

NER Annual Meeting

— by Marylee Ross, NER RFC and Megan James, NER Research Assistant

The Northeast Region Annual Meeting and GLP Training was a 2 day event that took place April 17 – 18, 2018 on the campus of the University of Maryland (UMD) College Park. This meeting was different than previous NE Regional meetings. In the past, the meeting was held in August, alternating between in-person and WebEx. While WebEx is a powerful tool for bringing a widespread group into conversation, it cannot replace meeting in person. Bearing in mind that there is really not a time of year that is perfect for all, it appeared that more people were able to attend in April. The location for this year's meeting seemed to work well for everyone.

Most notably, our UMD and Rutgers University team of leaders were brought together to represent the consolidation of efforts being made by both universities to honor the mission of IR-4 and support the

work of a program dedicated to serving our nation's growers and stakeholders.

On Day 1, participants from across the region received a warm welcome from Craig Beyrouy, Dean of UMD's College of Agriculture and Natural Resources (AGNR). Dean Beyrouy expressed his respect for the cohesiveness of IR-4's mission statement and AGNR's Rooftop Statement, to "embody the University's land-grant mission with a commitment to eliminate hunger, preserve our natural resources, improve quality of life, and empower the next generation." AGNR's Associate Dean Adel Shirmohammadi also articulated his appreciation for the IR-4 Project and how it complements his concerns for environmental issues. Daniel Rossi, IR-4 Northeast Region Director, gave a summary of regional activities and successes,

and Jerry Baron, Executive Director of The IR-4 Project, presented a summary of National IR-4 activities within each program, problems experienced because of export issues, increased need for efficacy work and public perceptions. He explained the challenging funding situation and the need for increases in funding and identifying new funding sources. He also addressed process improvements and upcoming events.

Michael Bledsoe, Vice President of Food Safety & Regulatory Affairs (Village Farms International), Chair of the IR-4 Commodity Liaison Committee (CLC), and member of

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Participants received a warm welcome from Craig Beyrouy, Dean of UMD's College of Agriculture and Natural Resources (AGNR).

Executive Director Notes

Dear Friends,

I recently had the pleasure to attend meetings of the IR-4 Northeast and Western Region State Liaison Representatives (SLRs) on the University of Maryland and University of California-Davis campuses, respectively. I am not certain that everyone knows that within each state/US Territory there is a "local" person who represents IR-4. Over time, the roles and responsibilities of the SLRs have changed dramatically. At one point, the SLRs were the key pest management scientists responsible to establish IR-4's work plan. More recently, the SLR's roles have evolved into more of a facilitator for IR-4. Many are key in transmitting information on specialty crop pest management needs back and forth from the farmers/growers to IR-4. This information is then reflected in the IR-4 priority setting process.


In conjunction with the Northeast SLR meeting, Marylee Ross conducted a daylong Good Laboratory Practice (GLP) training session. A significant amount of discussion at the GLP training session focused on the IR-4 Field Data Book and information prompts requested in the book. Based on feedback from the participants, there is a need for IR-4 to perform a review of information/data requested in the current version of the IR-4 Field Data Book. The goal of this review is to have IR-4 focus its efforts on collecting data on what is appropriate and required and reduce the requirements on collecting data that is "nice" to have.

The Western Region SLR meeting included an agriculture field tour and an evening group dinner. The tour allowed participants to see one of IR-4's Field Research Centers near Davis, a USDA-ARS living germplasm repository for tree fruit, and a large and diverse organic farm. Over the years, I have been a participant on many of these field tours and the visit to Full Belly Farms was one of the most interesting stops I have seen. The visit highlighted some of the unique challenges organic farmers face along with how they have already overcome some with innovation. IR-4 continues to step up its efforts to support organic production systems. Just this week we learned that IR-4 contributed to the National Organic Standards Board voting to recommend the use of polyoxin-D fungicide for organic production.

Much of my time and effort over the past couple of months involved IR-4 struggles for new funds. After eight years of flat funding, IR-4 is in desperate need of a new infusion of resources. We actually thought we had a chance with the FY 2018 appropriation process. The Commodity Liaison Committee (CLC) followed the textbook, writing a short and clear "ASK", meeting with the right people and keeping a consistent message. Shortly thereafter, IR-4 was featured at a National Coalition of Food and Agriculture Research "Lunch and Learn" session. On the House of Representatives side, over 50 people attended the IR-4 briefing. Unfortunately, when the FY 2018 Omnibus Bill was released, IR-4 funding again remained flat.

After a day of moping, the CLC regrouped and discussed new strategies. We have adopted the catch phrase, "\$19 in 19". Concurrently, Rob Childers from Senator Robert Menendez's (NJ) office approached IR-4 and the CLC. This contact led to a letter from the Senator being endorsed by over 60 commodity associations and signed by 13 Senators requesting the Senate Appropriations Committee increase IR-4 funding to \$19 million in FY 2019. A great and meaningful first step in the long process to gain new resources for IR-4.

This issue contains a tribute to a dear friend and colleague, Rick Melnicoe, who passed earlier this year. Thanks to Lori Berger for putting together this tribute. Before Rick died, he and I exchanged messages where I offered to run my next marathon as a fundraiser for the charity of his choice. Rick chose the American Cancer Society. By the time you are reading this, I have finished the Gate City Marathon in Nashua, New Hampshire to honor Rick and his brother John, who is fighting terminal cancer. Since April 1, the generous IR-4 community has donated nearly \$5000 to this cause. If you are interested in donating to the American Cancer Society/ Run4Rick fundraiser, you can still donate on-line at <http://main.acsevents.org/goto/Run4Rick>.

All for now, all the best, 

Jerry

Shout Out to EPA

— by Daniel Kunkel, Dan Heider and John Grabber

Over the years, EPA's Health Effects Division, Chemistry Science Advisory Council (ChemSAC) has considered many IR-4 proposals to help reduce IR-4's data cost, and save resources, time and effort in order to facilitate the registration of new uses for specialty crop growers. Some great examples include crop groups as a whole, super crop group extrapolations that were used to bring spinosad and other low risk products to growers quickly after passage of the Food Quality Protection Act. Some ChemSac decisions have also supported the use of data from other countries, especially Canada and the EU to support regional registrations or greenhouse uses, and standing policies for extrapolations to ultra-minor crops such as *Brassica carinata*, monarda, chia, stevia, teff and quinoa and many others.

At the most recent Food Use Workshop, IR-4 received a priority form for the urgent need for the plant growth regulator prohexadione calcium to enhance the establishment of alfalfa when being seeded into corn. Dan Heider and Mark Renz (University of Wisconsin), and John H. Grabber (Research Agronomist, USDA-ARS, US Dairy Forage Research Center, Madison, WI) on behalf of WI growers secured a priority for this important use.

Alfalfa grown in between corn rows.
Photo provided by John H. Grabber,



In Northern states, alfalfa is established between corn rows, and then it is used in subsequent years for forage production. Prohexadione calcium would be applied to reduce shoot growth (shorten internodes) and promote root growth, which enhances plant survival of alfalfa seedlings growing in limited light conditions under the corn canopy. This use is really only important in Northern states where silage corn is grown for feeding livestock.

Approval of this use would also have several beneficial attributes, such as providing a winter cover crop that would reduce soil runoff, offsite movement of fertilizers and pesticides, and reduce nitrate leaching into groundwater.

In IR-4's request to EPA ChemSAC, we proposed that prohexadione calcium tolerances on similar crops, such as grasses (grown for seed in the US), and EU uses on cereal grains (barley, oat, and wheat) be extrapolated to this limited use in corn. In addition, IR-4 conducted studies with prohexadione calcium on strawberry, and watercress. Although IR-4 observed some detectable residues in these crops, the use for corn, and even more so on the alfalfa, would be a very long treatment to harvest interval and therefore a very low tolerance (0.10 ppm) could be considered. With certain caveats, EPA agreed to the IR-4 proposal, which saved IR-4 the time and effort of generating residue data. We still need to gather some information on metabolism and residue data on cereal grain studies from the EU, but EPA's decision should cut two or more years off the time to registration, which is a major accomplishment. 🌱

Milestone Service Awards

— by Alvin Simmons, USDA-ARS Interim Minor Use Coordinator

Connie Scarborough and Thomas (Tom) Hendricks of the USDA-ARS, Crop Protection and Management Research Unit (CPMRU) in Tifton, Georgia were recognized with 30-year and 25-year service awards, respectively on March 27, 2018.



Connie and Tom were recognized at an awards ceremony at the CPMRU. Connie has spent her entire career as a technician working in the Tifton laboratory conducting assays on food crops in support of the IR-4 program. Tom has 33 years of pesticide residue chemistry experience, with 25 years in Tifton. Don Wauchope hired Tom in January, 1993. Tom was named the Laboratory Research Director for food trials a year later. 🌱

9th International IPM Symposium

—contributions by Keith Dorschner, IR-4 Entomology Program Manager

Over 500 people registered to attend the 9th International IPM Symposium held, March 19-22 in Baltimore, MD. The theme for the symposium was Improving Health, Environment and Global Sustainability.

The first day included three tours, IPM in Sports Facility Management, Urban Growth-The Green kind, and Urban Housing.

The Urban Growth tour visited two unique facilities. The first stop was at the home of Larry and Zhanna Hountz. Their small 10'x15' back room is the place where they grow microgreens. They started growing indoors in 2011 trying their hand at tomatoes and later lettuce. When those crops didn't work out, they switched to microgreens and have had a very successful business ever since. Larry and Zhanna now have a network of growers using their growing system and practices. They grow on specially designed coco fiber pads. The Hountz's sell their live produce in plastic trays where the plants maintain their root system. Chefs cut the fresh greens to include in their dishes, which provides greater nutritional value and exceptional flavor. When the

plants have all been used, customers return the trays to the farm. To learn more visit www.city-hydro.com.



That evening, Dini Miller, professor at Virginia Tech, specializing in urban pest management gave the keynote address. Her talk was titled, "*How the Misapplication of IPM (Integrated Pest Management) in the Urban Environment has Impacted German Cockroach Infestations- A Case for Assessment-Based Pest Management (APM).*"

Miller's extension program is designed to train pest management professionals, public health officials, apartment and hotel managers, and home owners to control indoor pests while reducing their pesticide exposure risk. Her research program focuses on the cost and efficacy of APM methods for structural pest control.

She showed how innovative new baits, combined with systematic cockroach population assessments, can control horrendous infestations. She also demolished the myth that control cannot be achieved without first removing food sources and habitat for the

pests. She emphasized the importance of assessments and proposed how APM could supplant IPM when describing such pest management programs.

Throughout the Symposium, volunteers gathered items to be included in a silent auction that took place on the final day. With 120 donated items, the silent auction raised over \$1700 and will be used for scholarships for students to attend future symposia. 🌱

Events

Southern Region

IR-4 Meeting
Embassy Suites
Cary, NC
August 15-16, 2018

North Central Region

IR-4 Meeting
East Lansing, MI
August 20-21, 2018

2018 Food Use/Biopesticide Workshops

The Marriott St. Louis Grand
St. Louis, MO
September 19-21, 2018

Western Region IR-4 Training

Webinar 11am - noon
July 24, 2018
November 6, 2018

Western Region IR-4 Training

UC Davis
February 26-27, 2019

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

The Western Region hosted its annual State Liaison Representative (SLR) & Commodity Liaison Committee (CLC) meeting at UC Davis on April 24th & 25th. The meeting was led by Michael Horak, the new regional field coordinator, along with the Western Region field team. The gathering of SLRs, IPM center folks, growers, commodity representatives, and California Department of Food and Agriculture representatives made for a diverse specialty crop group.

During the first morning, a round table discussion of state and commodity trends, needs, and challenges took place. The group then buckled down to sort through the hundreds of current IR-4 project requests and their relative merits from a Western Region perspective. The various projects were quickly reviewed and notes were taken to follow up on any unanswered questions. The first day also included an update from IR-4 Executive Director, Jerry Baron, regarding national IR-4 issues, and

informative presentations on the California processing tomato industry along with the UC IPM system.

A new step in the Project Clearance Request (PCR) process was introduced to the group regarding use of the just released national Priority Setting comments Tool (PST). This tool (pictured below) is modeled after the Western Region's PST which captures comments on projects to facilitate the project selection process at the Food Use Workshop. The tool now resides on the national website, and stakeholders can submit their own comments to the site on projects of interest to their regions.

In the spirit of IR-4's "serious" mission to serve growers, we invited Ray Ratto to a recognition dinner where we saluted Ray's "serious" love of rutabagas and his long service to IR-4. Jerry Baron presented Ray with an award honoring his contributions, and we all acknowledged our debt to key



Ray and Theresa Ratto: long time IR-4 cooperators and California vegetable growers. *Credit: Alvin Simmons*

cooperators like Ray. Our congratulations go to Ray and Theresa as they move toward retirement. We look forward to the next generation of Ratto Bro's farmers on the quest to provide picture perfect cilantro, bok choy, baby spinach and those amazing rutabagas.

Our regional meeting wrapped up with a local farm tour visiting research sites and commercial farms. On the research side, Brad Hanson and our UC Davis Field Research Directors (FRDs) Guy Kyser and Seth Watkins gave the group an overview of residue and efficacy trial conduct at the UCD center. The group got a close up look at pomegranate, fig, and stone fruit plots utilized by the UC Davis researchers. On our way from Davis to Winters, we visited Viguie

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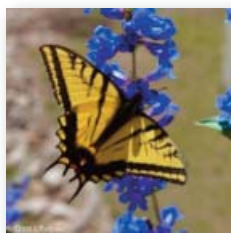
If you click "Print Report in pdf" button and the report doesn't come up, then your web browser does not allow Pop-ups. You can then click [here](#).

PR#	Priority	Pesticide(MFG)	Commodity (Crop Group)	Project Status																																						
10666	M	CALCIUM HYPOCHLORITE (ARCH)	ALL CROPS (00 = BLANKET)	NEED E/CS DATA ONLY																																						
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The Ornamental Horticulture Program is evolving into the Environmental Horticulture Program. We are renaming this IR-4 program a second time. In 1977, the original name of the program was the 'Ornamentals Program'. In 2003, it became the 'Ornamental Horticulture Program', and now in 2018 it is becoming the 'Environmental Horticulture Program'. So, why are we changing the name again?

Benefits of Nonedible Plants.

The outcomes of our program contribute to a healthy physical, social and mental environment for human beings. Healthy plants provide oxygen during photosynthesis, sequester carbon during growth while forming cellulose and lignin, filter pollutants out of air and water, and reduce heat island affects in urban areas.



Well-maintained landscapes combining trees, shrubs, and flowering annuals and perennials increase property values and reduce

crime. Plants have become hallmarks of certain social gatherings including weddings and funerals, as well as becoming interwoven with seasonal decorations and holidays. What would Valentine's Day be without long stemmed roses? What would fall decorations be without mums? What would December be without poinsettias? And, plants improve mental wellbeing. Horticulture therapy is used during medical rehabilitation. Studies have demonstrated plants in an office setting increase worker productivity and improve conflict resolution.

Perception is Reality

The word ornamental means

decorative or frivolous. What we do is not frivolous, and the plants we produce are not merely decorative. While many ornamentals are planted solely for their aesthetic value, they can provide critical ecosystem services. Trees and shrubs provide shelter for birds and mammals, such as squirrels. Ornamental plants also provide food for a wide range of organisms including beneficial insects, birds and mammals. The use of the word ornamental does not convey the true value of these crops, whereas the use of the word environmental better portrays the larger web of benefits.

Change Takes Time

During the Project Management Committee (PMC) meeting in March 2018, the PMC approved the change in program name to Environmental Horticulture. The new name will be official in June. However, many of the IR-4 outreach materials will contain the previous name until it is time to refresh them. Electronic media will shift faster than the print media. We will use EnvironHort or EH as abbreviations for the full program name.

Core Foundations

Other than changing the name, the program will essentially remain the same. We will still serve the same stakeholders with a focus on facilitating registrations of tools for greenhouse and nursery growers. The three components of the EnvironHort Program will continue to be 1) Registration Support Research, 2) Invasive Species Research, and 3) Pollinator Protection.

Registration Support Research

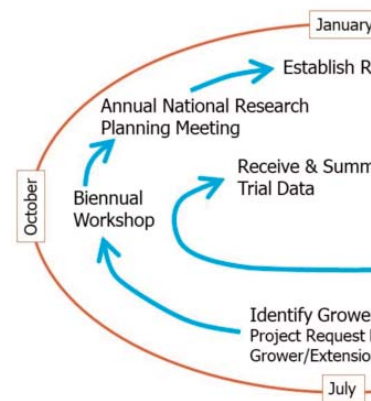
The processes for identifying grower needs, establishing priorities, implementing the resulting research program, and compiling research results will not change. While very similar to process used by the Food Use Program, there are

some differences in how the EnvironHort Program operates (see table). The EnvironHort Program identifies grower needs through a year-long grower/extension survey, a biennial survey of diagnosticians, and a project request form. The grower survey identifies problem diseases, pests, and weeds growers have challenges managing. The diagnosticians' survey supplements this with emerging or rare issues growers may not be able to diagnose easily. The project request form should be completed when one knows the issue and the potential solution, but the product or active ingredient is not yet registered for the use.

At the Biennial Workshop, the results from these surveys, and the completed request forms, are reviewed along with the status of ongoing research projects. Based on these and information about new

Introducing

— by Cristi Palmer, IR-4 EnvironHort



Environmental Horticulture

Area	EnvironHort
GLP	No
Definition of Project	Depends on data to be collected
Project Source	Surveys, Project Request
Prioritization	Voting in form of Sticker Caucus after review of potential projects
National Projects	Usually 8 plus regional projects
Regional Projects	Determined during biennial workshop
Use of Data	Posted to website compiled into summaries, sent to registrants

Differences in Program

biological or chemical active ingredients and potential expansions for existing projects, workshop attendees prioritize

research projects for the following two years.

Research project scope is defined by the type of data being sought. For crop safety, a research project is defined as one or more formulations of an active ingredient being applied to numerous crops. For efficacy, a research project is defined as

multiple active ingredients or products being applied to manage a target problem for crops. That target could be fairly specific like liverwort or could be general such as scale. The unique combination of a target, product, crop and production site is tracked as a study. The implementation of a study with different cultivars, application methodologies, researchers' locations over time is termed a trial.

Annually, the EH manager and the Regional Field Coordinators (RFCs) work together to align and balance researchers' interests across projects and regions to develop a coordinated research

plan. The RFCs establish research agreements, monitor progress throughout the season, and receive reports on the completed research. These are forwarded to the HQ team who compiles the results into Research Summaries, sends them to the registrants, and posts the summaries and research reports on the IR-4 website.

Invasive Species

Research projects associated with specific invasive species, such as gladiolus rust or impatiens downy mildew, arise when a new or emerging pathogen or pest begins to cause widespread damage. IR-4 can become involved when there is a need to identify effective mitigation tools and we are requested to serve as a facilitator of a multi-institution, multi-state research effort. IR-4 has coordinated research activities for five projects supported by USDA-APHIS cooperative agreements (gladiolus rust, arthropod shipping & European pepper moth, chrysanthemum white rust, boxwood blight, impatiens downy mildew). These research projects have developed information on biology, epidemiology, genomics, and diagnostic tools in addition to mitigation options. We have also participated in two USDA-APHIS sponsored task forces for Biotype Q Whitefly and Chilli Thrips assisting in the development of management plans to aid growers in choosing tools from cuttings to final crop growth before sale.

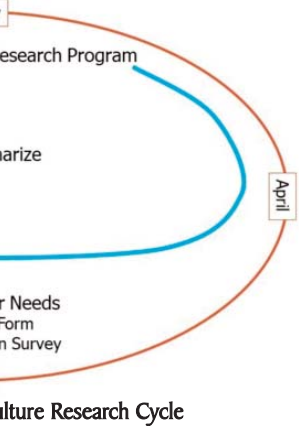
Pollinator Protection

This special research project arose because of controversy surrounding the role of systemic insecticides, namely the neonicotinoids, have in declining bee populations. Pollinator decline has many components including loss of habitat, parasites like Varroa mite,

viral and fungal diseases, and lack of nutritional resources. Pesticides can also impact bee populations, but mortality from direct application is rare and sublethal affects are still being explored outside of laboratory studies with conditions mimicking real-life exposures. One of the simplest ways consumers can aid bees is to plant pollinator gardens as forage for various bee species including honey bees, bumble bees, and other native bees like carpenter bees, mason bees, and sweat bees. The green industry can produce pollinator forage for consumers to plant pollinator gardens, but growers need options to manage pests during production. With EPA poised to review the systemic neonicotinoid insecticides, it became apparent little data were available about which environmental horticulture crops among the most sold were attractive to bees and the length of time systemic insecticides were present in pollen and nectar. IR-4 is coordinating a team of researchers addressing these gaps and developing best management practices for growers to produce crops without negatively impacting bees. This project is also studying barriers growers may have for adopting alternative pest management options and examining consumer willingness-to-pay for crops grown under several different grower practices,

Finale

Yes, we've altered the name of the program to better reflect the broad impacts it has, but we still have the same mission to enable growers to produce high quality environmental horticulture crops through facilitating registrations of sustainable crop protection tools.



Food Use	Yes for residues; no for performance
to	Crop and active ingredient
	Project Requests; HQ proposal needs
er	On-line project nominations;
al	workshop review of A-nominated projects; agreement on target number of A priorities
	About two thirds of the next year's research
g	Regional upgrades agreed to by HQ and regions after workshop
,	Residue data submitted to EPA to support new tolerance requests;
o	performance data submitted to registrants and posted to website

m Operations

Canadian Priority Setting Workshop

— by Thomas Pike, IR-4 Assistant Coordinator, Entomology

From March 20th to the 22nd, I attended the Canadian Biopesticides & Minor Use Pesticides Priority Setting Workshops in Gatineau, Quebec.

As a very new member of IR-4, this was my first chance to travel and see part of the process, albeit from the perspective of our Canadian equivalent. On top of that, this was actually my first time traveling out of the country, which was a unique opportunity and one that required me to expedite getting my passport!

When Van Starner and I arrived on Tuesday morning, we entered a large hall set up with long tables and microphones that were equipped to accommodate some 200-odd people. We took our seats at a central table that had placards for us and the other IR-4 members who would be in attendance, including Marylee Ross from the Northeast Region and John Wise from the North Central Region. At the front of the hall was seating for the people from the Pest Management Centre (PMC) running the workshop as well as four massive screens for displaying information to the audience. As we were in the bilingual country of Canada, two of these screens were in English and two in French.

From there, the workshop began with a pattern that largely repeated itself for each of the three days. Each day began with an introduction, typically from members of the PMC, before going around the room and getting an introduction from the members in attendance. Most attendees simply gave their name and affiliation, whereas the blueberry growers used this as an opportunity to needle their rivals in an open forum. Evidently, competition between highbush and lowbush blueberry growers in Canada rivals that of Yankees and Red Sox fans here in the US. After some brief presentations from registrants who want to inform the attendees of new products coming down the pipeline, the prioritization process began in earnest.

The process by which priorities were set is at first glance daunting. Each day of the workshop covers a different discipline: weed science, entomology and pathology. For each discipline, nearly 1200 priorities put forward by growers across Canada must be winnowed down to a mere ten. This was done by moving through the list line by line and prioritizing each item, first by giving priority items a C, then going through the list of C's and upgrading important ones to B's. Finally, the ten most important B priorities were given an A designation, thereby selecting them for work in the coming year. Going from B to A was generally difficult and required significant dealmaking and concessions from the

various consortia in attendance. It was quite impressive how readily some groups were able to put aside their priority interests in the service of the greatest good for Canadian growers.

We also attended a reception hosted by CropLife Canada, which was a great opportunity to meet with people whose work intersects with what we do here at IR-4 and with whom meeting in person outside of this context would be harder to achieve.

While long and difficult at times, this meeting was enjoyable and I look forward to interacting with these individuals again, either at next year's meeting or later this year at IR-4's Food Use/Biopesticide priority setting workshops. 🌱

Update

Following the workshop, the selected national priorities were grouped into the following categories: entomology, pathology, weeds and growth regulators, regional upgrades and organic production. When determining the solutions for each pest problem, products which minimize the potential impacts on the environment and human health are considered.

The 2018 Minor Use crop and pest problems are posted on the Agriculture and Agri-Food Canada website: <http://www.agr.gc.ca/eng/?id=1289590771112>



Presentations during the workshop, shown in English and French

NER Meeting continued from front page

the IR-4 Project Management Committee, gave a valuable explanation of the Food Safety Modernization Act (FSMA) that will directly impact us all. He also spoke about CLC efforts to bring awareness of the importance of IR-4 and the need for increased funding to our legislators.

Van Starner, Associate Director of The IR-4 Project, educated the group on the Food Use program priority setting process and details about the 2018 Food Use and Biopesticides Workshops. Krista Coleman, Program Assistant: Biopesticide and Organic Support, gave an overview of the Biopesticide program and the requests from stakeholders that are currently open for consideration for prioritization of research. She demonstrated how to submit a request.

Liaisons and researchers representing NY, MA, ME, NJ, MD, DE, PA and WV spoke to the group about the challenges their growers are experiencing. Greg Krawczyk (Penn State) gave the group a glimpse into the reality of an invasive species wreaking havoc on Southeastern Pennsylvania. He gave a presentation illustrating just how the population of Spotted Lantern Fly can explode. Some of the images were shocking. It is currently too early to determine the

economic impact this pest will have.

The group then worked to identify the most pressing concerns Northeast growers are facing. They worked their way through the list of potential projects and discussed projects of interest. There was much agreement on the projects we should focus on. "Me Too" and new Project Clearance Requests were encouraged. There will be follow-up conference calls prior to the FUW to capture any changes or new requests.

Day 2 was educational and fun! Researchers and Northeast Region leaders were in attendance. This GLP training started off with Jane Forder, IR-4 Northeast Region Quality Assurance Officer, walking the group through the revisions to the Field Data Book for 2018. The rest of the day was spent in open discussion about Quality Assurance and Field Data Book topics. It was a very productive exploration into how our data collecting system can become more efficient. Everyone was pleased to be able to express their thoughts and concerns. The weighty talks of GLP were interjected with an exercise of "finding the findings" on a field data book page and a trivia game that was part educational and part light hearted fun. Prizes were won by all. Feedback for both days has been positive and inspiring! 🌱



Day 2 GLP training at the NER annual meeting. *Credit Alvin Simmons*

WSR Meeting

continued from pg. 5

Farms and discussed management issues with David Viguie and Tommy Bottoms in order to better understand local production challenges. The UC Davis group also utilizes the Wolfskill station near Winters, California which was our next

tour stop. Our tour guide at Wolfskill gave us a firsthand glimpse of olive trees planted in the 1850's along with the thousands of selections of grapes and tree fruit being preserved as a genetic resource for plant breeders worldwide.



During a break, left to right: Lori Berger (UC-IPM project), Doug Walsh (Washington State University) and Ronda Hirnyck (University of Idaho) enjoyed a networking opportunity. *Credit: Jackie Hale*

The final tour stop was Full Belly Farms nestled in the picturesque Capay Valley north of Woodland, California. This diverse, organic farming operation is home to thousands of chickens, 150 sheep, visiting school kids and an impressive array of cut flowers, vegetable and tree fruit crops. Specific discussion topics included organic aphid control and soil nutrition, along with the challenging issues of weed control without synthetic herbicides. The group came away with an appreciation for the outsized tasks of organic pest control before dispersing to the airport and homeward journeys. 🌱

Remembering Rick Melnicoe – Friend and Champion for IR-4 and

— by Lori Berger, UC Statewide IPM Program

On February 22, we lost Rick Melnicoe, a long time member of the extended IR-4 family, after a one-year battle with lung cancer.

Rick's work ethic was exemplary. Words that best describe him include: hard worker, honest, helpful, fun, balanced, kind, passionate, ethical, and thorough. Each of these characteristics could be seen in his long career of service in many posts: CA Department of Pesticide Regulation, Pesticide Impact Assessment Program, Office of Pesticide Information and Coordination, IR-4, UC Statewide IPM, Western Integrated Pest Management Center and his assistance to many agricultural and horticultural organizations in the West.

Rick was born in Berkeley and raised in Sacramento. He was skilled in track and field and an avid runner, completing the Boston Marathon in 1985. He was a graduate of Sacramento State with a degree in biology. Rick loved nature and became a dedicated birder and naturalist after developing a close friendship with a teacher and mentor at Sacramento State.

His world travels were extensive and usually included observing or looking for interesting flora and



fauna which he often reported in unique and clever articles and blog posts. After his retirement in 2012, he served as a docent at local wildlife areas in the Davis area, while continuing with other life-long hobbies such as reading, gardening, brewing beer, and spending time with new and old friends.

Rick is survived by his wife of 38 years, Oleta, and son Eric.

We are thankful for the full life of Rick Melnicoe. His legacy is an inspiration to all of us to embrace sound science, protect the natural world, and produce a bountiful harvest. 🌱

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Tolerance Successes

February - April 2018

The trade names listed here 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: February 7, 2018

Isoxaben

Trade Name: Trellis **Crops:** Apple, Bushberry subgroup 13-07B, Small vine-climbing fruit (except fuzzy kiwifruit) subgroup 13-07F, Tree nut group 14-12 **PR#:** 07603, 09720, 10247, 11257, 11684, 11685

Fomesafen

Trade Name: Reflex **Crops:** Low growing berry (except cranberry) subgroup 13-07G, Tuberous and corm vegetable subgroup 1C, Legume vegetable group 6 **PR#:** 10282, 10439, 10476, 11115

Federal Register: February 12, 2018

Rimsulfuron

Trade Name: Matrix, Pruvin **Crops:** Low growing berry (except strawberry) subgroup 13-07H, Tuberous and corm vegetable subgroup 1C, Small vine-climbing fruit (except fuzzy kiwifruit) subgroup 13-07F, Citrus fruit group 10-10, Pome fruit group 11-10, Stone fruit group 12-12, Tree nut group 14-12, Fescue (tolerance

for regional registration in the Pacific Northwest), Ryegrass (tolerance for regional registration in the Pacific Northwest) **PR#:** 07888, 10657, 11377, 11378, 11379, 11380, 11381, 11382

Federal Register: March 6, 2018

Kasugamycin

Trade Name: Kasumin **Crops:** Cherry subgroup 12-12A, Walnut **PR#:** 09772, 10230

Federal Register: March 7, 2018

Fluopicolide

Trade Name: V-10161 **Crops:** Basil, Hops, Succulent moth bean, Succulent runner bean, Succulent snap bean, Succulent wax bean, Succulent yardlong bean, Citrus fruit group 10-10, Small vine-climbing fruit (except fuzzy kiwifruit) subgroup 13-07F, Fruiting vegetable group 8-10 **PR#:** 10121, 10323, 10916, 11021, 11022, 11110, 11190, 11191, 11658

Federal Register: March 21, 2018

Flutianil

Trade Name: Gatten **Crop:** Grape,

apple, cantaloupe, squash, cherry, cucumber, and strawberry **PR#:** 09175

Federal Register: April 12, 2018

Clethodim

Trade Name: Select **Crops:** Tree nut group 14-12, Okra (revised tolerance), Fruiting vegetable (except okra) group 8-10, Leafy greens subgroup 4-16A, Brassica leafy greens subgroup 4-16B, Leaf petiole vegetable subgroup 22B, Stalk and stem vegetable subgroup 22A, Green onion subgroup 3-07B, Brassica head and stem vegetable group 5-16 **PR#:** 10383, 11093, 11094, 11954, 11955, 11956, 11957, 11958, 11959, 11960, 12011

Federal Register: April 13, 2018

Sulfentrazone


Trade Name: Spartan **Crops:** Teff, Chia, Brassica leafy greens subgroup 4-16B, Head and stem brassica vegetable group 5-16, Stalk and stem vegetable subgroup 22A, Tree nut group 14-12 **PR#:** 11729, 11917, 11929, 11930, 11931, 11932

RU Organic Grower Advisory Meeting

— by Krista Coleman, IR-4 Research Assistant

Biopesticide and Organic Support Program Assistant, Krista Coleman, recently attended the Organic Grower Advisory Meeting organized by Rutgers Cooperative Extension of Mercer County. This meeting is an annual event that brings together farmers and researchers to discuss the hurdles and successes of producing crops in New Jersey. Representation from growers included: Terhune Orchards, Specca Farms, Muth Family Farms, Honey Brook Organic Farm, Cherry Valley Cooperative Farm, and Chickadee Creek Farm. Attendees discussed several

Northeastern pests of concern. In the category of entomology, allium leafminer has produced damage in high tunnels and in the field. This pest is known to infest onions, as well as other members of the Allium genus. Regarding pathology, Wes Kline, NJAES County Agent, presented findings on bacterial leaf spot and Phytophthora (*P. capsici*) tolerant bell peppers. He encouraged attendees to buy locally, in order to limit the introduction of diseased plants from the Southern United States. Properly cleaning stakes from the

field is a critical step in preventing these diseases as well. Additionally, Andy Wyenandt, Associate Extension Specialist, spoke about downy mildew on basil which has been an ongoing problem since 2008. Luckily, he noted that there is a resistant variety on the way as well as one with fusarium resistance. These will be available from Van Drunen Farms Specialty Seeds. In the area of weed science, the need for an organic solution persists. The IR-4 Biopesticide Support sector has noted this need since 1995, with efficacy trials on herbicides continuing to this day. 

New Product Corner

Flutianil (Fungicide – OAT Agrio Co., Ltd.)

Introduction: Unconditional registration for the new active ingredient flutianil was granted by the EPA on March 13, 2018, and it was classified as a Reduced Risk compound. OAT Agrio Co., Ltd., the discoverer and manufacturer of flutianil, has reached agreement with Nichino America to market and sell flutianil as Gatten® fungicide in the U.S. and Canada. This registration provides growers with a new pest management tool for use against the fungal diseases that cause powdery mildew. Belonging to the new chemical group cyano-methylene thiazolidines, flutianil demonstrates a novel mode of action against powdery mildews, and has no known cross-resistance with other classes of chemistry. Flutianil has been classified by the Fungicide Resistance Action Committee (FRAC) as a Group U13 fungicide.

Other global registrations: in Japan, registered on eggplant, cucumber, pumpkin, squash, watermelon, melons, strawberry, tomato/cherry tomato, peas, flowers and ornamental plants; in Korea, registered on green/red pepper (fresh), strawberry, watermelon, cucumber, Korean melon and sweet pepper; is in the registration process in the EU, for proposed crops grapes and flowers/ornamental plants

US trade name/formulation: the first market introduction of Gatten® in the U.S. is expected late spring 2018, as Gatten® fungicide (a 5% EC formulation)

Gatten® fungicide labeled crops (see label for specific use patterns and other general directions for use): apple, cantaloupe, squash, cherry, cucumber, grape and strawberry (no crop groups or subgroups are specified)

Labeled pest spectrum: powdery mildews, such as grape powdery mildew (*Erysiphe necator*), cucurbit

powdery mildews (*Podosphaera xanthii*, *Sphaerotheca fuliginea*), etc.

Ongoing IR-4 residue projects (PR#): head/leaf lettuce (including GH) (12388); peach (10220);

Ongoing IR-4 performance projects (PR#): sage (12348); rosemary (12349)

Other IR-4 database requests (PR#): artichoke, globe (09189); Chinese cabbage (09183); celery (09824); cilantro (09546); GH eggplant (12288); parsley (09185); pear (09635); GH pepper (12289); spinach (09826); Swiss chard (09186); GH tomato (12287); turnip greens (09187); mustard greens (09184); hops (09190)

Environmental Horticulture projects: In 2018, 10 crops will be examined for crop safety (African violet, calibrachoa, chrysanthemum, hydrangea, pansy, rose, spirea, tickseed, verbena, and zinnia) 🌿

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