

Fresh Hope for the Mint Industry

— by William Crawford

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Growers and distillers of Oregon's troubled peppermint industry hope that a not-so-new invention will help increase their crop's international competitiveness. Researchers are looking at how the humble microwave could be adapted to revolutionize the state's mint oil production process and greatly reduce the industry's operating costs.

Currently, mint oil is extracted through a high-cost steaming process involving large boilers that run on expensive fuel. Rocky Lundy, executive director of the Mint Industry Research Council, says the combination of cheap foreign products from China and India along with uncertain fuel prices has hurt the state's competitiveness over the last 12 years.

Bryan Ostlund of the Oregon Mint Commission says Oregon produces 25% of the nation's mint oil, roughly 2.5 million pounds, with an annual value of \$50 million. Lundy says planted acreage of the crop in Oregon

will increase 3% to 5% by 2010. Currently the state grows about 28,000 acres. But with a global appetite for the cheapest goods experts say the state's industry must find a way to cut production costs in order to survive.

Lundy says the current steam distillation system can account for 60% of the total production cost. "The idea of trying to find some more efficient form of distilling the oil has been around for years," says Lundy.

That Holy Grail of mint oil distillation may be on the way, says Lundy. With help this summer from Oregon State University researcher David Hackleman, mint producers rented an industrial microwave unit, designed for textile production and drying dog food, and used it to distill the oil from batches of mint hay instead of using costly boilers. Lundy says the samples of the oil produced in the initial experiments easily met the quality standards expected of Oregon mint. However, further research will be conducted in North Carolina on the true

energy efficiencies of the process.

John Wendel, general manager of Albany based RCB International, which buys mint from growers and sells to customers like Colgate, says over the past 10 years there has been pressure from large retail-

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Welcome to IR-4

New State Liaison Representatives (SLR)

The Northeast Region

Brian A. Kunkel has agreed to serve as IR-4 SLR for Delaware (UD). He might be a familiar face for some as he has been active in the IR-4 Ornamental Horticulture Program, and has conducted several efficacy trials for flea beetle and *Euonymus* scale. Another one of his interests is biological controls. Brian joined UD as an Extension Specialist in Ornamental IPM in 2006. He received his PhD from Ohio State University in 2003 and his Masters from the University of Kentucky where

he worked with Dan Potter.

Heather H. Faubert will become the first IR-4 State Liaison for Rhode Island in several years. A Rhode Island native, she has worked at the university for 28 years. Currently, she is responsible for running the URI Plant Protection Clinic. In addition to identifying samples in the lab, she also makes site visits to assess problems. Although her main focus has been tree fruit, as a diagnostician, she covers everything grown in Rhode Island, a great asset for IR-4 networking.

The Southern Region

Dr. Powell Smith, an extension faculty member at Clemson University joined the IR-4 SOR team as State Liaison

Representative for South Carolina in mid-2009, replacing Dr. Bob Bellinger who previously held the position. Powell is based in Lexington County, SC where he has responsibilities in vegetable/ small fruit production and pest management projects. He also conducts research to develop and refine sustainable pest management practices for vegetable and small fruit crops. Powell is highly regarded in the South as a valuable resource and is an excellent asset to the SOR team. This past year he, together with Ric Bessin (UK), chaired the entomology priority setting session of the SOR Regional meeting held in Myrtle Beach, SC.

Don Ferrin is the new SLR from Louisiana. Don earned a

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ers such as Wal-Mart for cheaper products. The result has benefited overseas producers who have gained a strong foothold in the industry with *Mentha arvensis*, a lower-cost peppermint alternative blended with other oils. The alternative blend has chipped away at traditional mint production and Oregon's share of the market, says Wendel.

"*Arvensis* affected us negatively," says mint grower Jim Cloud of Madras. "On the other hand, I can't blame [the customers] really."

But if the research on the

microwave system proves positive, Lundy says within five years the new process could give Oregon its edge back. "Last year, I would've said [Oregon mint] had an uphill battle," Lundy says. "Now that hill is not so steep." ▲

Post Script: When questioned how a more cost-efficient method of distillation can give Oregon an edge over foreign mint oil producers Rocky Lundy stated, "North American mint production uses a much higher level of management and technology than our foreign competitors. In India and/or China they distill their mint hay using small crude boilers and using sources of energy such

as sticks of wood and cow chips.

They do not have the large boiler system we use for steam distillation nor do they have the availability of different energy sources. This new method of distillation will not assist them in any way but will make the North American mint industry a much more efficient industry while reducing greenhouse gas emissions.

This particular article was about Oregon mint production but the large boiler steam distillation system/process is standard process throughout North America."

B.S. and M.S. in Botany & Plant Pathology at Michigan State University and a Ph.D. in Plant Pathology at the University of Florida. He worked in both academic (University of California, Riverside) and industry settings (Yoder Bros., Inc., and Pacific Plant Health Services) before joining the faculty of the Department of Plant Pathology & Crop Physiology at the LSU AgCenter in 2005. Here he serves as an Extension Plant Pathologist with statewide responsibility for all horticultural crops. He is active in the Southern Division of APS and is a senior editor for *Plant Health Progress*.

The Western Region

The Western Region welcomed **Scott Nissen** as the new SLR for Colorado. Scott's responsibilities at Colorado State University (CSU) include research (applied and basic), outreach (Cooperative Extension) and teaching. When he first joined CSU in 1995, his focus was integrated weed management in row crops including onion, sugar beet, dry bean and potato. His applied research has been supported by the various commodity groups. However, today, his focus is different.

Agriculture along Colorado's Front Range is being displaced by an increasing population. To solve this problem, communities are trying to preserve the quality of life in Colorado by purchasing farmland to establish open space and natural

areas. These areas are highly disturbed and susceptible to invasion by numerous weed species; therefore, over the past three years Scott has been involved in more research dealing with invasive species management and adaptive strategies to establish desirable plant communities. The goal of this research is to establish sustainable plant communities that can resist re-invasion. In addition to this work, he focuses on herbicide fate in the environment and non-target impacts.

New Hires

HQ

Headquarters hired **Karl Malamud-Roam** as the new Public Health Pesticide Manager (see article pgs. 6 & 7).

The Southern Region

opened a new IR-4 Field Research Center in Fayetteville, Arkansas in 2009.

Dr. Leopoldo E. Estorninos, Jr., (Jun) came on board as a Program Associate to assist Dr. Nilda Burgos, the new Field Research Director, in conducting the GLP residue trials. Jun brings with him over twenty years of experience in field research (Weed Science). He has been a Senior Research Assistant at the International Rice Research Institute in the Philippines and Senior Graduate Assistant and Post Doctoral Associate at the Crop, Soil, and Environmental Sciences Department, University of Arkansas, Fayetteville.

Also, **Reed Olszack** joined the Southern Region's Tropical Fruit Field Research Center at Homestead, Florida (UF) in summer 2009. Apart from being a long time serving member of IR-4's Commodity Liaison

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2009 IR-4 Awards

In October 2007, the IR-4 Project Management Committee voted on a new award structure to recognize excellence. The new IR-4 Awards process includes, awarding the existing IR-4 Hall of Fame Award as opportunities arise, presenting a new National Recognition of Excellence Award, and offering Regional and HQ Awards. In 2009, HQ, the Southern Region, and the North Central Region presented awards.

The Southern Region presented two Meritorious Service Awards this year. One award went to Ms. **Lori Gregg**, Field Research Director (FRD) at Texas A&M University. Lori has served the IR-4 SOR program with distinction over the past two decades conducting SOR trials in both field and greenhouse settings. She continually produces high quality data and her field data books are of excellent quality. As a field researcher, she does not hesitate when asked to serve in non-traditional capacities or to conduct non-routine trials. In fact, she often volunteers in this capacity even if it means that her research trials will be conducted in adjacent EPA regions, requiring extended travel several times during the field season. Ms. Gregg, a former recipient of the IR-4 SOR Technical Service Award, continually works to increase IR-4 outreach in Texas and is a regular participant in the annual IR-4

Food Use Workshop. She is the first FRD to be awarded the SOR Meritorious Service Award.

Dr. Charles Gilliam, SLR for Alabama at Auburn University received the other award.

Dr. Gilliam has served as IR-4 Liaison for Alabama for more than 12 years. His weed science research on ornamentals has generated both regional and national recognition. He has educated stakeholders at ornamental grower's meetings throughout Alabama and the southern region on the value and activities of the IR-4 Project. Charles carries out numerous research trials for IR-4 every year. He regularly participates in and contributes to the national IR-4 Ornamental Horticulture Workshop. He serves on the IR-4 Newsletter Committee and has recently assisted in producing a national critique on the national IR-4 Ornamentals Program.

The North Central Region handed out two regional awards, an Administrative Award and a Technical Award. The awards were presented at the North Central Region meeting, held August 2009.

Dan Heider, from the University of Wisconsin, was awarded the Administrative Award. Dan has been conducting IR-4 field trials for 10

years, and has served as Field Research Director for the past 6 years. His center performs approximately 12-15 trials each year. Dan has also served as the Wisconsin State Liaison Representative for the past 3 years, where he is able to communicate Wisconsin's specialty crop growers pest management needs to IR-4 and others.

Graig Reicks, a research associate who has been involved in South Dakota IR-4 activities for the past 3 years, was awarded the Technical Award. His field work has included pesticide residue sampling in sorghum, dry bean, corn, and flax. Graig plays a pivotal role in implementing the field portions of IR-4 projects. His responsibilities include all aspects of field work from planting to harvest and record keeping of field activities. In addition, he has taken over maintenance and upkeep of all laboratory equipment needed for IR-4 trials. This includes maintaining freezer and chemical storage temperature records, balance calibration, on-site SOP compliance, keeping SOPs up-to-date and writing new/amended SOPs as needed, sample shipping, and checking accuracy and completeness of notebooks prior to submission.

Special Appreciation Awards
In 2009, HQ handed out three Special Appreciation Awards.

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IR-4 SLR Receives Award

Shripat T. Kamble, a professor of entomology at the University of Nebraska and IR-4 State Liaison Representative, was selected as an Honorary Member of the Entomology Society of America (ESA) at the Society's annual meeting held December 13-16, 2009.

Honorary Membership acknowledges those who have served ESA for at least 20 years and have had significant involvement in the affairs of the society.

Shripat has been an active member of the North Central Branch (NCB) since 1970. He has served two terms on the ESA Governing Board (2000-2006), and has been actively involved in the certification program since its early days, serving as Board Certified Entomologist (BCE), Director in 2000, and Chair of the BCE Examining Committee from 2004-present. Shripat has organized and moderated a total of 34 symposia at NCB and national ESA meetings. He also served the NCB as an executive member-at-large (2006-2009).

Shripat has worked at the University of Nebraska for 31 years as an assistant, associate, and full professor. He is a graduate faculty fellow and has supervised eight M.S. and eight Ph.D. students, as well as three postdoctoral researchers. He has served on various



Dr. Shripat
T. Kamble

departmental committees, a pesticide advisory committee, and in the University Academic Senate. He has been a state liaison for the Pest Management Center, the Pesticide Impact Assessment Program, and the IR-4 Project for more than 15 years.

He has hosted 13 visiting scholars, has published 129 papers, and has acquired \$3.15 million in grants.

Shripat's studies include assessments of insecticides to control pests affecting crops, livestock, turfgrass, stored grains, and households/ structures. His studies on termites include research on environmental toxicology, baiting technology, and over-wintering physiology. His research on cockroaches includes the biochemical basis for insecticide resistance mechanisms, field evaluations of new products, and baiting technology. Shripat has also studied insecticide exposure on field workers and insecticide drift.

Congratulations Shripat! ▲

Visit www.entsoc.org to learn more about ESA.

Calendar of Events

February 2-3, 2010
Western Region Training
University of California
Kearney Research &
Extension Center
Parlier, CA

PMC Meeting
(CLC a.m. 3/2,
PMC/CLC p.m. 3/2,
PMC all day 3/3)
March 2-3, 2010
Washington, DC

Northeast Training Meeting
March 9-10, 2010
Geneva, NY

Western Region SLR meeting
March 16-17, 2010
Yuma, AZ

PMC Meeting
July 20-21, 2010
Bozeman, MT

North Central Region
SLR Meeting
Aug 9-10, 2010
(final dates and times TBD)
Brookings, SD

2010 Food Use Workshop
September 14-15, 2010
Summerlin, NV

The IR-4 Public Health

— by IR-4 Public Health Pesticide Manager

The latest IR-4 program, which supports the development and registration of new pesticides to protect public health, was initiated during 2009. The IR-4 Public Health Pesticides (PHP) Program complements the traditional strengths of IR-4 in fostering safe and effective pest control for small agricultural markets. The program expands the IR-4 mission to include critical pest control niche markets outside agriculture. The initiation of the PHP Program followed the adoption of an agreement between IR-4, USDA's Agricultural Research Service, and the US Department of Defense in late 2008. Initial funding for the Program for five years was committed by the military's Deployed Warfighter Protection Program (DWFP), in recognition of the critical need to develop new tools to protect soldiers and sailors from arthropod-borne diseases. A major milestone was recently reached with the hiring of Program Manager, Dr. Karl Malamud-Roam, who began work at IR-4 Headquarters in mid-September.

Pesticides are used to protect public health in many ways. Many insecticides used in agriculture are also effective toxicants against arthropods, such as mosquitoes or ticks, common vectors of infectious human diseases. In addition, insect repellents, whether applied to the skin, used to treat cloth, or used for area-wide protection, such as burnable coils, are registered as pesticides. Insect attractants used in trap-and-kill devices are also public health pesticides if the traps are focused on disease vectors. Many types of chemicals aimed at controlling non-arthropod organisms can also be classified as public health pesticides; rodenticides and antimicrobial chemicals applied to the environment, for example, can fall into this category (in contrast, antimicrobial chemicals that are ingested are considered pharmaceuticals).

The availability and use of topical insect repellents has grown in recent years, largely in response to concerns about West Nile virus and Lyme disease. However, the market for

public health pesticides has generally been too small to support significant innovation and registration of new materials. [This has especially been true for pesticides used by public agencies charged with vector control, including mosquito abatement districts conducting area-wide vector control campaigns, international efforts to combat malaria or dengue fever, and military medical entomology teams combating exotic pests like sand flies infected with the leishmeniasis pathogen.] In all of these realms, the tool box of active ingredients is small and has not changed appreciably in the last two decades.

Unfortunately, vector-borne diseases are major daily threats in many parts of the world today, each year sickening hundreds of millions of people and killing more than a million. The risk from both these diseases is most acute for the poor and for those, like soldiers and sailors, whose work may take them into environments where these diseases and their vectors are endemic. Even in areas where vector-borne diseases have been uncommon in recent decades, the examples of West Nile virus and Lyme disease remind us that changing patterns of demography, trade, and environment have made us all vulnerable to emergent diseases. In this context, the need for a public entity like IR-4 to assist with development and

Staff from Lee County (FL) Mosquito Abatement District, working with IR-4 staff to measure residues on crops following application of etofenprox as a mosquitocide during November 2009. See accompanying story (page 8) for a description of simultaneous applications of etofenprox in California. L-R: Dr. Jonathan Hornby, Bob Richardson, Gary Bonnough, Lee Reed, Darrel Thomas and David Studstill
Photo by Michelle Samuel-Foo.



Public Health Pesticides Program

er, Karl Malamud-Roam



Calibrating 20 micron droplets with laser and wind tunnel for mosquitoicide residual study. Photo by Clint Hoffman

registration of new public health pesticide tools is clear. Though risks are high and increasing, without public support, there simply has not been sufficient private return on investment to bring effective new tools to market.

A particular strength of IR-4 has been the development and implementation of GLP residue studies, and it was appropriate that the first major study by the PHP program was measurement of the residues accumulated by crops and pasture following the aerial application of a mosquito adulticide. The Mosquito and Vector Control Association of California requested that IR-4 help establish an all-crop tolerance or exemption from tolerance for the new adulticide etofenprox. This work required development of new calibration methods and protocols as the small droplets (20 micron) and aerial application (helicopters at 50 feet elevation and 70 knots airspeed) were unlike any previous IR-4 residue work. Two crops were sprayed in two states last fall and a third crop

will be tested in early 2010. The lab work also required new methods that will be completed in 2010.

Other early projects include regulatory support for insect repellents and attractants critical to both military and civilian personnel. PHP Program staff are working with EPA and developers of new repellent systems (one personal, one spatial) to facilitate registration of products to protect soldiers from sandflies and a disease they vector – leishmaniasis – that has sickened at least 3,500 U.S. servicemen and women and 200,000 civilians in Iraq and Afghanistan in recent years. Simultaneously, IR-4 is supporting the registration of new oviposition traps effective against container-breeding mosquitoes that carry dengue fever and other diseases, which threaten New Jersey and New York, as well as soldiers overseas.

In addition to residue and other traditional EPA registration support, the PHP Program

anticipates wide international collaboration, given the distribution of vector-borne diseases in the world, and the specific need of the military to ensure that the products they use overseas are safe, effective, and legal in all regions. Initial efforts in this area include development of sand fly repellent efficacy protocols, which will probably be implemented initially in Egypt or Israel, and initial collaboration with the Bill and Melinda Gates Foundation and the Innovative Vector Control Consortium (based in Liverpool, England) on identification of key product gaps, registration data needs, and potential funding proposals.

New Program Manager

Public Health Pesticides Program Manager **Karl Malamud-Roam** joined IR-4 after 18 years in operational mosquito control with the Contra Costa Mosquito & Vector Control District in California. Dr. Malamud-Roam has degrees in Biology and Physical Geography from Princeton University and the University of California at Berkeley. For the last eight years, he has served as Legislative & Regulatory Affairs Chairman for the American Mosquito Control Association, where he has been the liaison with EPA of pesticide registration and reregistration, for the Clean Water Act, Endangered Species Act, and other aspects of public health pesticides regulation. ▲

Etofenprox: Where the Rubber Meets the Helicopter

— by IR-4 Western Region Assistant Field Coordinator, Stephen Flanagan and Southern Region Field Coordinator, Michelle Samuel-Foo

So when was the last time you strapped your CO₂ cylinder into a helicopter seat, or had to calibrate your nozzle output when powered by a Huey engine? For field researchers in Florida and California, this fall marked the first IR4 studies in the Public Health arena. These projects are Magnitude of Residue studies designed to determine an all crops tolerance for insecticides used to control mosquitoes. The nature of applications to mosquito environments contributed to a uniquely challenging residue study.

Consider the mechanics of timing a helicopter traveling at seventy miles per hour a mere fifty feet overhead. Now consider that your test substance is being applied in microscopically small droplets designed to remain airborne and make

Rotary Impingers being placed in hay field prior to application to verify that test substance hit target.

Photo by Stephen Flanagan.



contact with flying mosquitoes. What is your swath width? What is your application time? How will we measure and confirm our EPA stipulated flight altitude of fifty feet? These questions and many more arose from this challenging study.

Fortunately, with the assistance of IR-4 Entomology Program Manager, Keith Dorschner and Public Health Pesticide Manager, Karl Malamud-Roam, most of these questions had been vetted to the EPA during protocol development. On the ground in FL and CA a cadre of IR4 Field Researchers, Regional Staff and professional applicators worked together to orchestrate the details.

One key component of adulticide aerial application is droplet size. Specialized aircraft nozzles are used which atomize the test mix so that ninety percent of the droplets are less than one hundred microns in size. In order to determine the proper function of these nozzles, Dr.

Malamud-Roam arranged a cooperative effort with ARS College Station engineer Clint Hoffmann. Dr. Hoffmann's lab has a wind tunnel with laser refraction technology which can characterize the range of droplet sizes exiting the nozzles.

In addition to characterizing the droplets, SOPs were developed for verifying GPS speed records, and a laser altimeter was installed and verified for GLP record keeping. The team in Florida utilized a radar altimeter to keep track of the helicopter altitude. Once all the preparations were complete and equipment delivered to the Florida and California field sites, the actual applications were made the week of November 16th.

During the dusk applications, live weather data was downloaded and used to calculate application "offsets" which predict how the test substance will drift onto the study plots. Without proper offsets the test substance could potentially



Parked Helicopter outfitted with rotary atomizer (Becomist) nozzle from CO₂ tank on seat. Photo by Stephen Flanagan.

IR-4 Awards

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The first was awarded to **Wally Ewart**, to acknowledge his contributions for serving as an IR-4 Commodity Liaison Committee Member.

IR-4 gave a second Special Appreciation Award to the four "Founding Fathers" of the IR-4 Ornamental Horticulture Program (OHP). This award was presented to: **Ray Frank, Paul Schwartz, Chuck Powell, and Richard Lindquist** to commemorate their contributions as originators and for their continued support of the IR-4 OHP. IR-4 is especially appreciative of

the partnerships it has formed with the Environmental Protection Agency (EPA). In 2009, Dr. Janet Andersen received a Special Appreciation Award from IR-4 as she retired.

Dr. Andersen received her Ph.D. in Forest Pathology from the University of Maine (1981) working on pesticides used to control Dutch Elm Disease. She was the Director of EPA's Biopesticides and Pollution Prevention Division (BPPD) which was responsible for the registration of biological pesticides. She advocated the

adoption of Integrated Pest Management (the use of safer pest management practices) including the use of biopesticides. Through her leadership the division registered over 200



Originators of the IR-4 Ornamental Horticulture Program are pictured with IR-4 Executive Jerry Baron (far l) and the Ornamental Horticulture Manager, Cristi Palmer (r). The "Founding Fathers" include (l to r), Chuck Powell, Richard Lindquist, Ray Frank and Paul Schwartz. *Photo by Delilah Onofrey*

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miss the test plots completely, or partially, which would confound any analytical results from the commodity samples. To ensure that the droplets were applied to the target crops, rotary impingers were installed and distributed throughout the test plots. Each impinger consisted of a pole mounted cylindrical microscope slide that rotated constantly prior to and at least thirty minutes after the sprays. Droplet deposition in the plots was confirmed within hours of the application.

Working with helicopters and public health pest control is certainly novel for the IR4 Project. This fall's field work presented ample opportunities to plow new ground and apply these novel techniques to future studies. The IR-4 project would like to acknowledge the Lee County FL Mosquito Control District, Sutter-Yuba Mosquito & Vector Control District and Field Researchers David Studstill, Darrel Thomas (FL) and Don Stewart (CA) for their contributions to these studies. ▲

microbial, biochemical and plant incorporated protectants including the first biocontrol agent to manage Dutch Elm Disease.

BPPD activities include agricultural and non-agricultural areas with the Pesticide Environmental Stewardship Program. In cooperation with IR-4, BPPD has co-funded and co-reviewed a Demonstration Grant program which funded on-farm projects with biopesticides.

IR-4 also gave its first National Recognition of Excellence Awards to Robin Adkins, Nancy Ragsdale, and Marylee Ross (see related article Vol 40 no2).

Congratulations to all IR-4 award recipients. ▲

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Fan Us

IR-4 now has two pages on Facebook, and we invite you to become our fan. What exactly is Facebook? Simply put, Facebook is a social networking site on the Internet. But more than that, Facebook lets many networks connect at once, and share information.

According to Facebook's statistics page,¹ Facebook has over 350 million subscribers with 50 thousand new subscribers joining every day. More than 3.5 billion pieces of content (web links, news stories, blog posts, notes, photo albums, etc.) are shared weekly.

Why would IR-4 want to be on Facebook? According to the Wild Apricot, a blog that is geared toward non-profits using social media, "[Facebook is] a very effective networking tool for nonprofits to create awareness and connect with their community." Another reason, according to Craig Newmark, creator of Craig's list, "[There is a] transformation in government across the country that is largely coming from the bottom up, from social media cluster groups." He discusses that cluster groups are able to move government and are "getting stuff done"² because of their "voices" that influence many others through the Internet.

An example of "cluster groups" are Farm Bureaus. At the time of this publication, the American Farm Bureau, and 17 state Farm Bureaus had a Facebook presence and are "getting stuff done" for their stakeholders.

Of course a network is only as good as the people using it. That is why we invite you to become a fan and post on our wall. Let us know what is going on with your research, tell us about your accomplishments, and share with us any extension or university trends. You can find us by searching for the IR-4 Project at Facebook.com. ▲

1) <http://www.facebook.com/press/info.php?statistics> 2) <http://www.istrategylabs.com/category/citizen-engagement/>

New Hires, Retirees continued from page 3

Committee, Reed currently owns and operates his own tropical fruit groves. His horticultural career began in 1972 and he has held various positions in the southeast related to tropical fruit production and sales. Reed currently works with Jonathan Crane at the IR-4 Homestead research station where he is expected to assume Field Researcher duties in 2010.

USDA-ARS

David Lara joined the IR-4 field program in Salinas, CA in 2008 as a technician. Previously, David had been a technician in the USDA-ARS sugar beet breeding program for 8 years. He also has many

years of experience in vegetable and strawberry farming in the Salinas area.

Retirees

Western Region

Greg Hall, who joined the University of California, Davis in 1974, retired in August 2009. Greg began his stint working in Professor Wendall Kilgore's analytical group in the Department of Environmental Toxicology. In the mid-80's, when the department moved to its current location in Meyer Hall, Greg was transferred into Professor Marion Miller's laboratory where he worked until 1992. In 1992, Professor Takayuki Shibamoto asked Chuck Mourer to take over the

IR-4 program and Greg transferred to the IR-4 laboratory. Much of the improvement in the Western Region's efficiency and performance stemmed from Greg's unique abilities in utilizing automated instrumentation and computerized data handling.

Northeast Region

Susan Whitney King retired from the University of Delaware (UD) in November 2009. She ably served her state and the region as Delaware IR-4 SLR for over ten years. In addition to her other duties at UD, she has been instrumental in the Delaware Information Network and organizing Pest Management Strategic Plans for important crops in the region.

IR-4 wishes our retirees the best. ▲

A Report from The Laboratory Scientific Review Committee

In February 2009, the IR-4 Project Management Committee voted to establish an IR-4 Laboratory Scientific Review Committee (LSRC), a team consisting of all Laboratory Research Directors and representation from the PMC, QAU and IR-4 HQ. The purpose of the committee is to help resolve contentious issues, such as study-specific analytical questions and provide professional guidance.

Emy Pfeil, LSRC Chair, gave a presentation to the PMC in October. In her presentation, she stated the objectives, challenges, and recommendations for the future in overcoming some of these challenges.

Lab Objectives

The IR-4 Lab's objectives are to increase residue data reporting output, and incorporate "time-line" flexibility into the completion of the residue phase of IR-4 studies, while maintaining and sustaining the high quality of IR-4 laboratory data. While these are noble goals, the labs are facing some impediments to reaching these goals.

Challenges

The remaining labs must recover the lost output from the closing of the Northeast Lab, which includes dividing up and completing an additional 18-22

studies (100-120 field trials) per year. The labs must also work toward matching industry submission time-tables, coordinate with EPA petition review time slots, and coordinate with bundled project submissions.

This must all be completed at a time when methods, and the studies themselves, are becoming more complex, more staffing is needed, freezer and bench space often are at capacity, requiring possible facility increases, and analytical equipment needs upgrading.

Also, predictably, the labs need more operating funds to meet these challenges.

Solutions

Emy's first task was to coordinate an audit of lab equipment across all IR-4 labs. In doing so, instrumentation needs were identified and procurement options for replacement or supplementation of resources were discussed with three vendors that are used consistently across the labs. The vendors were all willing to "bundle 2 or more labs" on an equipment lease or lease-to-purchase option, making replacing equipment more consistent, and provide the laboratories with reliable instrumentation to be ready when required for analyses, and having the necessary chemical

sensitivity needed by new the methodologies.

A second solution concerns communication with HQ, EPA, and industry in order to meet time-lines and review windows. The LSRC agreed to move forward with regular meetings that include all lab personnel to discuss ways to resolve issues relating to meeting of time-line deadlines and chemistry challenges by sharing technological advice or relocating samples to other laboratories.

These solutions for increasing lab output, combined with a funding increase, which the PMC voted to approve, will help the labs meet their goals. ▲

In Memoriam

Dr. H. Arthur Lamey, Professor Emeritus in Plant Pathology at North Dakota State University (NDSU), passed away November 27, 2009.

Dr. Lamey was a supporter of IR-4 for many years, and was the FRD at NDSU prior to Mark Ciernia's tenure.

He is survived by his wife of 53 years, Cynthia; sons, Timothy Lamey, Thaddeus Lamey, and daughters, Linda Lamey-Volk, Suzan Lamey and Laura Daigle.

Dr. Lamey will be missed.

IR-4 Successes Sept.-Nov. 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.

Federal Register: Sept. 2, 2009

Methoxyfenozide

Trade Name: Intrepid

Crops: Citrus fruit group 10, Pop corn, Pea (dry seed), Pomegranate

PR#: 07061, 09367, 09414, 09415, 10094, 07527, 10160

Federal Register: Sept. 9, 2009

Pendimethalin

Trade Name: Prowl

Crop: Olive

PR#: 07607

Federal Register: Sept. 23, 2009

Spinosad

Trade Names: Entrust, Success

Crops: Date, Pomegranate, Tree Nut group 14 and pistachio

(revised tolerances)

PR#: 10153, 10228, 08739

Federal Register: Sept. 30, 2009

Thiamethoxam

Trade Names: Actara, Cruiser, Platinum

Crops: Root vegetable subgroup 1A, Caneberry subgroup 13-07A, Bushberry subgroup 13-07B except lingonberry and lowbush blueberry, Low growing berry subgroup 13-07G except cranberry, Avocado, Papaya, Black sapote, Canistel, Mamey sapote, Mango, Sapodilla, Star apple

PR#: 09675, 09607, 08826

Federal Register: Oct. 28, 2009

Pyriproxyfen

Trade Names: Esteem, Knack

Crops: Leaves of root and tuber vegetables group 2, Leafy vegetables except brassica group 4, Foliage of legume vegetable group 7, Small vine climbing fruit except grape subgroup 13-07E, Asparagus, Globe artichoke, Watercress

PR#: 08975, 09259

There were no tolerance successes in November.



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United States Department of Agriculture
National Institute of Food and Agriculture



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