

IR-4 National Education Conference

—by Debbie Carpenter, IR-4 Research
Scientist & Training Committee Chair

San Antonio was the site for the IR-4 National Education Conference (NEC) held in February. Springlike weather was a welcome change for many participants coming from Northern regions. San Antonio's Riverwalk offered a myriad of outdoor dining experiences where participants enjoyed a nice meal and great weather while watching passing tour boats.

IR-4 holds a NEC every three years and planning begins approximately one year before each conference. Planning starts with the IR-4 Training Committee (TC), which has responsibility for making the arrangements. The fifteen member TC represents all areas of IR-4 including Field Research Directors, Laboratory Research Directors, the Quality Assurance Unit, Regional Field Coordinators, Study Directors and Project Management Committee (PMC) members. TC members provide a broad perspective of the IR-4 program, including the training needs of IR-4 researchers.

The TC considered two goals for the conference: to provide an opportunity for education and to encourage networking among colleagues. Since IR-4 researchers are located throughout the country, they typically contact one another using phones or email; the triennial conference provides the opportunity to put faces with names. Many feel this is one of the best opportunities of the conference.

A national conference is a good place for researchers to learn ways to improve operations/practices from colleagues. This became the first educational focus for the 2009 NEC. Recognizing that participants had various job duties, the TC thought specific topic areas would be of interest. In order to find out which topics would be relevant, the committee put together an electronic survey to solicit input. The survey was made available to all IR-4 researchers. Results were collected, and the data were grouped into presentation top-

ics. A draft agenda was prepared, and the TC met often via conference call. After a few iterations, the agenda for the 2009 NEC was decided.

The TC then arranged for speakers, prepared programs for each session, and before long, it was time for the conference to begin.

The first morning of the NEC provided a chance for the more than 145 participants to update and refresh their general IR-4 knowledge. This

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IR-4 Presents the First National Recognition of Excellence Awards



IR-4 Executive Director, Jerry Baron (l) and Project Management Committee Chair, Marty Marshall (r) congratulate (l to r) Nancy Ragsdale, Robin Adkins, and Marylee Ross, the first IR-4 National Recognition of Excellence Award recipients.

On February 25, the IR-4 Project Management Committee (PMC) Chair, Marty Marshall, presented the first IR-4 National Recognition of Excellence Awards. This award is presented once every three years at the National Education Conference. Recipients of the award are selected from nominations received from peers and colleagues.

Nominees can be anyone associated with the program except active members of the PMC. The number of nominees is not restricted, but no more than three awards are presented.

The nominee must show evidence of outstanding achievements well beyond normal job performance and that have resulted in a major positive impact on the IR-4 program.

A person may receive this award only once.

The 2009 National Recognition of Excellence Award recipients were Robin Adkins, Nancy Ragsdale and Marylee Ross. **Robin Adkins** received the award

for her outstanding contributions to the Southern Region. As one nominator phrased it, “she is the glue that holds the Southern Region together.” Robin has voluntarily taken on the responsibility of QC review of field data books. She is always available to assist researchers and growers, and manages funding issues with finesse.

Nancy Ragsdale was honored for her role in initiating action within the ARS Budget Office to obtain a million dollar increase in ARS/IR-4 program funding. In addition, Nancy played an important role as a member of the IR-4 PMC, where she served faithfully. She was an active contributor to help set policies, procedures and the strategic direction for the program.

Nancy shared some of her experiences with the attendees of the NEC upon acceptance of her award and encouraged everyone to keep up the good work.

Nancy retired in October 2007, after 27 years of Federal service.

Being recognized as an “enthusiastic ambassador for the IR-4 Project,” **Marylee Ross** was the third recipient of this prestigious award. Marylee, a Field Research Director at the University of Maryland, was recognized for her dedicated service to the IR-4 Training Committee and for contributing her time and resources to assist HQ when planning many of the IR-4/EPA/USDA tours.

One nominator called Marylee “a ‘go to’ researcher for difficult commodities, such as chives and honey” and commented on her willingness to always “pitch in and pick up extra trials when needed.”

IR-4 wishes to congratulate Robin, Nancy and Marylee as the first recipients of the National Recognition of Excellence Award!

It’s never too soon to start planning for the next group of award winners. Therefore, IR-4 encourages readers to be on the lookout for the next recipients of the National Excellence Awards, and consider nominating someone who serves the program with excellence. ▲

IR-4 CLC Welcomes New Member

Laura Phelps is the newest member of the IR-4 Commodity Liaison Committee. Laura is a government relations representative with the law firm of McLeod, Watkinson & Miller. She specializes in farm program policies and agricultural issues by monitoring the legislative process and administrative actions pertaining to clients' interests. The law firm represents a wide variety of trade associations and agri-businesses.

In 1989 she began working with the mushroom industry to secure passage of the Fresh Mushroom

Research, Promotion and Consumer Information Act through the U.S. Congress. Since that time, she has coordinated the government relations efforts on behalf of the American Mushroom Institute (AMI) through its law firm, McLeod, Watkinson and Miller. In June 1992, she was elected President of the AMI and serves on its Board of Directors.

Laura began her career in governmental affairs in 1982 as a press secretary for a Congressional candidate from the state of South Carolina. From 1983-1988, she



Laura Phelps is President of the American Mushroom Institute, and is the newest IR-4 CLC member.

served as legislative director for Congressman Robin Tallon (D-SC).

Laura is a native of North Carolina, and holds a B.A. in Journalism from the University of North Carolina at Chapel Hill.

IR-4 is pleased to welcome Laura to its Commodity Liaison Committee. ▲

The QAU Plans 2009 Projects

— by Michelle Samuel-Foo, IR-4 Southern Region Field Coordinator; Kathleen Knight, Southern Region QA coordinator

Every spring, the IR-4 Quality Assurance Unit (QAU) gathers to hold its annual planning meeting for the upcoming season. This year, the meeting was held March 10-11, in Gainesville, FL.

During the two-day meeting, the Quality Assurance staff from the four IR-4 regional offices and headquarters discussed projects for the 2009 season, work load distribution, field trials targeted for quality assurance inspection,

and facility inspections among other issues.

On the afternoon of the first day, a tour of the Southern Region Lab was arranged to allow the QAU the opportunity to visit and learn about the facility. The tour was led by Ms. Jau Yoh, the Southern Region Laboratory Director, who used the meeting to introduce the QA staff to the laboratory staff, equipment, and instrumentation.

Kathleen Knight, the Southern Region QA Coordinator,

took the visiting group to the IR-4 Region III Field Research Center located 25 minutes away in Citra, FL. Mr. David Studstill, the Field Research Director at this location, accompanied by Darrel Thomas, engaged the visitors by providing a tour of the facilities, equipment storage, test substance storage areas, greenhouses and other areas of their impressive research test site.

The IR-4 Southern Region Director and IR-4 PMC Chair, Marty Marshall, and the rest of the IR-4 regional staff, hosted a luncheon on day two. Samuel Fernando, who recently retired as the IR-4 Southern Region QAC joined his former colleagues for lunch. Everyone agreed that the location was great (Florida in March), and the meeting was very productive. ▲



FRD David Studstill (r), shows Barbara Anderson (NER QA Coordinator), Michael Chen (NCR QA Coordinator), Jane Forder (HQ QA Officer) and Tammy Barkalow (IR-4 QA Director) some of his center's GLP documentation.

Photo by Kathleen Knight

NEC '09

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Western Region Field Coordinator, Becky Sisco has an opportunity to network with the new Southern Region Field Coordinator, Michelle Samuel-Foo.

information was particularly helpful for the many new hires at IR-4. It gave them an understanding of various roles, mission, and goals within IR-4. Overviews of IR-4 (Jerry Baron and Marty Marshall), Crop Grouping (Bill Barney), the Ornamental Horticulture program (Cristi Palmer) and Globalization Efforts (Dan Kunkel) were presented.

The next section of the program was targeted toward networking. The “Laboratory Meet and Greet” provided an opportunity for lab personnel to interact with individuals who



Judy Collins, field researcher from University of Maine, meets Todd Wixson (l) and Tom Hendricks, USDA-ARS laboratory analysts.

typically contact them, such as study directors, field research and QA personnel.

In a concurrent session, Diane Infante and Van Starner provided instruction and answered questions on the use of the web based IR-4 database. At lunch on the first day, the networking theme continued. In order to facilitate meeting new people, seating was pre-arranged. The table groups consisted of a mix of people with various job responsibilities.

During the afternoon on the first day, the program focused on education. There were two sessions running concurrently, which addressed lab and field items. The lab session included discussions on the new Analytical Summary Report format (Riza Punongbayan), the Laboratory Guidance Document (Dan Kunkel) and the 860 Guidelines (Debbie Carpenter).

The field session included a presentation on Canadian trials (Sheryl Lonsbary). This was useful since it is likely that joint sharing of projects with Canada will continue. The session provided the opportunity for US IR-4 personnel to familiarize themselves with some of the differences and similarities between U.S. and Canadian trials and documentation.

Following the presentation on Canadian trials, optional topics (derived from survey data) were presented. This enabled participants to receive training that was relevant to their education-

al needs. These topics were designed to be concurrent, interactive sessions. Topics included “Field Data Book Documentation or No Job is Complete until the Paperwork is Done” (Robin Adkins, Roger Batts and Martin Beran), and “The Care and Feeding of Odd Applications” (Edith Lurvey, Jason Seward and John Wise). Rounding out the afternoon was a topic on the 860 Guidelines (Ken Samoil) with a focus on field operations.

On the second morning, the program began with a general session that provided background information on what happens with the data that is generated in the field and laboratory. “Petitions and Registrations—What We Do with all the Data” (Dave Thompson) provided details about creation of the data volumes and petitions, and submission of the information to the EPA. Next up was a session designed to share ideas on lab field interface issues. This provided an opportunity for discussion, better understanding of both operations (Robin Adkins, Roger Batts and Martin Beran) and how the two interact. This session was followed by an offering of optional topics. These concurrent topics included:

- “SOPs – Writing Non-Fiction Best Sellers” (Kathryn Hackett-Fields),
- “Modifications to Crops at Sample Harvest and Collection” (Edith Lurvey and Marylee Ross),
- “Test Substance and

Reference Substance Concerns” (Ken Samoil, Ben Fraelich and Matt Hengel) and

- “The Latest and Greatest in Laboratory Instrumentation” (Matt Hengel).

In the afternoon, efforts of some special people were acknowledged at the first National Excellence Awards were presented.

IR-4 Southern Region Director and PMC chair, Marty Marshall presented the first National Excellence Awards (see related



IR-4 Southern Region Director and PMC chair, Marty Marshall, welcomes Nancy Ragsdale, ARS Administrative Advisor (retired) back to IR-4 and presents her with the IR-4 National Excellence Award.

article p. 5) to Robin Adkins, Marylee Ross and Nancy Ragsdale for their efforts on behalf of the IR-4 project.

Following this, a panel discussion took place with a question and answer session. Participant questions had been collected on 3”x 5” cards throughout the NEC. A panel of “experts” including Matt Hengel, Jim McFarland, Van Starner, John Wise and Bernie Zandstra, provided answers.



The Western Region planned the closing session. Assistant Field Coordinator, Stephen Flanagan, reviews the “rules” for the final event of the conference, “IR-4 Jeopardy”. Participants won prizes for phrasing questions to the answers of topics discussed during training sessions.

The highlight of the second afternoon was the high energy closing prepared by the Western Region - a version of IR-4 Jeopardy! Hosts included, Martin Beran, Stephen Flanagan, and Matt Hengel, and Jim McFarland officiated the answers. Technical assistance was provided by Becky Sisco, who ran the game board.

Game categories included “Pray and Spray”, “Mug Shots” and “All things pH”. This session provided an entertaining way to review the many items discussed over the course of two days, plus IR-4 tidbits of interest. Each table group included people who had disparate job duties. At the end of the game, grand prizes were awarded to the top three tables. This event was a great closing for everyone and will be hard to beat when the next NEC is planned.

Thanks to all the presenters and to the IR-4 TC for putting together an excellent program. ▲



Calendar of Events

May 19-20, 2009
IR-4 Peer Review
Princeton, NJ

August 10-11, 2009
NCR SLR Meeting
Kansas City, MO

August 25-26, 2009
SLR Meeting
Myrtle Beach, SC

September 15-16, 2009
2009 Food Use Workshop
Cleveland, OH

October 6-8, 2009
2009 Ornamental
Horticulture Workshop
Cleveland, OH

October 14-15, 2009
2009 ARS LR Meeting
Cleveland, OH

October 27-28, 2009
National Research
Planning Meeting
Princeton, NJ

IR-4 Aids Florida Citrus Industry

— by Michelle Samuel-Foo, IR-4 Southern Region Field Coordinator; Keith Dorschner

Photo by Michelle Samuel-Foo



The Florida citrus industry is facing a grave threat from the disease commonly referred to as citrus greening, or Huanglongbing. This disease is globally recognized as a serious threat to citrus and has been endemic in many Asian and some African citrus groves for several decades. While the disease poses no human health risks, it can devastate infected citrus trees by reducing fruit production and can even kill healthy trees in a relatively short time. This bacterial disease is believed to have originated in China and affects all types of citrus including oranges, grapefruit and tangerines. It was discovered in San Paulo, Brazil in 2004 and made its initial appearance in Homestead, FL citrus in 2005. Since its discovery in Homestead, it has rapidly spread north and can now be found in more than 30 Florida counties.

This disease is of major concern to growers, as it is difficult to manage due to the non-specific nature of disease symptoms, suspected irregular distribution of the pathogen in trees and the suspected role of increased temperature on symptom expression and bacterial multiplication. Wherever the disease has appeared, citrus production has been reduced due to the widespread loss of trees. Infected fruit are small, lopsided and bear bitter tasting fruit.

Premature fruit drop also occurs. Those fruit that do manage to remain on the trees retain a green color, hence the disease name.

Also known as Yellow Dragon HLB, the disease is vectored by two species of psyllids (Hemiptera: Psyllidae), a group of insects characterized by their unique piercing-sucking mouthparts. Psyllids are tiny insects (2-5 mm long) which might be mistaken for aphids by an untrained eye. However, the long antennae and strong jumping legs possessed by psyllids aid in differentiating them from aphids. One way of combating this disease has focused on controlling the psyllid vector with insecticide sprays. No source of genetic resistance to HLB in citrus stock is available. In fact, once a tree becomes infected, the disease cannot be controlled. Current management practices include prevention and reduction of the inoculum in the field. This is done by controlling vector populations and timely destruction and removal of infected trees. Grower education has become an important component of citrus greening control efforts in Florida. Many educational and informative brochures are available for public use.

IR-4 became fully aware of the gravity of the issue facing the Florida Citrus Industry in August 2008 when Bob Johnson, an independent citrus consultant, and John Jackson, Director of the Citrus Growers Research Council, attended the IR-4 Southern Region State Liaison Representatives meeting in

Richmond, VA. This initial meeting was followed by a conference call involving IR-4 headquarters personnel (at Rutgers University), Charlie Meister (former IR-4 Southern Region Field Coordinator), Florida citrus grower representatives and University of Florida scientists. A strategy was developed for immediate assistance. After discussing several options involving low volume carrier rates (LVCR) of many labeled products, it was agreed the focus would be on three insecticides that had proven efficacious. With support from both industry funds and the Florida Citrus Box Tax, the products were included in IR-4 Good Laboratory Practice (GLP) residue studies to expedite label changes.

The products tested were diflufenzuron (Micromite, Chemtura Corporation), spinetoram (Delegate, Dow AgroSciences) and zeta-cypermethrin (Mustang Max, FMC). Each product was tested on three citrus varieties (oranges, grapefruits, and tangerines). Three separate protocols were developed by Keith Dorschner, IR-4 Insecticide Program Manager, following a plan that was carefully negotiated between IR-4 and EPA. GLP-compliant field work began shortly after protocols were finalized, to evaluate product residues following application in a LVCR of 2 gallons per acre (GPA) compared with the currently labeled GPA (>20 GPA). "We are just talking about a different use pattern, but we do have to demonstrate to EPA that any residues resulting from the low volume application

stry in Citrus Greening Battle

schnner, IR-4 Insecticide Program Manager; Van Starner, IR-4 Assistant Director



Bob Johnson, owner of AG Consulting, calibrating an airblast sprayer prior to making an application on oranges during this study. Photo by Michelle Samuel-Foo

are not greater than would be expected using conventional spray volumes,” says Meister.

Preliminary efficacy testing had indicated that LVCR insecticide applications resulted in better psyllid control than conventional spray volumes. LVCR insecticide applications are also significant in that they allow growers to spray more rapidly. This results in lower labor costs. “Reducing the GPA also reduces application costs and allows growers to make applications over the entire acreage” says Bob Johnson, owner of AG Consulting Inc., Mt. Dora, FL, who conducted the IR-4 field trials for each product. “Growers will be able to use smaller sprayers that travel at higher speeds to apply less diluent per

acre than the standard airblast sprayer used now.” Covering more acres in a short period of time allows growers to combat threatening psyllid populations more quickly and stop the spread of disease.

Once the field trials were complete, data books from the trials were finished in record time and sent to the IR-4 Southern Region office. Here quality control review was prioritized and the books were rapidly turned over for quality assurance auditing. Kathleen Knight, IR-4 Southern Region Quality Assurance Coordinator, performed in-life audits of orange and grapefruit applications and audits of the final field data books.

Next residue analyses was performed. Fruit sample analysis from the zeta-cypermethrin and spinetoram studies were processed and analyzed in the IR-4 Southern Region Laboratory at the University of Florida, under the supervision of Regional Lab Director, Jau Yoh. Sample analysis from the diflubenzuron study was contracted to PTRL West, an independent laboratory in Hercules, CA.

“Zeta-cypermethrin residues, the total residues of spinetoram (two isomers and their

four metabolites), and the total residues of diflubenzuron (parent and its two metabolites) in fruit samples from LVCR plots (2 GPA) were generally equal to or lower than residues in samples from plots sprayed using conventional gallonages (>20 GPA),” says Yoh.

With analytical data in hand, the registrants of each of these products are petitioning the Florida Department of Agriculture (DACS) for 24(c) (Special Local Needs) labels. DACS has prioritized these petitions and from all indications, the hope is that revised labels will be available later this spring.

This project illustrates the excellent cooperation between the IR-4 Project, growers, regulatory agencies and product registrants to pursue urgently-needed labels for local pest management emergencies. Within 8 months of IR-4’s involvement, and with the cooperation of all the aforementioned groups, this project proceeded from the discussion phase, through study plan development and acceptance by EPA, generation of field and laboratory data, to the point of regulatory agency submission.

The news of this rapid response was highlighted in the January 2009 issue of Florida Grower Magazine. For an update on this project or for more information, please contact the IR-4 Southern Regional field office at (352)392-1978. ▲



Kathleen Knight, IR-4 Southern Region Quality Assurance Officer, performing in-life audits.

Photo by Michelle Samuel-Foo

2009 Food Use Workshop — by Van Starner, IR-4 Assistant Director

The 2009 IR-4 Food Use Workshop (FUW) will be held Tues. and Wed., Sept. 15-16, in Cleveland, Ohio at: Cleveland Marriott Downtown, at Key Center, 127 Public Square. Reservations should be made directly with the hotel by calling 800-228-9290 or 216-696-9200. To secure the special room rate of \$135 single/double, mention Rutgers University IR-4 Project. **The cutoff date for reservations is Fri. Aug. 21, 2009.**

The workshop registration fee is \$150 until Aug. 21, 2009, and \$200 from Aug. 22 to arrival. Online registration is coming soon.

Based on the success of last year's 2-day program, we will continue a 2-day agenda for the 2009 FUW. This worked well, because the Aug. nomination prioritization process allowed for priorities within all regions to be well-organized prior to the workshop, such that focus concentrated on discussing only projects given at least one "A" nomination.

This year, Insect Management project prioritization will begin Tues. morning at 9:00 a.m., following welcomes, a "State of the IR-4 Project" address, introductions and general workshop instructions. Weed Management project prioritization will begin after the Tues. afternoon break, and will be completed Wed. morning. Disease Management project prioritization will commence before noon on Wed. and be completed by day's end. Look for a more detailed agenda on the IR-4 website. Plans for the nomination process and deadlines for receipt of new PCRs in Aug. have been communi-

cated through the regions. Briefly, plans and deadlines are as follows:

- Aug. 8-30: project lists available on the website for nomination
- Aug. 28: last day new PCRs accepted for consideration at workshop
- Aug. 8-30: list of new PCRs received August 8-28 posted for nomination
- Sept. 1: lists of nominated projects posted on website

There are a couple key differences in the nomination/prioritization processes this year:

- 1) there will be no visible indication on the website that any particular project has been nominated (last year the color changed the first time a project was nominated);
- 2) every new PCR received from Aug. 8-28 will automatically be given a "C" priority, and will be discussed at the workshop only if

someone gives it an "A" nomination on the website; and

- 3) FUW participants will be assigning 55 "A" priorities, including a minimum of 10 "A's" per discipline, plus another 25 to be assigned to disciplines based on the % of total projects on nomination lists posted to the IR-4 website Aug. 8 for each discipline. If a discipline is unable to assign its allotted number of "A" priorities at the workshop, these "A" slots will be filled through the Regional upgrade/Priority Upgrade Proposal processes.

We will not be mailing workshop printouts. Instead, we request that participants print the lists they need from the IR-4 website. Contact Cheryl Ferrazoli at ferrazoli@aesop.rutgers.edu or call 732-932-9575 ext.4601; or Van Starner at starnerv@aesop.rutgers.edu or at ext. 4621. ▲

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IR-4 Successes

Jan-Mar 2009

The trade names listed below are provided as a means to identify the chemical for which a tolerance has been established. A trade name listed here may not be the name of the product on which the new food use(s) will be registered. Only labeled products may be used on a food crop. Be sure to obtain current information about usage regulations and examine a current product label before applying any chemical.

January

None

February

None

March

Federal Register: 3/4/09

Dimethomorph

Trade Names: Acrobat, Forum

Crops: Ginseng, Turnip greens, Lima bean (regional registration), Succulent bean (regional registration), Grape (regional registration), Potato

PR#: 08958, 07499, 07261, 06794

Famoxadone

Trade Names: Famoxate, Tanos

Crops: Caneberry subgroup 13-07A (replaces tolerance on subgroup 13A), Leafy vegetables except brassica and spinach group 4, Cilantro, Spinach, Bulb onion subgroup 3-07A, Green onion subgroup 3-07B

PR#: 08766, 08499, 08758, 08308, 08303

Tebuconazole (revised tolerance)

Trade Names: Corail, Elite, Folicur, Horizon, Lynx, Raxil

Crop: Cherry (pre- and post-harvest)

PR#: 06554

Federal Register: 3/11/09

Chlorimuron-ethyl

Trade Names: Classic, Darban, Smart

Crops: Low growing berry except strawberry subgroup 13-07H

PR#: 03023

Federal Register: 3/25/09

Fenpropathrin

Trade Names: Danitol

Crops: Caneberry subgroup 13-07A, Stone fruit group 12 except cherry, Cherry, Tree nut group 14, Pistachio, Olive, Avocado, Black sapote, Canistel, Mamey sapote, Mango, Papaya, Sapodilla, Star apple

PR#: 08735, 08962, 08963, 08016, 08961, 09374, 07856, 07857, 07858, 07859, 07860, 07861, 07862, 07863

Propiconazole

Trade Names: Alamo, Banner, Break, Orbit, Propimax, Tilt

Crops: Garden beet, Cilantro, Parsley, Pineapple

PR#: 07352, 07371, 06351, 06585

New to IR-4 HQ

IR-4 HQ welcomed two new Assistant Coordinators in 2008. Tracy Switek, who is working with the Entomology Working Group and Kathryn Homa working with Crop Grouping.

Tracey brings to IR-4 her field and lab experience working in the Entomology Department at Rutgers University. There she was responsible for data collection, project management, sampling, collection and care of insect specimens. Tracey has also worked as a field botanist in the landscape architecture department at Rutgers University, and as a veterinary technician. Tracey holds a BS in Ecology and Evolution from Rutgers University.

Being raised on a farm, Kathryn has a wealth of farm related experience and expertise. Her primary responsibility is managing the pumpkin crop.

In addition, Kathryn has worked as a Rutgers University Research Intern, conducting a hydroponic strawberry study. More recently, she worked as a Research Assistant with Terracycle fertilizer on vegetables, lawns and ornamentals. Kathryn holds a BS in Ornamental Horticulture from Delaware Valley College and is currently taking graduate-level courses in Plant Biology at Rutgers University Graduate School of New Brunswick. ▲

The Northeast has a New Research Center

— by Edith Lurvey, IR-4 Northeast Regional Field Coordinator



Young peaches at Cream Ridge
Photo by Edith Lurvey

Among the new faces at the IR-4 National Education Conference were Tom Freiberger, Dave Bodine and Doug Richert from the Rutgers Fruit and Ornamental Research and Extension Center (Cream Ridge). The center, located in Cream Ridge, NJ will be conducting magnitude of residue studies for the first time this year. It will also conduct perennial fruit residue trials, replacing the work formerly performed at the Rutgers Agricultural Research and Extension Center (RAREC), located in Upper Deerfield, NJ.



IR-4 Field Research Director, Tom Freiberger

Although new to IR-4 food use research, Tom Freiberger has been the principal researcher at Cream Ridge for the IR-4 ornamental horticulture program. The center was originally established as an ornamentals research center by the IR-4 Northeast Region in 2004. In 2006, thanks to Paul Schwartz, the center became mostly funded through USDA/ARS.

Tom's expertise includes numerous entomology studies on soft scale and white grubs as well as considerable crop safety work. The white grub work was an in-field study, requiring significant

digging for the evaluations. Tom solicited volunteers from HQ to help out – a muddy experience by all accounts.

Dave Bodine has been working with Tom for several years, first as a student worker and now full time. He is an integral part of setting up the new GLP site and developing Standard Operating Procedures. This spring Dave joined the Naval Reserve and will spend the summer at boot camp. To provide needed support for a program of this size, Doug Richert from the Rutgers Plant Pathology Department will help out. He is a welcome addition to the program.

For perennial fruit, Cream Ridge already has established blocks of peaches, apples and grapes. These crops are important to Northeast agriculture. Although cranberries and blueberries are the two principal NJ fruit crops, neither is currently grown on the farm. Luckily, the Philip E. Marucci Center for Blueberry & Cranberry Research is an hour away and those fruit trials will be conducted at that location. Tom and his crew will be carrying out an extensive planting program. Blueberries will be planted at Cream Ridge to reduce travel time to the Marucci Center. Caneberries and other peach varieties are also being planted to increase flexibility for potential magnitude of residue fruit studies. Because Cream Ridge is in the

unique position of straddling two EPA regions, they are able to meet EPA data needs in Regions I & II. This allows for more trial distribution options and excellent research. ▲

A Little More about Cream Ridge

— by Joe Goffreda, RFOREC Director

The tree fruit germplasm collection at Cream Ridge, NJ is one of the broadest collections in the US, and contains an extensive collection of germplasm from former Soviet Republics in Central Asia. This collection has approximately 750, 1350, and 1800 unique peach, apricot and apple clones. One of the major objectives of its breeding program is using this germplasm to develop superior fruit and ornamental tree varieties that enhance resistance to diseases and insect pests. Cream Ridge is also interested in developing varieties with unique flavors, desirable textures, and exceptional storage qualities. Many of these disease resistant tree fruit cultivars are being marketed to home owners because of their excellent eating quality and reduced maintenance requirements. Additionally, Cream Ridge is using interspecific hybridization to develop ornamental cultivars of *Prunus*, *Malus* and *Pyrus* with distinctive growth habits, unique leaf colors, and high levels of disease resistance. Using controlled cross hybridization, the center is combining multiple resistance alleles into its selections to attain more durable resistance to diseases. ▲

Focus on the Researcher: Mike Matheron: Key Cooperator

— by Stephen Flanagan, IR-4 Assistant
Western Regional Field Coordinator

Yuma, Arizona is a desert town along the Colorado River in the Southwestern United States. Home to most US winter lettuce production, this agricultural hub is also the home of key IR-4 cooperator Dr. Mike Matheron.

Mike is a vegetable crop and citrus plant pathologist who cooperates with both the IR-4 food use and biopesticide programs. So what exactly does a plant pathologist do in a desert valley where the wettest month of the year (Aug.) has just over a half inch of rain, it's sunny over ninety percent of the time, and winter time temperatures are in the seventies?

Although the desert may not appear a likely place to study plant pathology, Mike's days are invested in working on many soil borne and dry climate diseases. Among these diseases are *Sclerotinia* drop of lettuce, downy mildew of broccoli and lettuce, powdery mildew of lettuce and melons, *Phytophthora* stem and root rot of chile pepper, *Phytophthora* root rot and gummosis of citrus and brown heartwood rot of lemon trees.

When Mike's not conducting trials in Yuma you might find him afoot somewhere in the region (or country) sharing his research insights. The IR-4 food use workshop has benefitted from Mike's pathology knowledge, and he also participates in the Western Region's regional meetings.

The Western Region's last State and Commodity Liaison meeting was held at Montana State University, in Bozeman, Montana this spring. Mike represented Arizona at this meeting and also marveled a bit at the six inches of fluffy white Montana spring snow which blanketed Bozeman on the night of his arrival.

The intense cultivation of winter vegetables in the desert southwest has increased the prevalence of soil borne diseases like *Sclerotinia* Drop of Lettuce. Changes in consumer preferences have also created problems. Lettuce growers have moved away from traditional head lettuce (which is less susceptible to *Sclerotinia* Drop) to Romaine lettuces and high density mixed greens production. These



shifts in production techniques and the loss of Ronilan®, (vin-clozalin) created a serious void for *Sclerotinia* Drop control.

Mike's experimental trials in the late 90's and early 2000's screened boscalid, fluazinam, and fludioxonil for control of *Sclerotinia* Drop. While working with these conventional products, he also screened a variety of



Dr. Mike Matheron conducts IR-4 research in the desert town of Yuma, AZ.

biopesticides including *Bacillus subtilis*, *Coniothyrium minitans*, and Polyoxin-D.

The causal organisms of *Sclerotinia* Drop, *Sclerotinia sclerotiorum* and *Sclerotinia minor* form sclerotia (a hardened resting stage.) These organisms can live for several years in the soil without a host plant. The combination of high demand for lettuce ground and the sclerotia's survival in the soil creates a heightened need for disease controls. Mike's research work has examined integrating traditional chemicals, cultural methods and biopesticides to control this pernicious soil disease.

The IR-4 program has historically concentrated on generating residue tolerances for specialty crops. However, there are some instances where the tolerance data has been generated by IR-4, but the new uses are not registered because of inadequate efficacy data. Dr. Matheron is completing two "A" priority efficacy projects this year in Yuma which fall into this category.

Projects 9265, cyazofamid /spinach and 9300 triflumazole/greenhouse cucumbers are both efficacy projects which received an "A" priority at last year's Food Use Workshop. Cyazofamid is used for the control of downy mildew of spinach and triflumazole is a powdery mildew

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material. The efficacy data generated by Mike will support the registration of these two crop production tools. Extension specialists are essential for generating efficacy data in support of IR-4's residue tolerance data.

Mike's work on lettuce is conducted along with his work on other crops like desert citrus and peppers. Citrus in Yuma is primarily lemons with over 10,000 acres in production. One citrus disease represented in Mike's work is *Phytophthora gummosis*. Mike's research program has screened numerous new control chemistries for gummosis.

Similar to disease work on lettuce, Mike's pepper work has concen-

trated on another soil borne pathogen *Phytophthora capsici*. Long term use of Ridomil® (metalaxyl) has lead to documented resistance by *Phytophthora* strains. Mike has screened numerous conventional and biopesticide compounds for control of the root, crown and fruit rot phases of this disease.

Beyond research into lettuce, broccoli, peppers and citrus, Mike has also examined diseases of peanuts, pistachios, walnuts and garbanzo beans. The unique world of desert agriculture is a significant asset in IR-4's bank of national research cooperators. The Western Region IR-4 is particularly appreciative of Mike's consistent and fruitful efforts supporting Western Specialty Crop growers and our overall research efforts. ▲

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