



April Committee Meetings



On Wednesday evening, April 28th, members of the Advisory Council and Steering Committee were greeted in Raleigh, North Carolina with a catered reception complete with pasta bar and carving station. The reception helped kick off a series of meetings between the two groups to discuss the latest concerns and plans of action for the Southern Region Integrated Pest Management Center (SRIPMC or the Center).



Members of both committees mingle during the Wednesday night reception.

On Thursday, the Advisory Council and Steering Committee met jointly for a full day of meetings and discussions. Starting with a welcome and introductions, Ron Stinner, director of the SRIPMC, announced the latest news in the Southern Region, including new staff, updates on the search for an Associate Director and the future move to new facilities. Following these updates, Glenn Williams with the Office of Pesticide Programs, and a new member of the Advisory Council, presented on the PESP (Pesticide Environmental Stewardship Program) and how PESP and the SRIPMC can partner effectively.



Tom Anderson and Gary Thompson with the Insecticide Resistance Action Committee (IRAC), and Steve Toth, associate director of regulatory issues with the SRIPMC, discussed the Mode of Action (MOA) Initiative. The Center is collaborating with IRAC to develop insecticide resistance management fact sheets to inform stakeholders of the insecticide MOA classification scheme. These sheets will be available early summer 2004.



Larry Elworth and John Anderson discuss the merits of adding a relevancy statement to proposals.

Amanda Hodges with the Southern Pest Diagnostic Network updated the group on soybean rust and the potential spread throughout the Southern Region as well as informed them about a soybean rust response planning workshop that will be held May 11-12 at North Carolina State University. The workshop is being co-sponsored by the Southern Region IPM Center and the Southern Plant Diagnostic Network.



The afternoon session consisted of discussions and proposed changes to the Center operations and procedures including, SRIPMC competitive grants, SRIPMC RFA relevancy statement and panel, pre-proposals, letters of intent and guidelines for applications and reviews of resubmissions. Thursday's meetings were concluded with updates from Steve Toth about the methyl bromide transition vs. soil pest management funding.

Only the Steering Committee met on Friday to discuss and vote on courses of action based on the recommendations from the Advisory Council. Building off the discussion regarding the need for a relevancy statement in the RFA proposals, the Steering Committee decided that applicants must include a statement of relevancy in their proposal and a separate committee would evaluate the relevance of the proposal to the Southern Region. The committees also decided there will be no future need for pre-proposals or letters of intent.



Shani File, Ames Herbert and Ron Stinner review Thursday's agenda.

As a whole the meetings were a success, giving the Advisory Council and Steering Committee the opportunity to come together and discuss the direction the Southern Region IPM Center will take throughout the year. By having the Advisory Council and Steering Committee meet jointly, members of the Steering Committee heard first hand the concerns and suggestions of stakeholders from a diverse group of organizations.



Tom Fuchs, Doug Johnson, Ames Herbert and Norm Leppla participate in discussion.

Look for the next Advisory Council and Steering Committee meetings to be scheduled sometime in late October 2004.

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Center for Agriculture Partnerships

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Newest Members : Advisory Council

Name	Affiliation
Carrie Harmon	University of Florida, Southern Plant Diagnostic Network
Mike Aerts	Florida Fruits & Vegetable Association
Lane Price	USDA-NRCS
Troy Pierce	EPA
Amanda Hodges	University of Florida, Southern Plant Diagnostic Network
Fitzroy Bullock	Tennessee State University - Cooperative Extension Program
Debbie Hamrick	Ball Publishing
Sarah Hoffman	USDA
Glenn Williams	EPA



Ball Publishing



Profile: Dr. Norm Leppla

Norm Leppla, professor and IPM coordinator at the University of Florida Institute of Food and Agricultural Sciences, has worked in Entomology and IPM since receiving his Ph.D. in Entomology/Biological Sciences in 1972. An avid outdoorsman with a love for natural history, Leppla's career path was influenced early on by the founding members of the EPA.

"When I was studying to receive my bachelor's degree in zoology at Arizona State University, some of the founding members of the EPA visited the campus and talked to people about how they were going to protect our environment. I heard them talking about it and said to myself, that's what I want to do," said Leppla.

As a professor and IPM coordinator, Leppla works with faculty members and individuals from other institutions to develop programs to advance the use of IPM. Together they work to improve research, extension, and education projects, and generate the funds and resources necessary to help make these programs successful.

"We don't just need funds to make an IPM program successful, we need high caliber people to actually conduct the work," said Leppla. "Fortunately for us that is exactly what the University produces, high caliber students and graduates. This is in addition to our excellent faculty and cooperators."

Leppla has a long history of involvement in research projects, including assisting in the development of the commercial production of a pest mole cricket nematode. A success, the program now has a commercial product that is used to control pest mole crickets. The program has prompted additional work to distribute two or three insects that are natural enemies to the mole crickets across the southeastern U. S. and Puerto Rico.

Not only has Leppla been involved in field research, he has given back to the University's education system by assisting in the development of the Doctor of Plant Medicine program. "We are very, very pleased and excited about the program and its future," said Leppla. "The program gives graduates unlimited opportunities because they have very broad training, opening many doors for them."

Currently, Leppla works across Florida and the Caribbean to safeguard the U.S. against non-indigenous, invasive species. By implementing IPM processes, particularly advanced surveillance and detection systems, Leppla and his team work together to increase the United State's capacity of detecting and excluding pests that threaten our borders.

An avid member and head of numerous organizations and committees, Leppla is proud of the opportunities he's had working with a wide range of organizations. Currently, he is vice-chairman of the SRIPMC Advisory Council, co-chairman of the International Organization for Biological Control Arthropod Mass Rearing and Quality Control Working Group and he is advisor to the Association of Natural Bio-control Producers, just to name a few. Leppla also advises up to 15 graduate students a year, with 12 planned for the upcoming semester. "These graduate students, they really are the future of IPM, so I try to spend a lot of time with them," said Leppla.

Dr. Norm Leppla can be reached at ncleppla@ifas.ufl.edu or 352 392-1901 ext. 120.



Leppla, an avid sailor, is "Steering the course of IPM in Florida."

"IPM is critically important because it offers sustainable long-term management, rather than the single tactic of repeated chemical pesticide application. "

- Dr. Norm Leppla

Working Towards Better Peach Production



For years, peach growers in the southeast have dealt with challenges controlling pests in their orchards. Because grower options for managing pests are limited, pesticides, particularly the oft maligned organophosphate (OP) insecticides play a large role in controlling peach insects. Eastern peaches have been identified by researchers and pesticide policy experts as pesticide-dependent and lacking Integrated Pest Management (IPM) options. Specifically, peaches lack the sampling techniques, pest models and treatment thresholds that are the nuts and bolts of IPM systems. In the absence of strong IPM programs, growers and peach entomologists have been dependant on preventative or scheduled sprays of OP insecticides to control insect infestations. Unfortunately, many OPs are toxic to humans, creating concerns for farm worker safety and residual of OPs that may remain on the harvested fruit.

The U.S. Environmental Protection Agency (EPA) is responsible for regulating pesticide use, and they have progressively raised standards to assure increasing margins of dietary and farm worker safety. While the peach industry has readily adopted these changes, a cost increase of up to 700 percent has prompted the desire for more refined, cost-effective IPM options.

Ethyl parathion was the standard peach insecticide for over 30 years. While effective, ethyl parathion was potentially dangerous to workers. EPA regulatory actions replaced ethyl parathion with encapsulated methyl parathion, a similarly effective product with much lower acute mammalian toxicity. While safer for the field workers, the encapsulated form proved to be more durable on the fruit and hence more toxic in terms of dietary safety. In the late 1990s EPA eliminated encapsulated methyl parathion use in peaches, and the OP insecticide, phosmet, became the dominant peach insecticide. Phosmet is effective against fruit attacking peach pests, it has minimal dietary risks and its acute toxicity to humans is low. But, phosmet is far less effective than the materials it replaced for control-

ling tree-attacking pests such as scale and lesser peachtree borer.

As noted earlier, EPA has continually pressed for better margins of safety. While phosmet is not a concern in terms of acute dietary or dermal exposure, there are concerns over chronic farm worker exposure. OP insecticides, even 'safe' materials such as phosmet, may pose dangers to workers because peach trees are thinned by hand. If left alone in nature, peach trees could potentially produce between 6,000 and 10,000 small and unmarketable fruits. Unlike apple trees, which can be chemically thinned, peach trees have to be thinned by hand, with each tree thinned two times over a period of a month. In addition, workers subsequently harvest peaches, again by hand, for eight to ten weeks.

The peach industry wants to provide the highest margin of worker and dietary safety, while incorporating a reliable, cost-effective program. In order to do this, southeastern peach growers are interested in research to develop better insect IPM options. To meet these needs, the Georgia Peach Council and the South Carolina Peach Council collaboratively approached the University of Georgia and Clemson University. Dan Horton, extension fruit entomologist with the University of Georgia and extension and research entomologist for peach in GA and SC, was asked to lead a joint-state and agency peach entomology team.



Lesser peachtree borer damage

The first task of the peach entomology team was the evaluation of new, low-risk insecticides that will fit into existing IPM programs to mitigate chronic worker exposure risks associated with using the OP phosmet in conjunction with thinning or harvesting fruit. The low-risk insecticide evaluations are done by Horton and Sam Hudson at Clemson University's Musser Fruit Farm.

The peach entomology team is also researching and testing long-term solutions. "What peach growers really want is the options that exist in crops with more evolved IPM systems, such as peanuts, apples or cotton," said Horton. "They want systems that use weather data to forecast events in pest life cycles, and reliable sampling technologies that generate numbers that can be used to make informed decisions on a block-to-block basis."

For some of these long-term solutions, Horton is working with Dr. Harald Scherm, plant pathologist with the University of Georgia and Zhiwen Lan, a former MS student. Scherm has expertise in developing pest models and Lan's research developed a predictive model for peach scab and plum curculio, two fruit attacking insect pests. The model shows when various lifecycle events can be expected to occur, but will not be able to indicate if plum curculios are actually present in the orchard. These models will ultimately help growers anticipate when sprays may be needed to avert the risk of wormy peaches. The plum curculio model is currently undergoing field validation to fine tune and assure a commercial level of reliability.

Horton is also working with Dr. Ted Cottrell and Dr. David Shapiro-Ilan, both with the USDA-ARS, Southeastern Fruit and Tree Nut Research Laboratory in Byron, GA. Dr. Cottrell has researched pheromone mating disruption as a non-toxic means of controlling lesser peachtree borer and peachtree borer. Lesser peachtree borer became a key pest after encapsulated methyl parathion's peach label was withdrawn, and is now the key cause of premature tree mortality in many southeastern orchards. Mating disruption saturates the orchard atmosphere with high levels of a harmless, volatile chemical that male borers use to locate females to mate. Male moths are confused and mating is either dramatically delayed or precluded. Dr. Cottrell's initial work has shown promising results, but there are still obstacles to overcome. Lesser peachtree borer is much more abundant in the southeast than in cooler production areas, and it ap-

pears that three to four times more pheromone will be needed to disrupt mating in Georgia. Cottrell and Horton have begun testing in a 385 acre orchard that is heavily infested with lesser peachtree borer. The large orchard will allow them to study how many, and how far, mated moths from wild hosts can fly into a pheromone treated orchard. If mating disruption works in this worst-case setting it's likely to be a good option in many other orchard settings.

Dr. Shapiro-Ilan, insect pathologist, and Dr.

David Jenkins, post doctoral associate, are working on wild host options to control plum cur-



Plum curculio

culio. Dr. Shapiro-Ilan's work has shown that entomopathogenic nematodes can very effectively control the plum curculio's soil dwelling life stages. Trials this season will determine if adult control with nematodes will be feasible and if nematodes could provide the first 'organic' control option for plum curculio. Dr. Jenkins, is focusing on the details of pest biology as a means of ultimately more reliable, affordable control of plum curculio and the two scale species. Dr. Jenkins is looking at wild hosts as sources of plum curculio that migrate into orchards, and is examining the reliability of border sprays for managing plum curculio intent on migrating into orchards.

There are many challenges in peach entomology, but progress is being made thanks to the help of the University of Georgia, Clemson University, USDA-ARS's Southern Tree Fruit and Nut Research Laboratory and all the individuals that make up the peach entomology team.

If you would like more information about the southeastern peach entomology initiative's efforts to make peach production safer please contact Dan Horton at the University of Georgia, dlhorton@uga.edu or 706-542-9030.

In the States...

Texas

Dr. Chris Sansone became the Texas A&M University Department of Entomology's Associate Head for Extension programs effective March 1.

Sansone will remain headquartered at San Angelo. He has been the entomology department's interim associate head at San Angelo since Dr. Pat Morrison retired in August of 2003.

"The Texas Cooperative Extension entomology program is recognized as one of the best in the nation," Sansone said. "I look forward to continuing the efforts of Dr. Morrison and working with Dr. Kevin Heinz, head of the entomology department, to maintain and improve upon that recognition."



North Carolina

North Carolina Signs IPM In Schools Accord: North Carolina representatives, including state Agriculture Commissioner Britt Cobb signed a memorandum of understanding on March 4 that they hope will pave the way for the adoption of Integrated Pest Management in North Carolina public schools. Several North Carolina school systems, including Wake County, Nash-Rocky Mount and Winston-Salem/Forsyth County already use Integrated Pest Management to control

pests and reduce students' exposure to pesticide residues.

"We're really interested in getting schools across the state involved in school IPM," said Dr. Mike Linker, Cooperative Extension's IPM coordinator, based in N.C. State University's Crop Science Department.

Updates

If you have any updates you would like included as part of the In the States section, please contact Jennifer Hodorowicz at jmhodoro@ncsu.edu or 919-513-1432.

Center for Agricultural Partnerships



The Center for Agricultural Partnerships (CAP), a nonprofit organization, is dedicated to solving agricultural problems by helping farmers adopt more environmentally sound and profitable practices. CAP programs improve the productivity and well being of farm communities, build healthier ecosystems, reduce pesticide risk, and improve water quality in growing regions across the country.

Executive Director of the Center, Larry Elworth, works with and supervises a wide range of activities including, but not limited to, fundraising and working with projects at the field level. While this is a busy schedule, having the opportunity to work on projects in the field gives Elworth a better idea and understanding of what programs are and are not working. In order to continue the programs that are successful, CAP works on larger policy issues with USDA and EPA to increase the grower's ability to access conservation programs and gain support from the government to help offset the cost of starting an IPM program.

"To me, there are two main reasons why IPM programs are important. Number one, IPM is probably the most effective and profitable program out there for growers. And number two, dealing with pest issues is best for protecting the environment, protecting the grower, and is the best approach overall," said Elworth.

As a member of the SRIPMC Advisory Council, Elworth is particularly interested in working with the Southern Region to set RFA priorities. A former political appointee at USDA, Larry understands the importance of working with USDA and EPA to set priorities for grant programs. "Having clear, set priorities is advantageous to the grower because of the simple fact that you can't get what you don't ask for. By having high priorities and a clear set of expectations, growers should get what they need," said Elworth.

CAP works with many universities and groups across the country to help get the message of IPM programs into the fields. In the South, they have worked with NC State University and Virginia Tech University to help peanut growers increase their use of an IPM tool to manage southern corn rootworm. In other parts of the country, CAP is working with Hispanic orchard growers in Washington State, providing IPM workshops in Spanish and publishing a Spanish scouting manual. CAP's "Putting the Farm Bill to Work" Program enables specialty crop producers to make use of USDA's Environmental Quality Incentives Program (EQIP) to support adoption of IPM and other environmentally sound practices.

If you would like to learn more about the Center for Agricultural Partnerships, visit their website at www.agcenter.org