

Director's Notes

In the last several months, we've had several major events worth mentioning. First, we have recently presented four of the Friends of IPM awards. We presented the Kentucky Wheat Science Group with the Pulling Together award at their Wheat Field Day on May 20, and the Texas IPM Program (Outstanding State IPM Program), Marvin Harris and Bill Ree (IPM Teacher), and John Jackman (Lifetime Achievement) at the Texas Pecan Growers Association Meeting on July 15. The 2009 Call for Nominations for the Friends of IPM Award will be released in the fall.

In May I had the pleasure of visiting Louisiana State University, courtesy of IPM Coordinator Clayton Hollier and researcher Gene Reagan. I met with faculty in the departments of Entomology and Plant Pathology,

shared information about what the IPM Center could do for them, and gave a seminar on grant funding opportunities. The experience was so positive that we plan to schedule similar visits to other states soon. We welcome the opportunity to see what you are doing and offer the Center's services.

The latest developments with the ipmPIPE are discouraging. USDA's Risk Management Agency is unable to fund the ipmPIPE beyond this year. We are seeking out alternative funding sources to ensure the ipmPIPE remains available as a decision aid for soybean, legume, cucurbit and pecan growers. As part of this effort we are preparing a proposal, due this month, to the new Specialty Crop Research Initiative.

-Jim VanKirk

2008 IPM Enhancement Grants Awarded

For the third year, the Southern Region IPM Center IPM Enhancement Grants Program was split into two parts. Part I included the state contact and IPM documents (crop profiles, pest management strategic plans, IPM priorities and IPM elements) projects. Part II included seed and capstone projects. Separate Request for Applications (RFAs) for Parts I and II of the IPM Enhancement Grants Program were released on December 3, 2007 with a deadline of January 25, 2008 for submitting proposals to the Center. Nine proposals (with 14 separate projects) requesting \$318,320 and 12 proposals (with 12 projects) requesting \$284,328 were submitted for Parts I and II, respectively.

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Enhancement Grants Awarded (continued)

Grant Review Panels for Parts I and II of the IPM Enhancement Grants Program reviewed the proposals and met on March 13, 2008 and March 11, 2008, respectively, to evaluate proposals and make recommendations for funding to Center staff. For Part I, 8 proposals (12 projects) totaling approximately \$277,220 were approved for funding. Six proposals totaling approximately \$148,125 were approved for funding under Part II. A list of projects (and project directors) selected for funding for 2008 is provided below.

PART I:

State Contact Projects:

- State Contact and IPM Documents for Alabama (Henry Y. Fadamiro)
- State Contact and IPM Documents for Arkansas (J. Ples Spradley)
- State Contact and IPM Documents for Kentucky (Patricia Lucas)
- Tennessee Pest Management Information Network - State Contact and IPM Documents (Darrell D. Hensley and James Patrick Parkman)

State Contacts and IPM Documents Projects:

- Southern Region IPM Network for Florida, Puerto Rico, and the Virgin Islands and Related IPM Documents (Mark Mossler and Fred Fishel)
- State Contact and IPM Documents for Oklahoma (Jim T. Criswell and Charles C. Luper)
- State Contact and IPM Documents for Texas (Mark A. Matocha and Don L. Renchie)
- Virginia Pest Management Information Network - State Contact Project (SCP) and IPM Documents (Michael J. Weaver)

PART II:

IPM Seed Projects:

- Identification of semiochemicals mediating attraction and aversion in the nine-banded armadillo, *Dasypus novemcinctus* L. (Russell F. Mizell, III and Holly K. Ober)
- Southern Region Conference to Assess Needs in IPM to Reduce the Incidence of Tick-Borne Diseases (Charles S. Apperson)
- Testing and deployment of a web-based yield loss prediction tool for risk management of Soybean Rust (Joe A. Omielan, Don Hershman and Saratha Kumudini-Vandoren)
- Xylem feeding insects of pecan in Texas and Louisiana and their role in Xylella disease transmission (William O. Ree, Forest Mitchell and Randy Sanderlin)

IPM Capstone Projects:

- Field Guide to Stink Bugs of Agricultural Importance in the Upper Southern Region and Mid-Atlantic States (Sean Malone, David Ames Herbert, Jr., Katherine L. Kamminga and Jeremy Greene)
- Refinement and validation of a new time-saving scouting technique for Hemipterous pests of cotton based on external feeding symptoms (David Ames Herbert, Jr., Jack Bacheler, Eric Lee Blinka and Michael Dennis Toews)

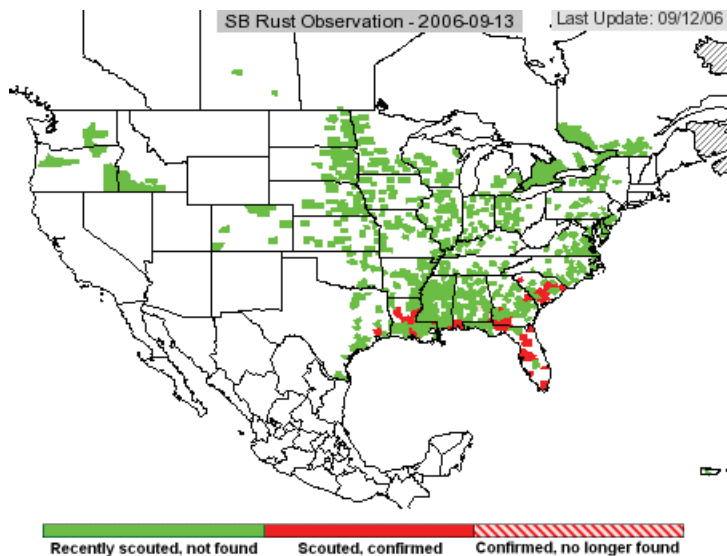
ipmPIPE Funding in Jeopardy



Since 2005, growers and their advisors have increasingly relied upon a national system called the *integrated pest management* Pest Information Platform for Extension and Education (*ipmPIPE*). This highly successful risk management system, originally built to track and advise about soybean rust, has been expanded to provide real-time information for management of soybean aphids, cucumber downy mildew, pests and diseases of legume crops, and the pecan nut casebearer. The web-based tracking and alert system has cost about \$3 million a year to develop and operate; however, return on investment has been outstanding. For example, the soybean rust PIPE has achieved up to a 100-fold return on investment as a result of fungicides not being applied unnecessarily and/or used when soybean rust threatened crop yield. With each additional pest risk platform developed, the benefit ratio per public dollar spent increased. The *ipmPIPE* has been called 'invaluable' by university extension specialists, growers, environmentalists and professional crop advisors.

The operational funds needed to run the *ipmPIPE* have been provided by the USDA Risk Management Agency (RMA) since early 2006. Significant supplemental funds for soybean rust have been provided by the soybean check-off and through Land Grant universities. However, as a result of adjustments to appropriated funding for RMA's research projects effective for the 2008 fiscal year, the *ipmPIPE* will lose funding for its operational budget beginning January 1, 2009. Component pieces of the *ipmPIPE* will be severely impacted by this loss of funding that supports the web-based platform, risk/prediction models, education

and extension outreach activities, research, pest monitoring operations, and scientist communication efforts. At this time, there is uncertainty about how or if the system will continue to function. Unless new funds can be found to support the *ipmPIPE*, formal pest monitoring activities for soybean rust, soybean aphid and legume pests will not continue beyond 2008. At this time, there are no sources of Federal funding identified to fill the gap, but USDA is exploring possible solutions.



Additionally, partner stakeholders from Land Grant universities, associations that represent the agricultural community, and the private sector working with the Federal Government are assessing what can be done to keep this important program going. There is a request in the President's 2009 budget to increase funding for the USDA CSREES Food and Agriculture Defense Initiative (FADI), which includes the soybean rust PIPE. This budget increase would help stabilize funding for the *ipmPIPE*. However, language and funding to support *ipmPIPE* was not included in recent House and Senate committee budget mark-ups.

UK Wheat Science Group Receives Friends of IPM Award

by Laura Skillman, UK Wheat Science Communication Specialist

Since 1997, members of six departments within the University of Kentucky College of Agriculture have pulled together and pooled their respective knowledge to assist the state's wheat producers.



Dean Scott Smith and Doug Johnson
photo by Dr. Robert De Mattina

This unique group works to improve the efficiency and economics of wheat production. These efforts have paid off in such areas as improved yields and a higher percentage of no-till production. Their efforts have been noticed by producers, crop consultants and colleagues with the latest recognition coming from the U.S. Department of Agriculture's Southern Region Integrated Pest Management Center.

The wheat group received the IPM Center's "Pulling Together" award following its annual field day on May 20. This award recognizes success by a group in any aspect of developing, promoting, teaching, and implementing integrated pest management. Integrated pest management is an approach to managing risks associated with pests and pest management that optimizes economic, environmental and social benefits.

The unique relationship among so many varied departments set the Wheat Science Group apart from other group nominations for the award, said Rosemary Hallberg, communications specialist for the center.

Scott Smith, dean of the UK College of Agriculture, presented the award. Smith was chair of the agronomy department when the Wheat Science Group was formed and helped provide funding to get their efforts under way. Today, the group is self-supporting.

"The Wheat Science Group exemplifies what the college is all about – working collaboratively through research, extension and teaching to improve the lives of Kentucky's residents," Smith said.

The group consistently focuses on the importance of using scouting, thresholds and no-till in wheat production. They developed many of their research and education priorities in conjunction with the Kentucky Small Grain Growers Association, county agricultural extension agents, wheat consultants and agribusinesses.

Integrated pest management is an important aspect of the UK Wheat Science Group's efforts, and over the years the IPM Center has been supportive of their efforts, said group member Doug Johnson, extension entomologist and UK IPM coordinator.



Dave Van Sanford (l) and Bill Bruening (r) explain their research on wheat varieties during the Wheat Field Day preceding the ceremony. Photo by R. De Mattina

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UK Wheat Science Group Receives Friends of IPM Award (continued)

“There is a real melding of a lot of different things to move Kentucky forward in efficiency and economics,” Johnson said. “The key to our success is that we are all sold on a common goal.”

Departments represented in the Wheat Science Group include plant pathology, entomology, plant and soil sciences, biosystems and agricultural engineering, agricultural economics, and agricultural communications.



The UK Wheat Science Group: Front row from left: James Martin; Chad Lee; Don Hershman; Nikki Mundell; Sam McNeill; Marilyn Hooks; Dave Van Sanford; Dottie Call; Charles Tutt; Jim Herbek; Laura Skillman; Bill Bruening; John Grove; Richard Trimble; Greg Schwab and Lloyd Murdock. Back row from left: Doug Johnson (kneeling); Dean Scott Smith, College of Agriculture; Assistant Dean of Research Nancy Cox and Jack Crowner, Veteran Farm Broadcaster. Photo by R. De Mattina.



Later that afternoon, Doug Johnson, Entomology (l), Don Hershman, Plant Pathology (on tractor) and Brenda Kennedy, research specialist in Plant Pathology work together to seed a soybean test plot field for one of Johnson's research projects.

Texas IPM Program Wins Friends of IPM Award for Outstanding IPM Program by Rosemary Hallberg

Well-versed in integrated pest management methods, Texas grower Barney Pustejovsky relies heavily on his IPM agent from Texas AgriLife Extension Service and the Texas IPM Program to keep him up to date on new IPM technology. And he's not alone. Growers, pest management professionals, crop advisors and many others frequently consult Texas IPM Program specialists and trust their advice. For their excellence in IPM research, extension and overall implementation, the Texas IPM Program received the 2008 Friends of IPM Award for Outstanding State IPM Program.

SRIPMC Associate Director Steve Toth presented the award during the 2008 Texas Pecan Growers Association Conference and Trade Show in Houston on July 15. Extension IPM Coordinator Dr. Tom Fuchs accepted the award for the IPM Program. Toth also presented two other Friends of IPM Awards: the IPM Teacher Award to Dr. Marvin Harris Professor of Entomology, Texas AgriLife Research, and Bill Ree, Extension Program Specialist; and the Lifetime Achievement Award to Dr. John Jackman, Professor of Entomology and Texas AgriLife Extension specialist (see Jackman's profile in the spring issue).

A special award this year, the Outstanding State IPM Program award recognizes a statewide IPM program that has proven



SRIPMC Associate Director Steve Toth (l) and Texas IPM Coordinator Tom Fuchs (r)

leadership and serves as a model for other programs. Recognized as one of the best IPM programs in the country, the Texas IPM program has mastered the concepts of collaboration and new technologies. The program employs 22 IPM "agents" for agricultural commodities and several urban IPM specialists. Each agent has his or her own Advisory Committee consisting of other Extension personnel, growers, agribusiness representatives and other agricultural leaders.



Texas IPM Program personnel meet for a retreat

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Texas IPM Program Wins Friends of IPM Award (continued)

The program began in 1972 as a pilot program funded by the US Department of Agriculture Animal and Plant Health Inspection Services (APHIS) to battle the tobacco budworm. The initial program employed four county entomologists to cover one quarter of the state. Their mission was to teach growers how to scout for pests and monitor their fields. In 1994, under the new leadership of Extension specialist Tom Fuchs, the program began to transition from one that emphasized primarily scouting, economic thresholds and monitoring of pests and natural enemies to one that increasingly emphasizes evaluation of new IPM technologies and how that they best fit into local production systems.

"It's not an entomological program; it involves the total production of a crop or commodity," said Fuchs. "We look at IPM in a broad context. Almost all areas of crop production are involved, whether it's agronomy, entomology, plant pathology, or weed science."

Growers who have worked with the IPM program have seen consistent success. In 2006, 94 percent of Texas' cotton producers surveyed said that IPM increased their net profits by an average of \$34.24 per acre. Producers also put their money on the Extension education and demonstration program—at nearly \$35 per acre. A majority of Texas growers say they use IPM methods because of what they've learned through the IPM Program and from consultants.

"Growers understand that these folks have their best interests at heart," Fuchs said.

Fuchs and the other awardees accepted the awards amidst many of their peers and clients.

"I was very proud to be able to represent our AgriLife Extension team in accepting the Outstanding State IPM Program Award," Fuchs said. "This is the first time this award has been presented, so it is indeed an honor."



Warren Multer, Extension Agent-IPM, Glasscock, Upton and Reagan Counties, and Thomas Moeller, IPM Intern (now a consultant for King Ranch)



Jim Swart, Extension Agent-IPM, Hunt and Collin counties, and Erin Wilson, IPM intern



Marty Jungman, Extension Agent-IPM, Hill and McLennon Counties, and Mary Joe Schronk, IPM Intern



Brant Baugh, Extension Agent-IPM, Lubbock County, and Kris Verett, IPM Intern (now graduate student at Texas Tech University)

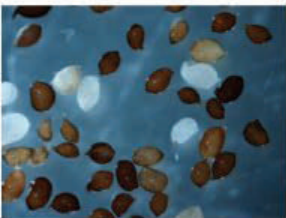
IPM At Work: New Corn Cyst Nematode Is Contained So Far

Researchers at the University of Tennessee have some good news for mid-south corn growers: a corn cyst nematode discovered in 2006 has not been detected beyond the area it originally infested.

Plant pathologists from the University of Tennessee discovered the nematode in a cornfield in Obion County, Tennessee, after a corn producer reported stunted plants in one of his fields. Examination of soil samples proved that the corn roots were covered by a cyst nematode. However, it was not *Heterodera zea*, the corn cyst nematode quarantined by USDA from 1981 through 1996. This new cyst belongs to the genus *Cactodera*.

The 2006 finding fascinated UT researcher Ernest Bernard, who had found the same nematode on goosegrass in 1978 in Lauderdale County, Tennessee. Bernard recorded the finding, but did not alert his colleagues at the time because the nematode didn't seem to threaten a valuable commodity. He deposited specimens at the USDA Nematology Lab in Beltsville, where scientists later confirmed that it was the same nematode as the one found in Obion County.

Corn Cyst



SCN



Corn cyst nematode (L) and Soybean cyst nematode (R)

The new finding in a corn field elevated the nematode's importance. So much was unknown about the new nematode other than its parasitism of corn. When the cysts

were extracted from the sample in Obion County, scientists noticed a strong resemblance to another cyst nematode—the soybean cyst nematode.

Soybean cyst nematode (*Heterodera glycines*) moves through the soil quickly, reducing yield sometimes before its presence is realized. Once established, it is very difficult to manage and almost impossible to destroy. Most growers fight it with a corn-soybean rotation. Hensley feared that a misidentification of the new corn cyst nematode could complicate that.

"If you unknowingly have infestations of this new cyst nematode, and you pull a soil sample, conduct the usual cyst count and find cyst nematode populations at the soybean cyst nematode's economic threshold of 100 cysts per pint of soil, you may decide to plant corn rather than soybeans," Hensley said. "You should have stayed in soybeans rather than have rotated into corn, because this corn nematode would not be a problem in soybeans, but could lead to yield loss in corn."

According to Patricia Donald, research plant pathologist with the US Department of Agriculture, Agricultural Research Service (USDA-ARS), soybean cyst nematode has been the bane of soybean growers because of its widespread distribution. Growers who use a corn-soybean rotation watch closely for the soybean cyst nematode, as its presence can mean yield reduction for years. A nematode that mimics the soybean cyst nematode might convince growers to use more resistant varieties when not needed, allowing the soybean cyst nematode to slowly adapt to the resistant genes.

"If a grower grew resistant soybeans and had soil samples analyzed for soybean cyst nematode population density, with this nematode they'd still have cysts recorded as being present," Donald said. "So they may

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New Corn Cyst Nematode (continued)

come to the conclusion that their management strategies aren't working, when in fact they are working."

Unlike the soybean cyst nematode, which "glows" white on the roots in its early stage, the new corn cyst nematode is barely visible to the naked eye.

"I went down to USDA lab located in Jackson (Tennessee) and viewed the roots, and at first I couldn't see any cysts on the infected corn," Hensley said. "But after you thoroughly washed the roots, you could see cysts with the aid of a dissecting microscope."

To find out how much corn acreage the new cyst nematode occupied, Hensley, Donald and other UT scientists began to collect and analyze soil samples from corn fields in Tennessee, Kentucky and Mississippi. The project was funded by a 2007 Southern Region IPM Center IPM Enhancement Grant. So far, samples that have tested positive for the new corn cyst nematode—still unnamed—have been collected within 100 miles of the original find.

"I'm just glad that so far it has not moved out of the areas it was found in," said Hensley.

Donald believes that the pathogen's biology as a *Cactodera* species may be one of the reasons it has not moved.

"Some of the *Cactodera* species have a fairly localized distribution due to their narrow host range," she said. "Until we get people looking for it on a much wider basis, we won't know how widespread it is."

And although the fact that it has not appeared on soil samples far from the initial sites, the number of unknowns make both Hensley and Donald nervous, especially since it has the potential to overwinter on grassy weeds.

"We still don't know how long it will survive," Hensley said. "Since it likes weeds, it may linger on goosegrass or sod. If you plant Round-up Ready cotton and control your grass, you may eventually get rid of it, but we don't know how long this nematode will survive in the soil without a host. The best thing to do is to rotate out to soybeans or cotton, or use a non-host if you're in an area that is infested with this new cyst nematode."

Hensley, Donald and other UT researchers are continuing to examine samples and study the new corn cyst nematode to discover some of the unknowns that continue to linger. Corn growers interested in new developments with this research should visit: <http://eppserver.ag.utk.edu/Extension/SPDN/2007/cyst-nematode-corn/cyst-corn.htm>.

Clemson University and Southern SARE Present New Online IPM Course for Organic Crops

A new online training course entitled "Integrated Pest Management for Organic Crops" has been developed with support from Southern Region SARE. The curriculum project, led by Clemson University and developed by southern region pest management experts, is designed to achieve widespread incorporation of the principles and practices of sustainable agriculture in the training provided to agricultural professionals in the Southern Region. The Web-based course builds on the basic curricula provided by the National SARE Curriculum Project (<http://www.sare.org/coreinfo/ceprogram.htm>). For more information about the course, go to <http://www.sare.org/coreinfo/SSAREceprogram.htm>.

Ames Herbert Receives Virginia Tech Award

Virginia IPM Coordinator Ames Herbert received the 2008 Andy Swiger Land-Grant Award on June 16. Make possible by an endowment established in honor of former Dean Andy Swiger, the award recognizes creative accomplishments that contribute to solving practical problems and en-



hancing production and profit in agriculture. Herbert was honored for his 20 years of outstanding service at the Tidewater AREC and his development, initiation, and management of the Integrated Pest Management (IPM) program. He also has positions of leadership on regional and national committees, speaks at regional, national and international meetings, and has authored more than 200 journal articles and papers and more than 100 Extension publications.



Upcoming Events

September 21-23: Florida Fruit and Vegetable Annual Convention, Naples, FL

September 29: Deadline for comment period on EPA cancellation of carbofuran

October 7-8: National IPM Committee Joint Meeting, Washington, DC

October 8-9: National IPM Centers Coordinating Committee meeting, Washington, DC

November 11-14: Methyl Bromide Alternatives Outreach Conference, Orlando, FL

December 2-3: SRIPMC Advisory Council and Steering Committee Meeting, Raleigh, NC

TAKE NOTE!

The Winter meeting of the SRIPMC Advisory Council and Steering Committee is Tuesday and Wednesday, December 2 & 3

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