Southern IPM Center

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Southern Region IPM Center Annual Update

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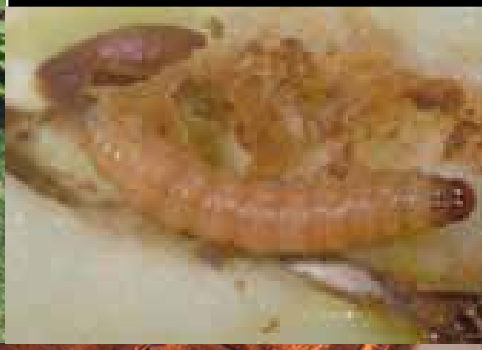

Five Nominees Receive “Friends of IPM Awards”

The end of 2010 brought some good news to three individuals and two groups who won this year’s Southern Friends of IPM Awards. This year, we had nominations in every category except Lifetime Achievement, and in a few cases, very stiff competition.

The Bright Idea award goes to the Okanola Project, a collaboration between Oklahoma State University, Kansas State University and the commercial seed industry. Initiated in 2003, the Okanola Project introduced winter canola to Oklahoma farmers to rotate with wheat in order to solve weed problems. After trying to assist wheat farmers who were progressively losing their yield to weeds and annual insect pests, weed scientist Dr. Thomas Peeper discovered that winter canola could help farmers end the pest cycle. Canola, a non-grass crop, would not be attractive to the pests who repeatedly visited the fields, cleaning the soil of weed seeds and keeping insect pests away during the next growing season.

The Okanola Project staff

After some production challenges, growers began to see cleaner fields of wheat after planting their wheat crop following canola. In 2006, the state IPM program started providing some funding for program needs. A mill that crushed cotton seed began crushing canola seed. The number of canola producers has grown from 6 in the initial pilot project to over 200. Growers who previously were skeptical about growing something other than wheat have seen canola increase their wheat profits once they rotate back to wheat.

L-R: Dr. Nancy Cox, Doug Johnson, Patty Lucas, Jim VanKirk

Extension IPM Specialist Patty Lucas at the University of Kentucky won the IPM Implementer award.

“Ms. Lucas is the driving force behind the development of documents through the Center grants,” writes Kentucky IPM Coordinator Doug Johnson, who nominated her. “Crop Profiles and Pest Management Strategic Plans are generally developed through the UK-IPM working groups, but it is Patty Lucas who develops the grant requests, organizes the clientele meetings, and oversees the production of the resulting documents.”

For faculty needing to collect required data for research analysis, Lucas’s extension background comes in handy. For several projects, including a fire ant project and Plum Pox virus survey with the Office of the State Entomologist and an EPA project on organophosphate use reduction, Lucas visits farms to collect sticky traps and teach the growers how to use the scouting instruments once the research projects are over.

When she isn’t crawling along school walls looking for gaps, IPM Educator winner Janet Hurley is teaching workshops on how to use IPM in schools. Coordinator for School IPM at Texas AgriLife since 2001, Hurley has not only provided guidance to Texas school IPM coordinators on how to manage pests, but she has also been a valuable resource regionally and nation-

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Friends of IPM (continued)

ally. She co-chairs the Southern Region School IPM Working Group and serves on the national School IPM committee. She networks with many of the state and national school maintenance professional organizations as well to promote the idea of school IPM beyond the school administrations.

Steve Toth and Janet Hurley

In addition to the regular assortment of cockroaches, ants, rodents and fire ants that typically infest schools, Janet has had a unique challenge in Texas—bats. She has worked with the state Department of Health Services to give a series of workshops on dealing with bats in schools and has had to reframe some of her thinking on how to inspect a school for pests. Recently she has begun working with Junior Master Gardeners on how to incorporate IPM in school gardens safely and legally.

This year's Pulling Together award goes to a team that has been together for many years but has become well-known among cotton producers in the last 10 years with their work on the tarnished plant bug. The Mid-South Entomologists involves entomologists from the land grant universities in Arkansas, Mississippi, Louisiana, Tennessee and Missouri, along with researchers from the USDA Agricultural Research Service in Mississippi.

As the tarnished plant bug began to all but replace the boll weevil in pest status, the Mid-South Entomologist working group worked together for three years to establish a regional threshold for tarnished plant but and to test more effective scouting techniques (see story on p.3). Their research culminated in a regional threshold for tarnished plant bug and distributions of black cotton drop cloths for sampling. They are currently using the research model to revise thresholds on soybeans.

Mid-South Entomologist Working Group: L-R: Kelly Tindall, Angus Catchot, Scott Akin, Scott Stewart, Gus Lorenz, B. Rogers Leonard, and Jeff Gore

Hannah Burrack (L) and Danesha Seth Carley

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Friends of IPM (continued)

Small fruit farmers have benefited the past few years from Future Leader winner Hannah Burrack's energy and versatility. In addition to traveling around the state delivering workshops, Burrack reaches those she hasn't met through a weekly blog, http:// ncsmall-fruitsipm.blogspot.com/. Probably the most important contribution she has made involves her monitoring of the invasive pest spotted wing drosophila (*Drosophila suzukii*), a devastating pest with a broad appetite that has reduced yields and profits in the Northwest.

Through an extensive monitoring network in North Carolina, Burrack was able to detect the entrance of the pest into the state. Because the pest was caught before its populations had become massive, North Carolina growers are more aware of the need to monitor closely this year. Burrack and her research group plan to begin work on the pest's biology this year and test new management strategies. They are also monitoring for blueberry maggot and are cultivating some biocontrol options for the pest.

Crop Profiles, PMSPs and Elements

The following have been completed or revised since September 2010:

Crop Profiles

- Florida Citrus (major)
- Florida strawberries
- Georgia, Kentucky, North Carolina, South
- Carolina and Tennessee nursery crops
- Virginia apples

Pest Management Strategic Plans

- Tennessee sweet corn
- Georgia, Kentucky, North Carolina, South Carolina and Tennessee nursery crops
- Woody ornamentals for all 13 states in the region

IPM Elements

- Virginia and North Carolina Wine Grapes

SRIPMC and the Social Market

We added three new blogs and a Facebook page to our list of social marketing strategies this year. Along with our original blog, ipmsouth.com, we now have a blog for news (ipmsouthnews.com), funding opportunities (ipmsouthfunding.com) and employment openings (ipmsouthjobs.com). As of today, we have over 500 "tweets" and 158 followers. We also recently opened up a Southern Region IPM Center Facebook page, which brings together information from the four blogs and allows us to reach other Facebook friends.

SRIPMC Staff Changes

The past three months has brought some significant changes to the Southern Region IPM Center staff. On July 29, our long-time and dependable administrative assistant, Jo-Anne Scoggins, retired.

Assistant Director Danesha Seth Carley will be starting a new position on October 1 in the Dean's office as the Coordinator of CALS Sustainability Programs.

On September 2, Associate Director Steve Toth suffered a stroke. As this publication goes to print, he is recovering in rehab and hopes to return to the Center after the holidays. Those who wish to write to Steve can go to http://wakemed.org/body.cfm?id=1561.

2011 Enhancement Grants Awarded

In 2011, the Southern Region IPM Center IPM Enhancement Grants Program was split into two parts. Part 1 included the Regulatory Information Network project, IPM documents (crop profiles, pest management strategic plans, IPM priorities and IPM elements), and IPM working group projects. Part 2 included seed and capstone projects.

Separate Requests for Applications (RFAs) for Parts 1 and 2 of the IPM Enhancement Grants Program were released on December 14, 2010 with a deadline of January 31, 2011 for submitting proposals to the Center. Eight proposals requesting $299,991 and 8 proposals requesting $193,965 were submitted for Parts 1 and 2, respectively.

Grant Review Panels for Parts 1 and 2 of the IPM Enhancement Grants Program reviewed the proposals and met separately on March 17 and March 16, 2011, respectively, to evaluate proposals and make recommendations for funding to Center staff. For Part 1, 6 proposals totaling $273,991 were approved for funding. Five proposals totaling $123,965 were approved for funding under Part 2. A list of projects (and project directors) selected for funding for 2011, totaling $397,956, is provided below.

PART 1:

Regulatory Information Network Project:

- Southern Region Specialty Crops at Risk Program – Regulatory Information Network (Mike Weaver, Fred Fishel, Mark Matocha, and Darrell Hensley)

IPM Documents Projects:

- Virginia Specialty Crops at Risk Program – IPM Documents Development Project (Michael Weaver)
- Creation of IPM Documents for Aquatic Plant Management in the Southern US (Robert Richardson, Steve Hoyle, John Madsen, and Ryan Wersal)

IPM Working Groups:

- Enhancing Nursery Crop Research and Extension with a Multi-State Working Group (Amy Fulcher, Juang-Horng Chong, Sarah White, Anthony LeBude, W.E. Klingeman, Matthew Chappell, Craig Adkins, and Kelly Ivors)
- Bugwood Center IPM Working Group (G. Keith Douce)
- Update of Priorities of the Southern Region School IPM Working Group, a New Beginning (Lawrence “Fudd” Graham)

PART 2:

IPM Seed Projects:

- Weed IT Mobile – a Weed Identification and Management Tool for Mobile Devices (Alexander Krings and Joseph Neal)
- Developing Management Practices to Address Invasive Plant Pests in Riparian Areas (Barbara Fair)

IPM Capstone Projects:

- Development of the “RiceScout” iPhone app to improve rice insect/arthropod, disease, weed and nutritional deficiency diagnostics in southern rice IPM programs (Natalie Hummel, Don Groth, Clayton Hollier, Dustin Harrell, John Saichuk, Eric Webster, and Richard Cartwright)
- Using GIS to develop pest management tools for wood boring beetles in southern nurseries (Carlos Bogran)
- School IPM cost calculator expansion and marketing (Janet Hurley, Michael Merchant, and Blake Bennett)

Mole Cricket Research Saves Money for Cattle Ranchers

Nationally, Florida ranks 12th in beef cows and 18th in total cattle production. Florida's dairies produce about 2 billion pounds of milk per year. Although Florida's beef and dairy industries are valued at over $800 million combined, profits are small and maintenance costs are high. One challenge that raises costs for ranchers is pest management for mole crickets.

In Forida, mole cricket damage to cattle foraging pastures, golf courses and other grasslands totals over $100 million per year. Mole crickets feed on the roots of plants and grasses, leaving large dead patches in pastures and depriving cattle of a natural forage source. Cattlemen have no effective chemical control for mole crickets. However, biological control options are available, including a wasp (Larra bicolor), a nematode (Steinernema scapterisci) and a fly (Ormia depleta).

Research has shown that the biological control has decreased mole cricket populations:

- Where the wasp is well-established, it has decreased mole cricket populations by up to 70%.
- The nematodes have caused mole cricket populations to steadily decrease.
- Where any of the biocontrol agents are established, they are controlling mole cricket populations in public areas as well as on farms.

Unfortunately, the biocontrol agents have not spread to several Florida counties, and many ranchers in those counties cannot afford to use them. In order to use the nematode, ranchers need an expensive special application rig, and to attract the fly and wasp to their farms, they need to plant certain flowers but lack the knowledge of which ones to plant.

Thanks to a $25,000 Southern Region IPM Enhancement grant, cattle ranchers now have the resources to use the biological control agents. Researchers at the University of Florida used the grant to purchase and modify two application rigs to plant the nematode, and to educate ranchers on ways to attract the fly and wasp.

The project is helping Florida ranchers to save their pastures and feed their cattle, strengthening the beef and dairy industries in the state.

Got Ticks? There's an App for That

edited from a press release by Paul Schattenberg, Texas AgriLife Communications

Early identification and accurate information are vital in effectively responding to human and animal interaction with ticks, said experts in the entomology department at Texas A&M University's College of Agriculture and Life Sciences in College Station.

To help in that response, they have developed and introduced a free mobile Internet smart phone application named "The Tick App for Texas and the Southern Region" or "The TickApp."

"Ticks are blood-feeding parasites capable of causing irritation, inflammation and infection in animals and humans, as well as transmitting the pathogens that cause tick-borne diseases," said Dr. Pete Teel, Texas

Photo by Texas AgriLife Extension Service

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Tick App (continued)

AgriLife Research professor and associate entomology department head. “We are frequently contacted for assistance from lay and professional audiences to identify ticks and answer questions about their biology, distribution and control, as well as the potential for acquiring a tick-borne disease.”

The TickApp was developed as a mobile application that resides as an Internet website providing in-depth content on tick identification, biology, ecology, prevention and management, and was designed for primary delivery on smart phones such as BlackBerry, Droid, and iPhone using Internet browsers, Teel said. It also can be accessed by desktop or laptop computer, as well as other personal portable electronic devices.

The mobile app is available at http://tickapp.tamu.edu, and future developments will include availability as a downloadable PDF for offline use.

Teel said he and others have designed and organized information to address the most frequently asked questions about ticks for a broad range of end-users into a smart phone application.

“We believe the smart phone application will provide portability and accessibility to tick-related information when and where it is needed,” he said.

The new mobile smart phone app will allow users to access a wide range of information about ticks, including photos and detailed descriptions of regional tick species, in a simple format accessible when and where it is needed most, such as in field or human or animal clinic setting, he said. A glossary of terms, information on tick biology and the parasites’ one- and three-host life cycles and other details will assist users without an entomology background. Images of tick species showing gender-based developmental differences will make identification easier.

Teel and his colleagues submitted a successful grant proposal to acquire partial funding to develop the app from the Southern Region Integrated Pest Management Center.

Rob Williams shows TickApp on Smart Phone (Texas AgriLife Extension photo)

“The Southern Region IPM Center issues grants to universities and other stakeholders from agricultural, urban and rural settings involved in integrated pest management efforts that generate economic, environmental and human health benefits,” said Steve Toth, the center’s associate director. “The online guide and TickApp site is being supported, in part, by funding from the center as we realized its potential to reduce health and other economic costs associated with human and animal exposure to ticks and tick-borne disease.”

The TickApp also will contain information on and hyperlinks to the center’s website, so users can gain additional information on integrated pest management efforts and research in the region, developers said. There also will be information on proper tick removal and on how to submit tick samples to the University of North Texas Health Science Center for testing of ticks from humans in Texas. Other states may have similar services provided through their state health departments.

“After a lot of work and collaboration with others, we have developed what we feel is an effective, easy-to-use mobile app with concise but thorough details on various aspects of ticks that almost anyone can use to get information for their personal or professional benefit,” Teel said.

ipmPIPE Update

Programs originally supported by the "original" NIFA/ RMA/NCSU tripartite agreements are winding down:

- Soybean rust: The Soybean Check-off has been supporting field monitoring for several years and has committed to doing so next year, at $350,000 or more per year. NIFA has provided diminishing funds over recent years for infrastructure support – i.e., website maintenance, data management, models, etc.
- Legume: Funds are essentially exhausted, and work being done in the field will likely have to be donated by Extension specialists, etc.
- Cucurbit down mildew: ipmPIPE funds have been used up. A separate grant from S-RIPM will be used during the 2012 season and potentially into 2013.
- Pecan: ipmPIPE funds will expire after this season.

The Western Specialty Crops PIPE has just completed its first year of three ($909,091).

The Onion ipmPIPE, funded by the SCRI program, has just completed its first year of 4 (at $2,467,589)

A workshop for leaders and IT coordinators of PIPE and PIPE-like projects was held in Washington, DC on July 5, 2011. Discussion topics were wide ranging including SWOT analysis of our current array and capabilities, improving collaboration, challenges of sustainability, and improvement of the ipmPIPE national web portal page. The group agreed to continue discussions.

eXtension Meeting Brings Together eXperts

Under a grant from USDA National Institute of Food and Agriculture, SRIPMC is sponsoring a one-day workshop in Washington, DC, to bring together IPM experts and the eXtension community. We hope that the meeting will foster future collaboration that will enhance both IPM and eXtension.

Topics for discussion include some of the concerns for both IPM professionals and eXtension staff about new Communities of Practice, how IPM specialists can enhance existing IPM information in eXtension, and what eXtension can gain from contributions by IPM specialists.

The workshop will produce an action plan for future collaboration between the IPM community and eXtension.

Six 2011 Southern Regional IPM Grants Awarded

This year Southern Regional IPM grants funded 6 out of 35 proposals for a total of $803,673. Of the funded proposals, three were for research projects, one was for an extension project, and two were for combination research and extension projects.

The following list includes all of the 2010 Southern Region IPM Awards:

- Brown Marmorated Stink Bug: Impact of an Invasive Pest on Orchard and Vegetable IPM (NC State University: James Walgenbach, $148,153)
- Ecologically driven stink bug management in commercial farmscapes (University of Georgia: Michael Toews, $140,167)
- Application of weather dynamics to predict changes and enhance IPM strategies for the Gulf Coast tick (Texas A&M Research Foundation: Pete Teel, $132,589)
- Integrated Management of Colletotrichum and Phytophthora Crown Rot of Strawberry in the Southeast (NC State University: Frank Louws, $169,851)
- Diagnostic Image Series Development for Supporting IPM in the Southern Region (University of Florida: Carrie Harmon, $83,000)
- Comprehensive management of plant-parasitic nematodes on peach with cultural practices, novel biorationals, and reduced rates of fumigants (University of Georgia: Phillip Brannen, $129,913)