The IR-4 Project
Providing Safe and Effective Pest Management Solutions for Specialty Crop Growers

# Newsletter

Vol. 36 No. 3 July 2005

Information Exchange

# Beyond the Susquehanna: IR-4 Hosts Tour of Lancaster County, PA

-by Van Starner, IR-4 Coordinator, Entomology and Pathology

On the first full day of summer 2005, the annual IR-4/EPA/USDA educational bus tour took off from the Washington, D.C. Greenbelt Metro stop, filled to its 57-seat capacity with IR-4, EPA, and USDA participants, and headed northeast from our nation's capital. The goal: a 12-hour plus day of experiencing the realities of crop production and agricultural research "Beyond the Susquehanna" in the lush rolling farmland in Lancaster County, PA, one of the most agriculturally productive counties in the whole U.S. This was the ninth in a series of agricultural tours sponsored and organized by IR-4, since the first tour in New Jersey in June 1999, as part of our valuable partnership with EPA colleagues.

Following several introductory videos on the bus about Lancaster County and our first farm stop, we arrived at Steve and Cheri Groff's Cedar Meadow farm a few miles northeast of the Holtwood Dam on the Susquehanna River. There we met our host for the day Mr. Tim Elkner, Horticulture Agent for Penn State University Cooperative Extension in Lancaster County. We transitioned quickly from riding the bus to riding on tractor-pulled wagons for a tour of the 200-acre family farm while Steve described how they have pioneered the "Permanent Cover Cropping System" to reduce soil erosion and farm runoff, and how they use no-till farming, minimal pesticides, and plastic tunnels to grow a wide variety of vegetables and raspberries.

*Steve Groff owner of Cedar Meadow farm describes the no-till "Permanent Cover Cropping System" to tour participants.*

Enroute to the next tour stop, Tim provided some background information about agriculture in Lancaster County, and about various conservation methods that have been researched and used by the county's farmers to help reduce potential negative impacts on the lower Susquehanna River and upper Chesapeake Bay from nutrient and pesticide runoff. When we reached our second destination at the Penn State Southeast Agricultural Research & Extension Center (SAREC), near Landisville, tourees anxiously enjoyed a catered lunch on the main floor in the 1890's Pennsylvania bank barn, while listening to Dr. Dave Johnson, Farm Manager at SAREC, describe the 100 plus acre farm and the kinds of crop research and extension studies conducted there.

Also, during our SAREC visit, Kathy Demchak (Small Fruit Extension Horticulturalist at Penn State) provided comments about the growth in PA small fruit production, pest management needs and blackberry variety testing at

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# Inside this issue...

# Trinka Honored with MSU Distinguished Service Award


*Dave Trinka receives the Distinguished Service Award from Michigan State University President Lou Anna Simon.*

Dave Trinka of South Haven,MI, Director of Horticulture for the Michigan Blueberry Growers Association (MBGA) [and IR-4 Commodity Liaison Member], was honored March 8, 2005 with the Michigan State University (MSU) College of Agriculture and Natural Resources Distinguished Service Award.
Lou Anna Simon, MSU President, and Jeffrey Armstrong, Dean of the College of Agriculture and Natural Resources, presented the award during the Agriculture and Natural Resources Week luncheon at MSU.
Trinka is one of three people from across the state who were recognized for their success in agribusiness or natural resources-related enterprises and their commitment to leadership in community, state and national activities.

Trinka started with the MBGA, a grower- owned cooperative that markets approximately half of Michigan's blueberries, in 1991. Since then, he has provided leadership in identifying key regulatory and government policy issues that affect Michigan's $60 million blueberry industry. Trinka has advocated for the industry in various venus with the Michigan Department of Agriculture, the U.S. Environmental Protection Agency and the U.S. Department of Agriculture. He has also shared his insight as an advisory committee member for the MSU Trevor Nichols Research Complex in Eennville, MI. Through the MBGA, Trinka has helped identify, prioritize and fund MSU research programs important to blueberry production and producer profitability.

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## Calendar of Events

**Aug. 9-10, 2005** North Central SLR Meeting Lincoln, NE Contact: Satoru Miyazaki 517.336.4611
**Aug. 22-24, 2005** Southern Region Regional Meeting: South Padre Island, TX Contact: Robin Adkins 352.392.1978 x 400
**Sept. 13-15, 2005** IR-4 Food Use Workshop: Marriott, San Diego, CA Contact: Cheryl Ferrazoli 732.932.9575 x 601
**Oct. 4, 2005,** Northeast Reg. SLR Meeting: Geneva, NY, Contact: Edith Lurvey ell10@nysaes. cornell.edu, 315.787.2308
**Oct. 4 -5, 2005** Western Reg. SLR Meeting: Davis, CA, Contact: Rebecca Sisco rsisco@ucdavis.edu, 530.752.7634
**Oct. 18-19, 2005** ARS Meeting: Wapato, WA Contact Paul Schwartz 301.504.8256
**Oct. 10-12, 2005** IR-4 Ornamentals Workshop: Charleston, SC Contact Cheryl Ferrazoli 732.932.9575 x 601
**Feb 28-Mar 2, 2006,** IR-4 National Education Conference: Phoenix, AZ, Contact Van Starner 732.932.9575 x 621

## Help IR-4 Determine Ornamental Horticulture Research Priorities

The IR-4 Project Ornamental Horticulture program focuses on research for floral, nursery, landscape, Christmas tree and forestry producers. IR-4 works with growers, researchers, registrants and regulatory agencies to facilitate new product registrations that add new crops, diseases, insects and weeds to already registered products for use in ornamental horticulture. Determining where to focus research is crucial in helping those in need of new pest management products. Each year, IR-4 hosts an Ornamental Horticulture Workshop where the next year's research projects are prioritized. This year, IR-4 is conducting an online survey prior to the October 10-12, 2005 workshop. The survey will take less than 10 minutes to complete and will be helpful in identifying the most irritating pests for research priority. The survey will be available online from June 15 through August 15, 2005, and can be found at: www.ir4.rutgers.edu/ornamentalsurvey.

Please take the time to help IR-4 help growers. For more information contact Cristi Palmer at 732.932.9575 or palmer@aesop.rutgers.edu or your Regional Field Coordinator listed on the back page.

# Tour

*continued from page 1*

SAREC. Following lunch, a wagon-ride tour provided an up-close look at a few research plots, with perhaps the most striking being Alan Michael's (Penn State Extension Educator in Floriculture from Dauphin County, PA) potted bedding plant study, an incredibly beautiful display of dozens of multi-colored varieties from Ageratum to Zinnia.

*Penn State Extension Educator, Alan Michael, discusses his potted bedding plants with the group.*

The next 2 hours of the tour focused on a prominent segment of Lancaster County life and agriculture - the Amish. Enroute to White Oak Nursery, an Old Order Amish fruit, vegetable and nursery farm operated by Amos Fisher and his family near Strasburg, a PBS documentary video introduced tourees to Amish history and culture in Lancaster County. Amos led a walking tour of the farm where we learned about Chinese "weeder" geese, minimal pesticide inputs, tree fruit nursery production, and a mule-drawn orchard airblast sprayer. This tour experience gave everyone an appreciation for how the Amish survive and successfully farm the old-fashioned way amidst the modern world of mechanization and technology.

*The Amish will take their time deciding when and if they should incorporate a new technology onto their farms. Even then, they will remove "worldly" luxuries such as rubber tires.*

Cherry Hill Orchards near Willow Street served as our final tour stop, and Tom and Richard Haas (son and father owners) greeted us in the middle of their largest orchard of sweet cherries, where "pick-your-own" was in full swing. Tourees jumped at the chance to devour a few cherries right from the trees (can't get them any fresher than that!).

Tom described for us 1) their use of some of the latest technologies to assist them in making pest management decisions in their apple, cherry, and peach production systems; 2) the challenges of losing pest control products without economically effective replacements; and 3) the development of pest resistance and its impact on their pest management programs. Before departing for a Lancaster County smorgasbord dinner, tourees capped off their day-on-the-farm experience "Beyond the Susquehanna" with a stroll through the extensive Cherry Hill Orchards farm market and purchase of some farm-fresh produce and treats for the long bus ride back to D.C.

*Few could resist the Cherries at Cherry Hill Orchards.*

# Clearances March-May 2005

**Product: Clofentezine**
**Trade Name:** Apollo
**Crops:** Persimmon
**Federal Register:** March 9, 2005

**Product: Buprofezin**
**Trade Name:** Applaud
**Crops:** Avocado, Papaya, Star Apple, Black Sapote, Mango, Sapodilla, Canistel, Mamey Sapote, Sugar Apple, Cherimoya, Atemoya, Custard Apple, Ilama, Soursop, Biriba, Guava, Feijoa, Jaboticaba, Wax Jambu, Starfruit, Passionfruit, Acerola, Peach, Pome Fruit
**Federal Register:** April 8, 2005

**Product: Dimethenamid**
**Trade Name:** Frontier
**Crops:** Horseradish
**Federal Register:** May 11, 2005

**Product: Fludioxinil**
**Trade Name:** Scholar
**Crops:** Pomegranate
**Federal Register:** May 18, 2005

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# The IR-4 Workshops Are Coming...

In the fall of each year, IR-4 sets its research priorities for the following growing season. With the threat of Federal Budget cuts affecting IR-4 funding, having clear direction for research is essential. IR-4 solicited input from its stakeholders to provide insight on why it is important to attend the workshops.

**American Vegetable Grower, American/Western Fruit Grower, and Florida Grower Magazine, Group Editor, Richard Jones says...**

## Speak For Yourself

As many of you know, much of the heavy lifting in shaping IR-4's research priorities each year happens at the annual Food Use Workshop. Input on the most pressing pest problems is provided by attendees representing the university research community and pest control product registrants. But as knowledgeable and helpful as these industry representatives are, there is typically one voice that is conspicuous in its absence at the workshops.

Amazingly, the missing voice is that of the growers themselves. Each growing region and each crop faces its own unique set of challenges. And no one is more familiar with the specific pest control needs and priorities of growers better than the growers themselves. There's only one way growers can ensure their priorities are known, and that is to be an active participant in the process. Make your voice heard by attending this year's IR-4 Workshops:

**The Food Use Workshop will be held September 13-15 in San Diego, CA and the Ornamental Horticulture Workshop will be held October 10-12 in Charleston, SC.**

**Michael Aerts, Florida Fruit and Vegetable Association, comments...**

Consider for a moment what your unaddressed crop protection chemical/pest control/ commodity priorities are. To you the specific priorities are probably obvious, that is for your particular pest control needs on your particular commodity under your particular circumstances. But, when considering your own specific priorities list, be cognizant of the fact that growers of other commodities are asking themselves what their unaddressed needs are and coming up with completely different answers for their "obvious priorities" list. What is an obvious priority to you is probably not an obvious priority to producers of other commodities, and visa versa. And even growers who are producing the same commodity but in different regions of the country may also have different obvious priorities from yours. IR-4 has been a prolific submitter of crop protection chemical tolerance petitions, and has been successful overall in having their petitions approved at the federal level. But IR-4 has capacity limitations too. The IR-4 typically has only 10 – 12 "A" priorities per discipline in a given year to use across all a.i./pest/commodity potential combinations nationally, so those scant numbers of "A's" become highly desirable in rapid fashion. In order to assure communication, comprehension and understanding of the circumstances surrounding your particular "obvious priorities," attendance in prioritization setting workshops becomes a high importance. Commodities compete for priorities against other commodities, against other active ingredients, against other pest problem situations, and against like commodities from other regions of the country. Without the physical presence and communicative inputs from producers like you, accessibility to justifiable "A's" might unavoidably pass you by. Don't miss out on your chance to set the record straight. Make your priorities known by attending the workshops.

**Chuck Masters, Ph.D. Weyerhaeuser Company comments...**

The 2005 USDA/IR-4 ornamentals workshop will be held in Charleston, SC in October. So, who cares? You need to...

Well, basically the USDA/IR-4 program in general is designed to facilitate the registration of pesticides, including biologicals, for minor crop use. If you are involved in some way with the production and management of ornamentals, which includes the production of seedlings used in forestry, here's your chance to influence research priorities. At the workshop, ARS/CREES and university scientists, chemicals companies, and other interested persons from private consultants to growers sit around a table to review proposals and make decisions on what the IR-4 research and funding priorities should be for the upcoming year. To those mangers, growers, technologists, consultants and all those who have a stake in the success of this program here is your chance to influence these decisions. Therefore your attendance is encouraged, and your input is vital. It is important to recognize as well that this meeting is an excellent place to meet knowledgeable people, to get questions answered, hear about new products coming on line, establish contacts, and to make things happen. So, check out the IR-4 website, and consider attending. I guarantee that it will be time and money well spent!

For more information about the workshops contact your Regional Field Coordinator, listed on the back page. For registration information contact Cheryl Ferrazoli at IR-4 Headquarters 732.932.9575 x 601 or ferrazoli@aesop.rutgers.edu.

# Big Shoes, Fittingly Filled

When Hoyt Jamerson, the Minor Use Officer for the Environmental Protection Agency (EPA), retired in December of 2003, IR-4 knew it would take a dynamic individual to fill his shoes. The collaborative partnership that Hoyt initially forged with IR-4's Associate Director, George Markle and later with Assistant Director, Registrations, Dan Kunkel and the IR-4 Headquarters Team has been a key factor to the recent record number of IR-4 regulatory accomplishments. With the new Pesticide Registration Improvement Act (PRIA) regulations, IR-4 felt a real sense of uncertainty and anxiety when Hoyt left. Those anxieties were put to rest in February 2005 when the EPA announced Barbara Madden as Hoyt's successor.

Barbara, who worked as an EPA Emergency Exemption Specialist for over six years, is well versed in the needs of Specialty Crop Growers and is very familiar with IR-4 and its working relationship with the EPA. Her skills in working cooperatively with growers and the agency were demonstrated when she led a team in resolving a nationwide crisis involving honeybees, a primary pollinator for the majority of agricultural crops. In this case, Barbara led the review and processing of emergency exemption requests from 46 states. Her skills in diplomacy were tested as the chemical in question was coumaphos, an organophosphate (OP). Coumaphos was an effective tool in controlling Varroa mites and small hive beetles that were infesting beehives. The USDA developed a coumaphos product strip that would be placed in beehives to ward off the intruders. Barbara's challenge was to lead the effort in setting a tolerance for this OP, when the EPA was scrutinizing tolerances for all OP's.

In order to get this special approval, Barbara coordinated several meetings with the EPA Health Effects Division, RD's Insecticide Branch, and the registrant to develop criteria in support of this emergency use exemption and future Section 3 registration. In addition to these meetings, Barbara had to go to the Assistant Administrator to set a tolerance for the OP. Throughout the process, she kept in close contact with scientists from the USDA, IR-4's Biopesticide Manager, Michael Braverman, and members of the American Bee Association to stay current on the emergency and to learn about other possible control products.

*IR-4's Assistant Director, Dan Kunkel, right, officially welcomed EPA's Minor Use Officer, Barbara Madden with a presentation of the "Green Book" during the June IR-4/EPA Technical Working group meeting.*

"I enjoyed working on Section 18's," stated Barbara, "because I got a true sense of what's going on in agriculture within the various states and learned about the needs of growers. I also appreciated that Section 18's are finished within a year."

Barbara's work with the EPA has also included being a member of a Product Management Team involved in the registration of pesticides, being a risk assessor in the Health Effects Division for several years and temporary work assignments in the Biological and Economic Analysis Division and the USDA/ARS, Biological Control Documentation Center. Prior to joining the EPA, Barbara served three years as a Peace Corps Volunteer in Jamaica as an Agricultural Extension Agent working primarily with potato and yam farmers. After completing her Peace Corps service, she worked as an Agricultural Trainer, training Peace Corps Trainees slated for agricultural positions in Jamaica.

When asked about her new position, Barbara commented, "I'm really happy to be working with IR-4. Having worked with Hoyt on Section 18's, I got a good sense of who IR-4 is and their mission. I'm really looking forward to the partnership with IR-4 and getting into more work-share opportunities that will lessen trade barriers and provide more tools for growers."

IR-4's Dan Kunkel remarked, "Barbara has hit the ground running and has already gotten a lot of IR-4 data into review. Her appointment has been a smooth transition and one that we expect to further build upon the foundation established between Hoyt and IR-4."

*Since 1998, IR-4 Study Directors have met with the EPA Minor Use Officer's team three to four times a year (26 in total) to discuss the EPA's workplan and other important issues that relate to IR-4 projects.*

# Muddy Fields, Sterilized Trai Up C ar Hand

In March 2005, over 40 Western Region IR-4 researchers, laboratory scientist and headquarters personnel were invited to understand how a field trial results in a product registration. The two-day field research training was

*Western Regional Field Coordinator, Rebecca Sisco, welcomed the group.*

the collaborative effort of the Western Regional Field Coordinator (RFC), Rebecca Sisco, Assistant RFC, Stephen Flanagan, Regional Laboratory Coordinator, Matt Hengel, Quality Assurance (QA) Coordinator, James (Jim) McFarland, and UC Davis Field Research Director, John Roncoroni.

"The idea of this training is to discover from the dusty field to the analytical laboratory, just what goes into a study," remarked Stephen Flanagan during an introduction of the training. "We're going to get the laboratory people out in the fields, to get their hands dirty and we're going to bring the field folks into the laboratory where they can learn to extract samples."

As part of the introduction, Jim McFarland discussed the role of the QA auditor during a Critical Phase Inspection, where QA actually watch a procedure being performed to verify that Good Laboratory Practices (GLP), protocol and Standard Operating Procedures (SOP) are being followed. These inspections are typically conducted once in the field and once in the laboratory, but could be completed more often if needed. The role of QA is to be independent from study conduct, which means they cannot tell the researcher what should be done, but must report when something was not done correctly. This often puts QA in an awkward position, because researchers often ask them how something should be done. The only answer QA can provide is to call the RFC or Study Director (SD). "The QA person is not trying to be evasive, they just aren't allowed to direct," Jim stated. "Our role is to watch and compare what is being done with what is written in the SOP and protocol. Later on, QA compares their observations with the written explanation in the Field Data Book (FDB).We want to know if what was captured in the FDB tells an accurate story of what we observed."

*Martin Beran, right, kept a close watch on the University of Hawaii's James Kam, who received the test substance.*

The hands-on training simulated a trial from beginning to end and was taught by those who actually do the work. The chemical and crop selected for the training was acetamiprid on wheat. John Roncoroni and his crew had planted the wheat earlier in the season so that the harvest was ready prior to the training. Given the wet winter in California, that was no small task.

Julie Coughlin and Maury Craig discussed the importance of GLPs and how to fill in the FDB. Julie explained, "GLPs can really be tedious and many researchers feel frustrated at the time spent in being GLP compliant, but the value of this training is to share ideas on doing things differently in order to help streamline the process. One thing I do is to make sure I fill out the information as I do it. I find my memory is not that great at remembering what was done later so, as soon as I do it, I record it. When a deviation is needed, I contact the SD, and have found them to be very responsive." Study Director, Van Starner, reiterated Julie's comments stating, "Please don't hesitate to call us. We have no problem with your calling and in fact we would much rather you contact us early on in the process." Van also encouraged the group to contact the Study Director if a protocol does not make sense. He continued, "Every year we go over the FDB and the protocols, to make changes so please contact us if changes are needed."

As the group looked on, the simulated trial began with the receipt of the test substance. QA auditor, Martin Beran, kept a close watch on the University of Hawaii's James Kam, who received the material. James checked to make sure there was enough material to complete the application, that the chemical received was the right one and that the test would be completed within the expiration date. He also checked the condition of the test substance container to make sure it was in tact. Others in the group mentioned they open the container to make sure the substance matches the look or the physical description. Jim asked the group how to describe the container and cautioned them that "good" might not be the best explanation. The group came up with wording to fill in the FDB as "container intact," which seemed to satisfy everyone.

Before the test substance was carried to the field, Larry Blackwell and Brent Boutwell checked the weather through an online weather predictor http://iwin.nws.noaa.gov/iwin/graphicsversion/rbigmain.html. They printed out the weather report and included it in the FDB.

Everyone moved on to the trial site, Ron Wight and Chuck Farrar completed a plot layout demonstration and discussed signage labeling and exhorted the researchers to include in clear text: WARNING: THIS IS NOT TO BE CONSUMED OR USED.

Mike Miller and Dan Cervantes discussed sprayer calibration then Joe DeFrancesco and Mike Straugh (pictured right)

# Test Tubes, and Paperwork:

# ning Close nd ls On

exhibited spray application and accuracy checks. Michelle Mitchell showed the group an Excel spreadsheet tool for displaying temperature data. Finally Will Meeks and Gina Koskela showed the group how to harvest the wheat forage samples.

Once the samples were harvested, they were prepared for transport. Mike Kemper and Bob Viales talked about shipping methods and demonstrated how to pack and seal a cooler containing dry ice.

The samples were transported to the UC Davis Center for Health and the Environment (CHE) where, upon receipt, Bronson Hung compared the shipping form with the protocol for commodity, application rate and PHI and filled out the sample arrival check sheet. From there he completed more laboratory paperwork for sample routing and logged the samples into the freezer. He then entered the information into the freezer log, sample receipt log and the IR-4 sample log. A lot of paperwork goes into tracking the samples and the Western Region Laboratory has developed a set of sensible, expeditious paperwork that helps this process. They are willing to share these forms with anyone who is interested, just contact Matt Hengel mjhengel@ucdavis.edu or Jo Engebretson jaengebretson@ucdavis.edu at UC Davis to learn more.

The next step was processing the sample. To reduce the field sample into the size and texture of corn meal, it is chopped with dry ice using an industrial food processor. Technician, Riza Punongbayan, explained that herbs and smaller items are chopped in a coffee grinder. More forms were filled out to document the chopping and processing. Bronson explained the chopping order as 1) untreated samples 2) treated samples and 3) if a decline study was needed, the samples would be chopped longest PHI to shortest.

The analytical part of the training was where the fun began. Here, field researchers replaced their muddy boots with gloves and safety glasses. Matt Hengel and his group of scientists designed this training to be a hands on event for the participants. The group of 40 was divided into subgroups of ten where each group learned about the different phases of sample analysis.

The sample analysis began by extracting the sample, which included weighing, fortification, homogenization with organic solvent and sample filtration. Riza explained the techniques (pictured right) involved in this process and invited the group to try their hand at weighing samples. The next phase had the field researchers performing hexane and dichloromethane partitioning procedures in the laboratory hood with Jo Engebretson. Matt demonstrated the fine art of column cleanup using Florisil columns. The skills required for this process are concentration and a steady hand. Once the samples within test tubes are "cleaned", they are analyzed using various mass spectrometers to determine how much chemical residue was left in the sample.

*Riza Punongbayan, right,, helps Julie Coughlin extract samples.*

***Van Starner, HQ, left and Ron Wight, from Washington State University, watch Rebecca Sisco "clean" a sample***

Many field researchers commented on this being the first opportunity they had in seeing what happens to the samples once they leave their field. While the work was "cleaner", many stated they would rather stay in the muddy field but gained an appreciation and better understanding for those in the lab.

"So the field work is completed, samples are shipped, prepared for analysis, analyzed, Analytical Sample Reports and Field Data Books are completed and mailed, and you've responded to all QC and QA findings; is your job as a FRD or LRD complete and your involvement with this study over?" According to Study Director, Van Starner, "maybe yes and maybe no." Van explained that the reports still go through stages of examination and explanation at HQ. When all issues are addressed, a final report is drafted by the SD, and FRD and LRDs may need to discuss issues that arise during the drafting of the reports. These final draft reports are submitted to QA for audit, which may also require FRD and LRD input. Then a second QA audit is performed. By this time FRD and LRD involvement is usually complete and the SD finalizes the study (final report signed). Then they work with the registrant to prepare the petition, which briefly summarizes the study, details the new use, proposes the tolerance and provides support for the new tolerance. The final submission to EPA includes a cover letter, Notice of Filing from the registrant, Registration Package from the registrant, the Petition, and the data volume (final report). Following a favorable EPA review, a Notice of Filing is published in the Federal Register and a Final Rule establishing a new tolerance is published after a 30-day period of public comment. From there, it is up to the registrant to add the new use to the product label.

This whole process works well — since 1963, IR-4 research has resulted in EPA establishing over 10,000 new food tolerances. Sessions such as this help ensure continued IR-4 success.

# EPA About to Propose a New Review Program for Old Pesticides

— by Vivian Prunier, Office of Pesticide Programs, EPA

EPA expects to release proposed procedural regulations for pesticide registration review in July. The goal of the registration review program is to review each pesticide every 15 years. The new program is mandated by section 3(g) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and will replace tolerance reassessment and reregistration as the Agency's means for systematically revisiting old pesticides.

EPA consulted the Pesticide Program Dialogue Committee (PPDC), a stakeholder advisory committee, regarding the design of the proposed program. Based on input from a diverse group of stakeholders, the PPDC developed recommendations to address their key concerns

- Stakeholders need a reliable, predictable schedule
- Stakeholders need to participate early and throughout the process
- The review should be tailored to the complexity of the case
- The review should determine whether a pesticide meets - or does not meet - the FIFRA standard for registration

EPA's proposal takes these recommendations into account. There will be a 90-day comment period on the proposed procedural regulations. This is your opportunity to comment on the design of the new program. EPA welcomes your comments on how the proposed program will affect your interests, your views on the proposed procedures, and your suggestions for improving the design of the program before it becomes final.

You can find out more about the proposed program by -

- Checking EPA's website at http:// cfpub.epa.gov/pesticides/news.cfm. In addition to news releases about the proposed rule, EPA expects to roll out a registration review web page.
- Reading the proposed rule. You can access it through the Agency's website.
- Attending one of the public information sessions that EPA plans to hold during the comment period in Washington, DC and in another city. EPA will announce these meetings in a Federal Register notice and on its website.

Registration review will replace EPA's one-time pesticide reregistration and tolerance reassessment programs starting in 2006, as those programs approach completion. Registration review will operate continuously, encompassing all registered pesticides. The Agency proposes to base the schedules for registration review on the date of the pesticide's last comprehensive review. Before beginning its analysis of a pesticide, the Agency will ask for public comment on the information it intends to consider in its review. At this point, stakeholders may submit information that they believe should be considered in the review.

The scope and depth of the Agency's reviews will be tailored to the circumstances, so reviews will be commensurate with the complexity of the issues currently associated with each pesticide. EPA will review each pesticide to determine whether it continues to meet the FIFRA standard for registration. For each pesticide, the Agency will consider:

- What has changed since the chemical's last assessment?
- What is the significance of the changes?
- What value would be added from more data or a new risk assessment?

In assessing changes since the pesticide's last registration or reregistration decision, EPA will determine the significance of the changes and whether the pesticide still satisfies the FIFRA standard for registration. Additional data will be required and new risk or risk/benefit assessments conducted whenever they are needed to determine whether a pesticide continues to meet the statutory standard.

The Agency will ask for public comment on draft risk assessments and registration review decisions. If the Agency is unable to decide whether a pesticide meets the FIFRA standard for registration because it does not have information needed to complete this decision, it may issue an interim registration review decision, pending submission of data needed to complete the registration review decision. Under the new program, EPA will continue its current practice of managing new issues, such as new information about hazard or risk of a pesticide, as they arise. The Agency will not wait until a pesticide's regularly scheduled registration review to deal with the new issue.

Both Canada and the European Union are working on programs similar to registration review and EPA is exploring work-sharing opportunities with them.

*For more information contact EPA's Vivian Prunier at 703-308-9341 or send her an email at Prunier.Vivian@epamail.epa.gov*

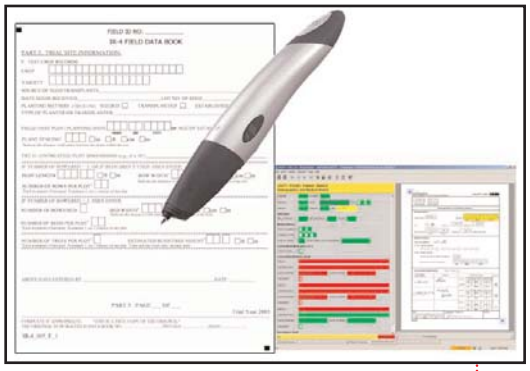
# IR-4 Investigates Automatic Pen Technology

— by Karen Briegs, Director, Marketing & Product Development 3C Company

"It's important for IR-4 to continue moving forward by delivering research data in a timely fashion in order to provide specialty crop growers with as many exceptional pest management products as possible. That is why we have chosen to test a new tool to help us expedite the study process," says IR-4 HQ Associate Director, Jerry Baron. The tool, an automatic pen called justWrite, is being piloted in a few selected 2005 field trials. It uses a software system called writeresult™, created by technology sponsor 3C Company, and is currently being used in the pharmaceutical industry. The goals of the IR-4 pilot are to collect and electronically transfer field trial data in the study, allowing for reviews of trial progress, and to use the collected data to automate parts of the final study report - essentially replacing a highly manual and time-intensive process with one that is automated and streamlined.

The pilot trials use a modified IR-4 Field Data Book (FDB) that has been copied onto paper that was imprinted with a pattern of tiny, hardly visible dots. The eight field researchers in the three pilot studies (Etoxazole/Tomato, Pendimethalin/Grass and Lambda Cyhalothrin /Radish) use the pen, which is equipped with an optical sensor that senses the imprinted pattern on the paper, to recognize exactly which data field is being captured and triangulates every pen-stroke's precise location on that page. At the end of the day, the pen is docked in a cradle and the pen-strokes are automatically uploaded into the writeresult™ system, where the software joins the pen-strokes with an image of the FDB page.

The page image can be viewed on a website within seconds of docking the pen - enabling Regional Coordinators, QA staff, and Study Directors to see the data almost the same time as it is captured. "The ability to view trial data as the trial is progressing is a great benefit to us", says Johannes Corley, who along with Van Starner and Bill Barney, are the Study Directors involved in the pilot. "Previously, we waited until the very end of the trial, and often several months afterward before we could see any indication of how the trial progressed, and then, it was after-the-fact and generally too late to make any adjustments that might save a trial from failure."



The pilot will determine if the pen creates an accurate, exact digital replica of the completed FDB. When the electronic page is received by writeresult™ the data are read and inserted into a database where it is reviewed and used to generate sections of the final submission report, as well as provide an evolving set of reports for at-a-glance trial information to monitor key data points. According to Paul Schwartz, Staff Scientist of the USDA Agricultural Research Service, "Regional Coordinators have a big job staying on top of so many trials at the same time. Communication was often accomplished by phoning or faxing information and FDB pages around the country. We're hoping this pilot will show that we can check status, or discuss a question with a research center, as soon as we log-on to the computer system and look at the written page as it appears at the site."

One of the other pilot goals is to alter the current process as little as possible to prevent extra effort on the part of the field researchers who use a familiar book, and a familiar writing instrument. "Feedback from the participating centers has been positive," says Melissa Zimmerman, FRD at the Rutgers Ag Extension Center in Bridgeton, NJ, "with anything new there is always an adjustment period. So far I would say I was more nervous going into this than I needed to be. We received comprehensive training and the technical support and responses to questions have been prompt and thorough. My limited experience with it so far has been successful." IR-4 Headquarters QA Manager, Tammy White, stated, "we're optimistic because even though the data is electronic and quickly accessible, there is still a real, original paper version as the GLP record." Finally, Berry Tanner in Florida sums it up, "So far so good."

For more information on these pilots or how you can get involved in using the pen, contact Johannes Corley at 732-932-9575 ext.611.

*Rutgers Ag Extension Center FRD, Melissa Zimmerman records trial data using the justWrite pen.*

Did You Know

# Technology Helps Western Region Set Priorities

— by Stephen Flanagan, Western Region Assistant Field Coordinator

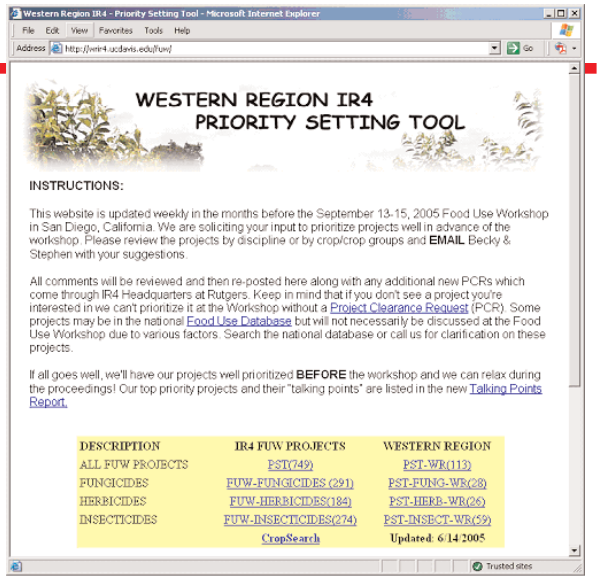
Exactly how does a thirteen state region encompassing the desert southwest, arid inter-mountain west, green pacific northwest, sun blest California and tropical Hawaii prioritize IR-4 projects? Very carefully you may guess… and we also utilize an electronic helper we call the Priority Setting Tool (PST).

The PST is simply a website which tracks input from Western crop specialists and IR-4 State Liaisons in advance of the Food Use Workshop. The Food Use Workshop takes three days to sort through over seven hundred potential IR-4 projects to synthesize which forty to fifty projects will be initiated the following year.

The task of tracking which projects the Western Region is interested in pursuing falls to Regional Field Coordinators, Becky Sisco and Stephen Flanagan. Our rather frantic experience of tracking Western region priorities during previous Food Use Workshops spawned the idea of somehow tracking high priority projects well in advance of the actual Workshop.

There are many potential projects which may merit attention in any given year, but only those projects with clearly defined objectives, solid supporting data, and regional support will advance through the Food Use Workshop. The jostling for position which occurs every year at the Workshop is clarified when this prefacing information is available and brought to the table during the prioritization process. The PST tool simply allows us to systematically categorize which projects are of significant interest to the West before the Workshop thereby reducing last minute stress.

The actual PST tool is available online on the Western Region website at wrir4.ucdavis.edu/fuw/. This page details a series of reports that show IR-4 projects by either discipline or crop depending on whether participants are commodity folks or discipline experts like a plant pathologist, weed specialist, or entomologist. Likewise the reports are pre-selected to display either all the fungicide projects or only the Western Region fungicide projects, and likewise for herbicides and insecticides.




Becky Sisco forwards new Project Clearance Requests (PCRs) prior to the Food Use Workshop to our Western Region State Liaison representatives, commodity and crop specialists for their feedback. These participants then return their comments as to the relative merits of given projects back to Stephen and Becky who capture their comments into the PST database and reports. Once participants have given their feedback, the relative priority and related comments are posted on the Western Region Priority reports.

For example, the PST-HERB-WR report lists twenty-two herbicide projects which are of current interest to the Western Region. By following the report hyperlinks, a participant can access the national IR-4 program database reports of project details, as well as reconfigure the report to sort by crop, chemistry, or Western Region goal. The Western Region "A" priority projects are the projects which the West will most strongly advocate for at the national Food Use Workshop. These projects are well researched and prioritized from the West's perspective, but the projects still must be prioritized through the Food Use Workshop process for national work to be initiated.

The combination of tracking new PCRs and following previously submitted PCRs allows the West to prioritize all potential IR-4 projects in advance of the fall's Food Use Workshop. This process starts in the summer before the Workshop and allows our stakeholders to consult with growers, technicians, and specialists early-on in the prioritization process. The PST is simply a tool to clearly define our Western projects, collect supporting data, and then present these requests to the national prioritization process at the Food Use Workshop. The end goal of the PST process is an appropriate representation of Western needs brought to the national program where the national priorities are set with input from all regions.

# 2004 IR-4/EPA Demonstration Grant Research Results

— by IR-4 Biopesticide Manager, Michael Braverman

Biopesticides are often produced by small companies without the means to conduct on farm trials through university researchers. The lack of knowledge about biopesticide products by the university and extension community has hampered their adoption by growers. In order to promote the adoption of safe pest control technologies, the IR-4 Project and the Biopesticides and Pollution Prevention Division of the U.S. Environmental Protection Agency have been cooperating in the review and funding of this research. These results may be useful or interesting, however IR-4 and the EPA can not attest to the accuracy of information provided. Providing this information does not constitute endorsement by IR-4 or the EPA or its employees of the information or products presented in this report.

This summary is not intended to replace or change the interpretation of any data presented in this report. The data were generated by the individual researchers and not IR-4 or the EPA.

Maine -Mycotrol /Blueberry Flea Beetle *F. Drummond* — Mycotrol (Beauvaria), Imidan and Entrust were similar in their control of flea beetle larvae and all were better than the control. About 83 % of larvae collected 1 or 12 days after application of Mycotrol died. In the field, Mycotrol combined with Spinosad provided 100% control of flea beetle.

NY -Serenade /Apple Diseases *B. Turechek* — Spray programs including Serenade in rotation with conventional disease control products performed equal to the grower standard for the control of apple scab, powdery mildew and fireblight.

Long Island- Biopesticides Powdery Mildew/Pumpkin *M. McGrath* — The biopesticides Oxidate or Trilogy rotated with Quintec provided greater than about 90% season long control of powdery mildew. Oxidate, Sporan, Trilogy, Bugitol, Eco-Erase, and JMS stylet oil alone were similar to the standard fungicide treatments Bravo and Quintec, early season, but were not as good in later ratings.

Michigan- Codling Moth/ Apples *L. Gut* — This project was conducted on 800 acres. Combinations of pheromone and codling moth granulosis virus were used. Moth captures in orchards that had previously used pheromones were never more than 2 per trap and rarely reached 1 per trap in the protected areas. In areas that never used pheromones before, the populations were greater and contained more than 20 per trap. Fruit injury was 43% less in the area wide project and never exceeded 1.5%. Through posters displayed in local farm supply center, growers with at least an additional 800 acres on adjacent farms voluntarily chose mating disruption for codling moth control.

Mississippi - Dollar spot/Bermudagrass *M. Peterson* — Zerotol alone or EcoGuard *(Bacillus linchineformis)* rotated with Daconil Ultrex or TurfShield *(Trichoderma harzianum*) rotated with Chipco 26019 had about a 55% reduction in dollar spot while the fungicide standard Daconil, reduced dollar spot by 52%. Chipco 26019 (another chemical standard) alone only had 15% dollar spot control.

Colorado- Corn Earworm/Sweet Corn *B. Hammon* — Nuclear Polyhedrus Virus (NPV) rotated with Spinosad was as effective as a pyrethroid (Warrior) program in controlling corn earworm. Spinosad is expensive compared to the pyrethroid or the virus. The most likely adoption by growers is expected to be a tank mix between the pyrethroid and the NPV.

Arizona -Sclerotinia/Lettuce *M. Matheron* — The results of this study suggest that the biological products Contans and Serenade, used either alone or with the conventional fungicide Endura, can provide effective levels of control of lettuce drop caused by *S. sclerotiorum.* The incorporation of Contans and/or Serenade in lettuce drop management programs could provide not only good levels of disease control but also resistance management for the conventional fungicide, utilizing alternation products that have a low environmental impact.

Wyoming- Mycotrol/Grasshoppers Pasture *A. Latchininsky* — Mycotrol (Beauvaria) decreased the density of grasshoppers in pasture or rangeland, but mortality in the control plots made it difficult to access. Carrier oil did not effect treatments.

California- Powdery Mildew/Grapes *D. Gubler* — Serenade in rotation with conventional fungicide treatments of Pristine, Procure, Flint or Quintec was as effective as rotating only conventional fungicides in controlling the incidence and severity of powdery mildew in grapes.

*Note: The full length version of this report is available at ir4.rutgers.edu/Binars/DemonstrationGrant2004entire.pdf*

# New Office for Michigan State Contacts

Researchers at Michigan State University have new digs. The following addresses can be used both for Fed Ex and U.S. mail.

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*Bob Hollingworth can also receive mail at the NC Region Research Center address.*

# Northeast Region Welcomes New Hampshire State Liaison

**-by Northeast Regional Field Coordinator, Edith Lurvey**

Rebecca C. Grube has been named the State Liaison for New Hampshire. She is an Extension Associate Professor in sustainable agriculture for small fruit and vegetables. A Vermont native, Rebecca is returning to the northeast after five years as a lettuce breeder with USDA in Salinas, CA. Rebecca holds a Ph.D. in Plant Genetics from Cornell University.

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Providing Safe and Effective Pest Management Solutions for Specialty Crop Growers

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