribers. A survey of subscribers demonstrated that 84% of respondents indicated increased learning about pest management, and 67% reported changing their pest management practices based on blog content.
- Purdue University hosted Crop Management Workshops, which is Purdue's IPM programs main venue for promoting field crop IPM. IPM programming was delivered to 917 attendees in January 2023. Impacts from the January Workshop include 92% of attendees intend to apply what they learned from the Crop Management Workshop, 94% intend to share what they learned with other stakeholders, and 81% of attendees have implemented IPM strategies learned at past Crop Management Workshops. IPM information is also disseminated via the *Pest & Crop* newsletter. A survey of newsletter readers indicates that 96% of readers increased IPM learning, 78% share newsletter content, and 67% of respondents with at least 1,000 acres of pest management responsibility base their in-season pest management practices on newsletter content.
- The Ohio State University continues to implement and expand research, education and outreach on Spotted Lanternfly (SLF). Efforts include a research project to detect SLF DNA residue left on plants because detection of SLF at low densities is challenging, direct educational programming at the county and statewide levels, using 3D-printed egg masses of all SLF life stages as educational tools, and a food truck signage campaign to raise SLF awareness in Ohio's urban centers.

- The University of Nebraska conducted in-person, hands on field crop scout training. The UNL Corn Pathology Lab tracks tar spot through Nebraska and reports the distribution of tar spot at <https://corn.ipmpipe.org/tarspot/>. Extension programming, including IPM strategies for multiple crops, are shared regularly on the Nebraska Extension CropWatch website at <https://cropwatch.unl.edu/>
- South Dakota State University Extension developed a webinar series named the SDSU Extension Crop Hour to reach and inform stakeholders on agricultural topics, including IPM strategies. Webinars were held every Tuesday, Wednesday and Thursday from January through March. Webinars were recorded and made available on the SDSU Extension YouTube channel. CCA/CEU credits were offered for each webinar. Recorded webinars were promoted again from September through December as part of a Virtual IPM Field School, again with CCA/CEU credits offered.
- North Dakota State University Extension conducted the statewide IPM Crop Survey Program. NDSU Extension-trained field scouts surveyed barley, spring wheat, sunflower and soybean fields for insect pests and diseases. Survey data were used for weekly articles in the NDSU *Crop & Pest Report* newsletter, which provided IPM recommendations to over 6,000 direct subscribers. A *Crop & Pest Report* reader survey showed that 89% of readers indicated increased knowledge on IPM, 76% used IPM Crop Survey data, and 72% of respondents, representing approximately 2 million crop acres, used economic thresholds and other IPM strategies recommended by NDSU Extension. A strong pollinator habitat initiative through Extension Horticulture, Extension Entomology, and the Extension Master Gardener (EMG) programs. In 2023, three new pollinator teaching gardens were added in urban areas of ND, bringing the total to 30 since 2016. Gardens are maintained by EMGs. A new pollinator habitat project focused on creating pollinator friendly lawns. The Certified Pollinator Garden program certified 34,036 square feet of new home/private pollinator gardens in 2023, bring the total to 4,690,872 square feet since 2016.

Objective 2: Review, prioritize and disseminate IPM research and Extension needs. Review key IPM research and Extension needs that would be useful in conducting Extension programs, informing research activities, enhancing grant applications and assisting with state, regional national and international agendas.

In gathering information for this report, NCERA222 coordinators were asked to provide and prioritize at least three IPM needs for their respective states. These needs can be used to develop and/or enhance multistate extension and research efforts. Responses fall into these categories:

- **Funding Support.** Overwhelmingly, funding support was listed as a critical need because we simply cannot address any IPM priority or need without financial support. The reality is that IPM research and extension efforts are becoming more costly as inflation, resistance management, climate change, and personnel training and turnover continue to drive up costs for salaries, travel, educational and research materials, etc.
- **Resistance Management.** Insects, weeds and plant pathogens continue to evolve resistance to pesticides and transgenic crops. Funding support is desperately needed to research and develop IPM strategies to mitigate crop losses due to pesticide resistance, and to provide IPM education and outreach to producers and other stakeholders in this arena.
- **Climate Change.** Climate change affects the biology, distribution, and evolution of many weeds, insects and plant pathogens. Understanding how climate change affects pests, including invasive and emerging pests and the crops they affect, is critical to developing 'climate smart' IPM

strategies. Support for research and extension is crucial to keeping pace with the influence of climate change on agricultural production and IPM.

- Training the Next Generation of IPM Specialists. Land Grant Universities are experiencing turnover as veteran IPM specialists retire. Training and recruiting new IPM specialists is a challenge, especially if LGUs must absorb budget cuts. Given the growing IPM challenges faced by insufficient funding support, pest resistance management, climate change, and invasive and emerging pests while feeding a burgeoning human population, training and placing future IPM specialists is critical to the overall success of IPM.
- Support to Reach Underserved Audiences. Several states report the need to provide more IPM programming for specialty crops, pollinator health, new and minority group farmers, and translation of IPM educational materials into Spanish and other languages.
- Navigating and Understanding Pesticide Regulations. All states are facing challenges with EPA regulations, especially Endangered Species Act (ESA) regulations and language on pesticide labels. EPA has provided educational material to navigate their Bulletins Live! Two website where ESA specific regulations can be found. Nevertheless, navigating, understanding and complying with regulations found at Bulletins Live! Two is a somewhat daunting and confusing process. Producers in many areas where ESA specific regulations must be observed may not be able to comply due to landscape incompatibility or other practical problems, and are turning to Extension for IPM strategies for areas where certain pesticides cannot be applied. Each state in the NC region has conducted Bulletins Live Two! trainings at pesticide safety education events, and also has conducted in-house trainings for other Extension personnel, such as county extension agents.

Objective 3. Increase collaboration and coordination between state IPM programs, NCIPMC related working groups and relevant NC multistate committees. Focus on communication and interacting with relevant NCIPMC-funded working groups and other NC multistate committees in an effort to reduce redundancy and create efficient streams of information exchange and proactive future activities.

NCERA222 members participate in many other multistate committees, including NCERA137, NCERA184, NC246, NC7, NC1197, NC1208, NCCC211, NCCC212, NCERA221, and S1080. The North Central IPM Center provides funding for Working Groups, and serves as a focal point for IPM collaborations in the North Central Region. Currently funded Working Groups include the Alfalfa Pest Management, Pollinator Education and Action, Tactile Toolbox, Rights-of-Way as Habitat, Pulse Crops, Public Tick IPM, Managed Pollinator Protection Plans, Great Lakes Urban Agriculture, Hemp IPM and Sunflower Pathology. Additionally, Working Groups previously funded by the NCIPMC are still active and highly successful, including the Crop Protection Network, War Against Weeds, NC Extension Entomologists, Great Plains Sawfly Survey, Ag and Wildlife Coexistence, Great Lakes Fruit Workers, Great Lakes Vegetable, Great Lakes Hop, and IPM4Bees Midwest. The value of the NCIPMC cannot be overstated. These Working Groups address regional IPM needs and bring together state programs to achieve IPM goals.

Other multistate projects include the SCN Coalition, various insect and disease projects within the North Central Soybean Research Program (NCSRP) and United Soybean Board (USB), Corn Tar Spot in the Great Plains, Get Rid of Weeds (GROW), Soil Health Nexus, Tri-state Spotted Lanternfly Coordination, Emerald Ash Borer University, National Managed Pollinator Protection Plans, Soybean Gall Midge Alert Network, Regional Youth Crop Scouting Competition, IPM Pest Surveys (ND and MN), and National Sunflower Association research on red sunflower seed weevil (ND and SD).

Objective 4. Facilitate multistate programming to share curriculum and educational materials. Provide publications, workshops and concepts that might have regional interest, enrich the knowledge base of members and positively impact end users in other states.

Several NCERA222 IPM Coordinators are relatively new to the group and had not yet experienced applying for a grant through the USDA NIFA CPPM-EIP program. The grant runs on a three year cycle, and the FY24 grant was due in mid-February, 2024. To help our newer members, we 'old hands' (coordinators who have been through the process a few times) organized a virtual grant writing workshop that was held on December 11 and December 13, 2023. Each session ran for two hours and each was recorded. The NCIPM Center hosted the event. The workshop was geared specifically to writing a successful EIP proposal, and covered a multitude of topics including alignment of programs with the National IPM Roadmap goals, program focus areas, how to construct logic models, the importance of stakeholder input, proposal content and form, and other topics germane to the RFA. There were many good questions, and the workshops benefitted all who participated. Hopefully, states in the NC region will have their proposals reviewed very favorably.

Another topic that has been referenced earlier in this report is the changing landscape of pesticide registration and compliance, specifically registration decisions involving chlorpyrifos, dicamba, new enforceable label language to comply with the Endangered Species Act, and navigating Bulletins Live! Two. Each IPM Coordinator was asked to provide information on how each state is handling these topics. All states are addressing these topics through their respective Pesticide Safety Education Programs at training events held over the winter meeting season. Some even invited EPA personnel to attend training events. EPA itself has developed instructional materials for Bulletins Live! Two, and many states have developed in-house webinars and training modules to educate other Extension staff (e.g. county agents) so that they in turn can educate and assist their clients. Ultimately, we will share PSEP resources on this topic with one another to address our evolving educational efforts in the North Central region as a whole.