

NER Training, SLR Meeting & NER Lab Recognition

The New York State Experiment Station, in Geneva, NY was the site of the Northeast Region (NER) training, held March 9-10, 2010. The region's State Liaison Representatives (SLR) met on March 11, following the training session.

The training session was attended by most of the NER Field Research Directors (FRDs) and technicians involved in IR-4 studies. Training opened with a welcome by David Soderlund, NER director. Dave talked about the closing of the NER analytical laboratory, stating that "despite its closing, the laboratory personnel have been doing an outstanding job of finishing studies." He also reiterated that no changes were being made to the size and scope of the Northeast region field and QA programs. Instead the field and QA offices will move to Barton Lab, where the Entomology and Plant Pathology Departments are housed. This will facilitate communications between Edith and the scientists at the experiment station.

Van Starner, IR-4 Assistant Director, Research Planning and Outreach, followed with a general update of the National program. He gave a brief run-down on some of the other programs within IR-4, such as crop grouping, the international programs, and product registration for public health. Van then gave a demonstration of the new search features of the Food Use Database on the IR-4 website. His demonstration was very helpful to the group as they found new ways to use the database.

Debbie Carpenter, IR-4 Assistant Director of Registrations, explained the value and importance of "bundling" IR-4 petitions when submitting them to the Environmental Protection Agency (EPA). "Bundling" is when several crops evaluated for residues of the same chemistry are submitted together. Since a fair amount of coordination is needed between registrants, IR-4 field and lab coordinators, and the EPA, to bundle submissions, it may be necessary to adjust the time-



Marylee Ross and Susan Stevenson, from the University of Maryland, enjoy a cylinder demonstration during the NER training session.

lines. For example some current field studies may need to be bundled with studies conducted in previous years. This means the field trials need to be completed in a shorter time period. In order to help communicate the adjustment of the timeline, Headquarters is now

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2010 Western Region Training: What Was Foggy Is Now Clear

—by IR-4 Assistant Coordinator, Kathryn Homa

On the foggy morning of February 2, 2010, IR-4 personnel including Field Research Directors (FRD) and assistants, Regional Field Coordinators, and QA Coordinators met at the University of California Kearney Research and Extension Center (KREC) for the 2010 Western Region IR-4 Field Residue Trial Training.



David Ennes shows the group how to calibrate a sprayer.

Western Region IR-4 Field Coordinator, Becky Sisco and Assistant Western Regional Field Coordinator, Stephen Flanagan headed the program with help from others including Lisa Stevenson, Western Region IR-4 Financial Manager; Jackie Hale, Western Region IR-4 Program Coordinator; Laura Van der Staay, KREC IR-4 Field Research Center Director; Martin Beran, Western Region QA Officer; and Jim McFarland, Western Region QA Coordinator. Additionally, field and PowerPoint presentations were led by a number of FRDs throughout the training.

Tuesday began with Martin

Beran's Top Ten List, which consisted of the top QA issues that are currently being encountered by FRDs. Each item was accompanied by a discussion. Topics included: Certificate of Analysis (COA) issues, the improper identification of late entries, early entries in Field Data Books, SOP availability, plot markers and plot map issues, overwrites, test substance labeling problems, and data book pages not being completed by the end of the field trial. This presentation was followed by a session outlining the importance of checking the identification of the test substance and COA before conducting a trial. To ensure a smooth transition to 2010 trials, revisions to 2010 Protocols and Field Data Books including bundling notices, calibration information, test substance recordings, surfactant notices, and sampling information were addressed. Following this, Jim McFarland provided everyone with a lesson on application calculations. All sessions stressed the importance of the Study Director as the main contact when questions arise.

Providing a valuable learning experience, another portion of the train-

ing was conducted outdoors. Here, a tour was given of the KREC sampling area, records, freezers, pesticide storage area, equipment, and greenhouse trials. A post harvest trial demonstration was also given. This was a good opportunity, since few research centers have the equipment to do this type of application. Since the KREC was so large, participants enjoyed a wagon tour of the center. During this time, crops including almonds, walnuts, pomegranates, apples, peaches, pears and grapes were observed. During the afternoon, a mock pesticide application was made using moisture sensitive spray cards at various distances to demonstrate the importance of pesticide drift and the need for large buffer areas between treated and untreated plots. That evening, a reception and dinner was held at the hotel. David Ennes, an FRD at KREC, was honored for his hard work and dedication to IR-4.

On Wednesday, the training wrapped up with a discussion of

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Will Meeks discusses high pressure application sprayers.

WSR Training

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specific issues encountered by FRDs around the country such as freezer alarm systems, coffee processing methods, and hop drying methods. This session was followed by a presentation of unique trials that were done by several FRDs in the Western Region including the Brassica Crop Group Validation, the Tomato Global Residue Study, and the Public Health Mosquito Project.

The next morning consisted of a side visit for the HQ team to FRD Don Stewart's field site, including the area that was used for the Public Health Project helicopter application. The afternoon consisted of a trip to the Western Region IR-4 Lab with Dr. Matt Hengel, Bronson Hung, and Chava Torres. Correct chopping procedures, and methods used to analyze the samples were discussed.

These training sessions, provided great opportunities to both field personnel and Study Directors. In addition to the specific, detailed presentations, training sessions also provide time for networking.

For more information regarding the 2010 Western Region IR-4 Training, please contact Becky Sisco at rsisco@ucdavis.edu or Stephen Flanagan at sflanagan@ucdavis.edu. ▲

IR-4 Welcomes New AA

In January, [Mary Delany](#) was appointed as the Western Region IR-4 Administrative Advisor (AA). She replaces Mike Parella who served as the Western Region AA for almost ten years.

Mary was raised in New Jersey, and received a bachelor's degree (1979) in biology from Montclair State College. Following master's (1984) and doctoral (1987) degrees in animal genetics from Cornell University, she held postdoctoral and research biologist positions at Cornell.

Delany joined UC Davis in 1995 with a joint faculty appointment in the departments of Avian Sciences and Animal Science. She was chair of the Department of Animal Science (2005–2009), and was named to the John and Joan Fiddymont Endowed Chair in Avian Genetics in 2009. She joined the College of Agricultural and Environmental Sciences as a Programmatic Associate Dean in 2009.

Her teaching has included courses in animal cytogenetics, avian development and genetics, and integrated animal biology. Delany's overall research program focuses on avian genome organization and the role of genome sequence and its specialized architecture in regulating growth, development, and disease.



Delany's main area of research is avian telomere biology, using chicken as the primary study organism. Projects address Marek's disease virus (MDV), a DNA herpes virus which induces T-cell lymphomas and results in a high level of mortality. This disease is of enormous significance in the poultry industry. MDV infection and disease also serves as an important model for human herpes virus infection and disease.

Delany has served on the board of directors for the Poultry Science Association, and is associate U.S. editor for the journal *Chromosome Research*. She has received research grants from the USDA and the National Science Foundation, and has served on review panels for USDA and the National Institutes of Health. She was a member of the International Chicken Genome Sequencing Consortium and has publications in *Nature*, *PNAS*, *Science*, and many disciplinary journals. ▲

Canadian Growers Select Crop/Pest Priorities for 2011

— by Canadian PMC & Agriculture and Agri-Food Canada, National and International Relations Office, Shirley Archambault & IR-4 Assistant Director of Research Planning and Outreach, Van Starnier

Agriculture and Agri-Food Canada's Pest Management Centre (AAFC-PMC) hosted the 8th Annual Canadian Minor Use Priority Setting Workshop in Ottawa, March 23-25, 2010.

The PMC's mandate is to improve grower competitiveness by facilitating the approval of new, safe and effective pest management solutions for their specific crop/pest problems. By helping to improve sustainable crop production and environmental stewardship, growers as well as the public benefit.

This meeting brought together a wide range of participants from across Canada and the U.S., including grower organization representatives, university and federal researchers, provincial Minor Use Coordinators, extension specialists, registrants, Pest Management Regulatory Agency representatives (PMRA, Canada's "EPA"), processing companies and other stakeholders. Representatives from the U.S. IR-4 Project also attended the meeting.

Annual participation by IR-4 personnel in the Canadian Minor Use Program's priority

setting process (and AAFC-PMC participation in IR-4 priority setting workshops) is a valuable component of the partnership between the two grower-focused organizations. The two groups continue to explore additional ways to work cooperatively for the benefit of specialty crop grower stakeholders on both sides of the border.


The purpose of this meeting was to review the current minor use priorities identified by growers in each of the provinces for all crops, including ornamentals, and to establish the top priority projects for the PMC for work in 2011.

A total of 37 projects were selected by growers, which includes a total of 10 priorities in each discipline (entomology, pathology and weed science) as well as 5 regional upgrades and 2 priorities for organic production. Some of the priorities that may reflect similar grower needs in the U.S. could become cooperative research projects in 2011 and (upon agreement between PMRA and EPA) could result in joint review submissions. After completion of the IR-4 Food Use

Workshop in September, cooperative projects will be identified, and joint review possibilities will be examined.

A few entomology projects might reflect similar grower concerns in the U.S. such as mealybugs on greenhouse (GH) pepper, thrips on GH tomato, sciarid fly adults in mushroom houses, and a new pest, the spotted wing drosophila, which has been identified as a problematic pest in various crops like blueberry and other soft fruits (cherries, etc.).

In disease management similar needs in both countries include Botrytis on GH peppers, downy mildew in several field-grown and GH grown vegetables (lettuce, succulent peas and cucumber) and powdery mildew in peaches.

For a complete list of the priorities selected at the 2010 Canadian Minor Use Priority Setting Workshop please contact Stefan Bussmann at: Stefan.Bussman@agr.gc.ca or Shirley Archambault at Shirley.Archambault@agr.gc.ca. For more information on AAFC-PMC, please consult the website: www.agr.gc.ca/prrrmup. 

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including a notice on the title page of the Field Data Books (FDB). This statement indicates the need to complete the trial as soon as possible.

Edith Lurvey, NER Regional Field Coordinator, led a discussion session Tuesday afternoon and Wednesday morning. The focus of the Tuesday discussion was the concepts behind residue research. That is, the critical phases of a residue trial and the data that needs to be documented for each phase. This was not a page by page 'how to fill out the IR-4 FDB', but rather a general discussion based on the critical phases as identified, with an occasional reference to a page in the FDB, for specifics.

Marylee Ross, University of Maryland Field Research Director (FRD), opened day two with a discussion on shipping samples to Canada. As Canada becomes the sponsor/study director (SD) on a growing number of joint projects, the number of samples being shipped across the border will increase. The preferred way of shipping to Canada is with ACDS freezer truck service. When using ACDS, timing becomes important, as the carrier only travels to Canada twice a year. If the first date is missed the samples may remain with ACDS for an extended period of time. However, since ACDS does not travel to every IR-4 field site, shipping by air may be the

only alternative. Marylee recommends that you get to know your local shipping agent. Contact them well before shipping, as they do not always know the international regulations. Be sure to have your paperwork in order before taking the samples to FedEx. The SD and the lab can help with the forms and documentation. Also be aware that Canada does not usually identify its analytical labs until late in the season often long after the samples have been collected.

The second day's discussion sessions included the organization of IR-4 HQ, regions and test sites, equipment logs, and SOPs. The group put together draft organizational charts based on the IR-4 Operational Handbook and information from last year's EPA audit in New Jersey. The discussion on equipment logs was about capturing the introduction of new equipment, important events during its use under GLPs, and its retirement. In the SOP discussion it was suggested that sites take a detailed look at them to ensure they still reflect what is being done at the site and cover important events. Edith stressed "it is a good time to remove the redundancies. When evaluating what to include, cover logical things. Take a look at other sites SOPs for ideas. It is doubtful anyone will object to a little plagiarism."

The field training concluded with brief presentations from several HQ staff members. Cristi Palmer, the IR-4

Ornamental Horticulture Program Manager talked about how the Program is organized and some of its successes. IR-4 Associate Director, Dan Kunkel gave a brief overview of IR-4 HQ programs, including international activities. The day was rounded out with a nice dinner at the Geneva Country Club combining the field researchers from the training and the NER State Liaisons, who were among the attendees.

On Thursday morning, several of the field researchers went on a tour of Ann and John Martini's winery. Ann was a gracious hostess and showed the group where the wine is stored and the equipment used to bottle their wine. She also showed a preview of a special sweet wine made in celebration of Anthony Road Wine Company's 20th anniversary.

The same morning SLRs convened for a one-day meeting. Since so many SLRs have joined the NER in the last couple of years, the morning was spent summarizing the IR-4 Project. After Dave's welcome, Wlodek Borejsza-Wysocki, NER Lab Coordinator, talked about some of the lab's activities. Members of HQ gave presentations on their programs in a bit more detail as they had more time. Van talked about additional fine tuning to the Food Use Workshop. In addition to the overview of the Ornamentals Program, Cristi explained the prioritization

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Aquatic weeds, particularly non-native invasive species, are serious threats to the natural and production-based ecosystems in the United States. They have become a major National problem, as key waterways (such as rivers, reservoirs, canals) are interconnected, traversing political boundaries throughout the country, and providing convenient avenues for movement of aquatic weeds. Agriculture in most of the US is dependent upon timely delivery of irrigation water via reservoirs, canals and other conveyances, and aquatic weeds directly impact the movement of water in these delivery systems.

Faced with the serious threat of a growing US-wide aquatic weed problem, experts from the IR-4 Project, the USDA Cooperative State Research, Education, and Extension Service (CSREES now NIFA), the US-EPA Office of Pesticide Programs (OPP), the US Army Engineer Research and Development Center (USA ERDC), and the University of Florida Center for Aquatic and Invasive Plants formed an Ad Hoc Working Group for Registration of Herbicides for Aquatic Weeds. Members of the Working Group included senior scientists, James Parochetti (NIFA), Bob Holm, Jerry Baron, Dan Kunkel, Marija Arsenovic (IR-4), Kurt Getsinger (US Army Corp of Engineers- USACE), Donald Stubbs, Sidney Jackson (OPP), William Haller (UFL), and Lars

Anderson (USDA CA).

As a result of the Working Group's efforts and participation in the 2004 IR-4 Strategic Planning conference, the IR-4 Project's Strategic Plan for 2005-2008 included an initiative to support registration assistance for aquatic herbicides. However, it stated, the funding for this new initiative must come from sources other than those used for the core IR-4 programs.

Funding & Planning the Project

The Working Group identified endothall as a priority. Originally, it was labeled with a restriction that did not allow waters where the product had been applied to be used for irrigation until 7-25 days following the application of endothall. Growers who used irrigated waters found this label restriction very limiting to their production. IR-4 was interested in requesting a label amendment removing this restriction. As a result of several meetings with EPA and the Working Group about data requirements, a reduced data set — using broad data extrapolation and a crop grouping scenario — was proposed and approved by EPA. This research approach allowed IR-4 to conduct 67 field residue trials (compared to 400 needed without crop grouping) and 10 processing residue studies, at various locations in the US. In addition to a reduced data set for mag-

nitude of residues of endothall in numerous crops, the IR-4/UIP endothall group developed a reduced data set proposal for the chemical analysis portion of the study. The group determined, based on knowledge that certain crops are similar enough, that validation for one commodity was reasonable for use with another very similar commodity. The endothall analytical method was to be validated on 31 crop matrices, instead of on 86 matrices.

Initial funding for this initiative was provided from USACE, but the 2005 Federal budget cuts eliminated resources for this funding stream. However, in 2005, the United Phosphorus Inc. (UPI formerly Cerexagri) Company, responded to the funding shortfall and indicated that they were willing to consider funding "Endothall Irrigation Canals and Ponds Program" with IR-4 HQ which would support a registration amendment for endothall.

The Study

The next step was to write the protocol. UIP, IR-4, Quality Assurance (QA), and EPA worked closely together to develop a protocol identifying which crops could be representative of the crop groups and the procedure to simulate an irrigation system. Jack Norton, of Norton Agricultural Research Consulting, Aquatic Field Manager, selected the

n Focused Cooperation

trial locations. Trials were located in Arkansas, California, Florida, Louisiana, Georgia, Idaho, Iowa, Kansas, Kentucky, Michigan, New Jersey, New York, North Dakota, Oregon, South Dakota, Texas, Washington, and Wisconsin. Additionally, IR-4 used private research contractors for this unique project.

List of Endothall Magnitude of Residue Studies and representative crops:

- Vegetable, Root and Tuber Group - **carrot, potato, sugar beet**
- Vegetable, Bulb Group - **dry bulb onion, green onion**
- Vegetable, Leafy except Brassica Group - **lettuce (leaf and head)**
- Vegetable, Brassica, Leafy Group - **cabbage**
- Vegetable, Legume Group- **lima bean, pinto bean, green pea, soybean**
- Vegetable, Fruiting Group - **tomato**
- Vegetable, Cucurbit Group- **cucumber**
- Fruit, Citrus Group - **orange**
- Fruit, Pome Group - **apple**
- Fruit, Stone Group - **peach**
- Berry Group - **blackberry**
- Nut Tree Group - **almond, pecan**
- Grain, Cereal Group - **field corn, sweet corn, wheat, sorghum**
- Grass, Forage, Fodder, and Hay Group - **Bermuda grass, Bluegrass, fescue**
- Animal feed, Non-Grass Group - **alfalfa**



- Grape - **grape**
- Mint - **mint**
- Rice - **rice**

All field trials were conducted under the Good Laboratory Practice standards. At each field site, a 1,000-2,000 gallon tank was filled with water and an exact amount of endothall was added. Overhead sprinkler systems were used to irrigate the crops at once-a-week intervals for 5 weeks. After the fifth week's irrigation, the crops were harvested, prepared and shipped for analysis. UPI further participated by running the sample analysis at their analytical laboratory.

After all Field Data Books and Analytical Summary Reports were received at HQ, 18 final reports were completed and signed off. IR-4 HQ submitted registration package to the EPA asking for the amendment and the establishment of endothall tolerances in irrigated crops.

The highly motivated cooperative effort paid off. In December 2009, EPA established 69 tolerances on 372

Water from a 1,000-2,000 gallon tank (pictured left) where endothall had been applied is being used to irrigate mint, one of the crops EPA approved for this label.

new uses for endothall. This innovative research — using broad extrapolation of data and crop grouping — could serve as a template for future research on aquatic herbicide registration in irrigation systems. It may have been the catalyst for registrants' new interest in the aquatic weed market; which has eliminated most of the need for current IR-4 involvement in aquatic weed research.

Not only did this approach save the EPA on the cost of review, it also saved IR-4 significant research dollars and will save the industry significant research dollars in the future. The registration of endothall for irrigation use is a striking example of well planned and executed collaboration among agencies, industry, and stakeholders to develop environmentally compatible technology to protect and conserve the Nation's water resources. ▲

Biopesticide Program Pursuing Growers' Needs

— by Michael Braverman, Manager, Biopesticide and Organic Support Program

The 2010 Biopesticide grant programs have been determined. They include five early stage, 21 advanced stage, and 10 demonstration stage projects. Twenty-one projects involve disease management, 11 involve insect management, one is a plant growth regulator two are nematode projects and one is a bird management project. The combined total of IR-4 and EPA funding is \$539,681. Thirty-three projects involve food crops and 3 involve ornamental/ non-food projects.

The biopesticide database, which was launched in 2007, has had over 30,000 visits. Out of the visits, 75% of the visitors were growers and 27% were interested in organic options. The database is updated regularly and new labels have been added for T-22 HC, Trilogy SoilGard 12G, Sonata, Scythe, NoMate PBW Spiral, and Oxidate.

The Biopesticide Program continues to offer regulatory support to facilitate registration of new biopesticide active ingredients. One such active ingredient is anthraquinone, which is utilized to repel birds from destroying emerging seedlings. Residue studies support a Section 18 for anthraquinone as a seed treatment on corn in Wisconsin, Minnesota, Michigan, North

and South Dakota. Efficacy studies have also supported a Section 18 on rice in Missouri, Louisiana, Arkansas, Mississippi and Texas. Plans are being made for 2010 residue studies on canola and sunflower seed treatments. The efficacy program is also funding studies in Michigan on the potential to protect blueberries from bird predation.

Resistant cultivars also aid in disease prevention. For example, plum pox virus is an aphid transmitted disease of stone fruit. USDA-ARS has developed a resistant plum line known as HoneySweet based on the viral coat protein. IR-4 submitted the registration which is on track for approval this year.

While we often think of viruses as being harmful to crops, there are certain viruses that can be used to help growers. These viruses specifically infect bacteria, and are known as bacteriophages. Two such viruses are phage and Tobacco Mild Green Mosaic Virus (TMGMV). Clavibacter is a bacterial disease of tomato that is also known as bacterial canker. It is a serious problem to the greenhouse tomato industry. A joint submission to EPA and Canada's PMRA was recently made for the phage which attacks Clavibacter. IR-4 previ-

ously assisted in the registration of phages for the management of bacterial spot and speck in tomato and pepper. Those products are currently registered and are used widely in Florida field grown tomatoes. It is expected that the approach of using phage to control bacterial diseases will increase over the coming years. TMGMV causes a rapid wilting of the invasive weed tropical soda apple (pictured) which invaded Florida and other parts of the Southeast and reduced pasture area for cattle. At the request of the Florida Department of Plant Industry and the Florida Cattleman's association, IR-4 submitted the registration for TMGMV to EPA.



Aflatoxin is a potent liver carcinogen, caused by the organism *Aspegillus flavus* and there are no conventional pesticides used to control this organism. AF36 is a specific strain of *A. flavus* that does not produce toxin. In cooperation with USDA and the Arizona Cotton Research and Protection Council, IR-4 helped obtain the current registration on cotton. There are Experimental Use Permits underway in corn and pistachio and the Section 3 for corn has already been submitted

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process. IR-4 Executive Director, Jerry Baron, then gave his overview of the project and Dan talked in depth about global harmonization of Maximum Residue Levels and other exciting developments in that arena. The rest of the meeting was a lively "give and take" on the role of the SLR, improving stakeholder participation and other issues of mutual interest.

For lunch on March 11, the SLR's, NER and HQ staff and field researchers joined together for an awards luncheon at Belhurst Castle. This luncheon

Biopesticide

to EPA.

Trichoderma hamatum isolate 382 is a soil dwelling beneficial organism to enhance disease resistance in ornamentals. It is designed to treat potting mixes and prevent the infection of soil borne diseases. Registration is anticipated by this summer.

One of the greatest difficulties in organic crop production has been weed management. Acetic acid is the same active ingredient in vinegar, but at a higher concentration, can effectively control small emerged weeds. It is not selective so it has to be directed away from the crop to avoid crop injury. When it becomes registered it will present a significant opportunity for organic growers. ▲

was to honor the outstanding work of Northeast Regional Laboratory analysts Susan Brightman, Roxanne Fish, George Helfman, Michele Humiston and Allan Roloson.

Jerry presented each of the NER laboratory researchers with an appreciation plaque for their dedicated service to IR-4 and U.S. specialty crop growers. He commended them for their many years of devoted service throughout IR-4. ▲



IR-4 Executive Director, Jerry Baron thanks Susan Brightman for her service to the NER Laboratory and IR-4.

In Memoriam

Paul R. Heller, Professor of Entomology, and IR-4 State Liaison Representative (PA) passed away on January 19, 2010 in State College, PA, after a long and valiant fight against cancer.

Paul served as Professor of Entomology at Penn State for over 33 years, and produced numerous publications. He also served on many committees of The Eastern Branch of the Entomological Society of America. The Penn State Department of Entomology has established the Paul R. Heller Memorial Award, to benefit graduate students. Contributions may be made through the Department.

Paul is survived by his wife, June, and many other relatives and friends. He will be missed!

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IR-4 Successes Dec.'09- Mar. '10

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: Dec 2, 2009

Hexythiazox

Trade Name: Onager

Crops: Potato

PR#: 08829

Federal Register: Dec 9, 2009

Novaluron

Trade Name: Rimon

Crops: Brassica leafy greens subgroup 5B, Bushberry subgroup 13-07B, Stone fruit group 12

PR#: 08420, 08421, 08422, 09052, 09047, 09048, 09347

Clothianidin

Trade Name: Arena

Crops: Low-growing berry (except strawberry) subgroup 13-07H, Peach, Tuberous and corm vegetable subgroup 1C

PR#: 09399, 08544, 09065

Federal Register: Dec 18, 2009

Prometryn

Trade Name: Caparol

Crops: Carrot, Celeriac, Cilantro leaves, Parsley, Okra, Leaf petioles subgroup 5B

PR#: 01682, 03567, 08996, 03618, 05160, 08575, 02480, 03217, 06590

Dinotefuran

Trade Name: Starkle

Crops: Brassica leafy greens subgroup 5B, Turnip greens

PR#: 08626, 08627, 08628, 08629

Federal Register: Dec 20, 2009

Endothall

Trade Name: Hydrothall

Crops: Crop groups 1-19, Grape, Mint, Soybean (all tolerances are residues from aquatic uses)

PR#: 09762, 09763, 09757, 09764, 09765, 09766, 09755, 09759, 09767, 09769, 09770, 09771, 09761, 09768, 09760, 09756, 09754, 09758

Federal Register: Dec 23, 2009

Fenarimol

Trade Name: Rubigan

Crops: Hop

PR#: 06940

Bifenazate

Trade Name: Acramite

Crops: Bean (dry seed)

PR#: 08929

Federal Register: Jan 27, 2010

Novaluron

Trade Name: Rimon

Crops: Fruiting vegetable group 8, Okra, Cocona, African eggplant, Pea eggplant, Scarlet eggplant, Goji berry, Garden Huckleberry, Martynia, Naranjilla, Roselle, Sunberry, Bush tomato, Currant tomato, Tree Tomato, Cucurbit vegetable group 9, Low-growing berry subgroup 13-07G (except lowbush blueberry), Swiss chard, Succulent snap bean, Dry bean

PR#: 08985, 08634, 08988, 08989, 08990, 09782, 10050, 09745, 08128, 09781

Pendimethalin

Trade Name: Prowl

Crops: Grasses

PR#: 08310

Federal Register: Feb 3, 2010

Chlorantraniliprole

Trade Name: Coragen, Rynaxypyr

Crops: Acerola, Alfalfa, Animal feed (nongrass) group 18, Artichoke (globe), Asparagus,

Atemoya, Avocado, Banana, Biriba, Head and stem brassica subgroup 5A, Brassica leafy greens subgroup 5B, Cacao bean, Cactus, Canistel, Cherimoya, Cherry (sweet and tart), Coffee, Field corn, Pop corn, Sweet corn, Crambe, Custard apple, Feijoa, Fig, Caneberry subgroup 13-07A, Citrus fruit group 10, Pome fruit group 11 (except mayhaw), Small vine-climbing fruit (except fuzzy kiwifruit) subgroup 13-07F, Stone fruit group 12 (except cherry, Chickasaw plum, and damson plum), Grass (forage, fodder, and hay) group 17, Guava, Hare's ear mustard, Herb subgroup 19A, Hop, Ilima, Jaboticaba, Jojoba, Lesquerella, Longan, Lunaria, Lychee, Mango, Mayhaw, Milkweed, Mustard, Tree nut group 14, Radish oil, Okra, Olive, Papaya, Passionfruit, Mint, Persimmon, Pineapple, Pistachio, Chickasaw plum, Damson Plum, Pomegranate, Poppy seed, Pulasan, Rambutan, Rapeseed, Rice, Rose hip, Sapodilla, Black sapote, Mamey sapote, White sapote, Sesame, Soursop, Spanish lime, Spice subgroup 19B, Star apple, Starfruit, Strawberry, Sugar apple, Sugar cane, Tallowood, Tea oil plant, Cucurbit vegetable group 9, Foliage of legume (except soybean) subgroup 7A, Fruiting vegetable group 8, Leafy vegetable (except brassica) group 4, Legume vegetable (except soybean) group 6, Tuberous and corm vegetable subgroup 1C, Wax jambu

PR#: 09477, 09344, 09732, 09642, 09581, 10232, 10208, 10205, 10200, 10201, 10250, 10219, 10202, 10537, 10536,

Spotlight on Ornamentals

—by IR-4 Ornamental Horticulture Manager, Cristi Palmer

Grubs are an unseen, underground menace that threaten ornamental horticulture plants in production and in the landscape along with turf and ornamental grasses. Grubs are the larval stage of beetles which may or may not feed on the foliage of the same or different ornamental horticulture plants and grasses.

At the Rutgers Fruit and Ornamental Research Extension Center in Cream Ridge, NJ, we are testing various products to

manage Oriental Beetle (*Anomala orientalis*), supported by a grant from USDA-ARS. A field known to be infested with oriental beetle was planted with arborvitae (*Thuja* sp.) in the spring of 2007. The established saplings were treated with drenches or granular broadcast applications during the peak adult flight in August 2009. The products tested included BAS 320i (metaflumizone), Acelepryn/DPX-E2Y45 (chlorantraniliprole), Flagship 0.22G (thiamethoxam), Flagship 25WG (thiamethoxam), Marathon II (imidacloprid), Safari 2G (dinotefuran), and Safari 20SG (dinotefuran).

During the first week of April

2010, we dug grubs. Actually, IR-4 FRD, Tom Freiberger, ran the tree spade attached to a skid steer and 12 people counted grubs on 524 tree root balls during the course of one week.

The outcome of this experiment was intriguing. While some products decreased the average number of grubs on arborvitae, the average height did not appear to be shorter for those treatments with higher grub infestations nor did the average width correlate with the average number of grubs. The variability in arborvitae height and width observed at this site was not related to the number of grubs attacking the roots. The products with the least number of Oriental Beetle larvae included Acelepryn, Flagship 0.22G, Flagship 25WG, and Marathon II. ▲

Efficacy of Seven Products to Reduce Oriental Beetle Populations on Arborvitae.

Treatment (active ingredient)	Rate	Average Number of Grubs per Tree	Average Tree Height	Average Tree Width
Acelepryn/DPX-E2Y45 (chlorantraniliprole)	0.8 fl oz	1.1 a	56.2 a	31.7 b
BAS 320i (metaflumizone)	16 oz per 100 gal	6.6 bc	52.9 a	31.2 ab
Flagship 0.22G (thiamethoxam)	11.25 g product per 9 sq ft	2.2 a	53.1 a	30.2 ab
Flagship 25WG (thiamethoxam)	0.1 g product per 9 sq ft in ½ gal water	1.1 a	53.3 a	30.2 ab
Marathon II (imidacloprid)	0.6 fl oz per 1,000 sq ft in 10 gal water	1.2 a	53.4 a	31.5 ab
Safari 2G (dinotefuran)	120 grams per inch dbh for trees	6.2 b	55.7 a	32.5 b
Safari 20SG (dinotefuran)	12 grams per inch dbh for trees	6.9 bc	53.5 a	31.8 b
Untreated	---	8.7 c	52.3 a	28.3 a

‡ Mean number of grubs counted in approximately 3.5 cu ft of soil per tree.

‡ Means within column followed by the same letter are not significantly different (P>0.05, Fishers LSD).

Thank You to the Participants of the 2010 Grub Dig!

- | | |
|--------------------|-----------------|
| Bill Barney | Mitch Haines |
| Mike Bell | Kathryn Homa |
| Brandon Cantarella | Kathleen Hester |
| Mark Cantarella | Ben Lavine |
| Jane Forder | Cristi Palmer |
| Tom Freiberger | Doug Reichert |

Successes *continued*

10136, 09850, 10538, 10539

Federal Register: Feb 10, 2010
Acetamiprid

Trade Name: Assail

Crops: Small vine-climbing fruit (except fuzzy kiwifruit) subgroup 13-07F, Tea, Clover (regional registrations)

PR#: 09057, 10316, 09600

Federal Register: Feb 24, 2010
Flumioxazin

Trade Name: Valor

Crops: Cucurbit vegetable group 9 (replaces tolerance on melon subgroup 9A), Leaf petioles subgroup 4B, Hop

PR#: 08317, 08318, 08646, 09371

Federal Register: Mar 24, 2010
Clopyralid

Trade Name: Stinger

Crops: Bushberry subgroup 13-07B, Swiss chard, Strawberry (regional registrations)

PR#: 05433, 09602, 05435, 08132

The NCR Welcomes New RLC

Early this year, the North Central Region (NCR) welcomed **Susan (Sue) Erhardt** as its new Regional Laboratory Coordinator. Sue brings with her 22 years of experience in analytical chemistry. Most recently, Sue was the Senior Environmental Research Specialist at Dow Chemical Company. There she was responsible for testing industrial chemicals for registration of use and consulted on environmental issues, but she admits her strength is in the fields of analytical and pesticide chemistry. Sue has led and participated in data generation,

team management and supervision, and has extensive experience in analytical instrumentation.

Sue has also been successful at obtaining external funding for an international collaboration effort and she has delivered cost savings through implementing assay training, and by addressing issues raised by Environment Canada's Domestic Substances List Challenge program.

Sue earned her Ph.D. in Analytical Chemistry/



Environmental Toxicology from Michigan State University and a B.A. in Biology/ Chemistry from Earlham College in Richmond, IN. She has given numerous presentations and has published papers in journals such as Pest Management Science, Environmental Toxicology and Chemistry, and Weed Technology, as well as authored/co-authored over 50 internal reports at Dow Chemical Company.

Welcome Sue, to IR-4. ▲



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United States Department of Agriculture
National Institute of Food and Agriculture



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Rutgers, The State University of New Jersey • University of California • Cornell University
• University of Florida • Michigan State University

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