

# Look What's Out There

in

## Integrated Pest Management

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Issue 18 August 2009  
<http://www.wvu.edu/~agexten>

### **Dr. John Baniecki Retires After 40 Years of Service**

West Virginia Extension is losing a valuable member. Dr. John Baniecki is retiring after nearly 40 years of service. Dr. Baniecki has been the epitome of the land grant university mission with his extensive and far reaching service to West Virginia's citizens. He worked as a professor and developed a plant diagnostics laboratory at West Virginia University, began the newsletter you are reading now, and worked tirelessly with county agents conducting clinics, and producing radio and television programs to disseminate pest/pesticide information to the public. Dr. Baniecki's position may be filled but what he has meant to West Virginia Extension can never be replaced and he will be missed by everyone involved with extension.

### **EPA Warns Companies about Misleading Label Claims**

(*Beyond Pesticides*, August 18, 2009) In a letter to Responsible Industry for a Sound Environment (RISE), the national trade association representing producers and suppliers of specialty pesticides and fertilizers, the U.S. Environmental Protection Agency (EPA) clarifies for pesticide companies federal pesticide label regulations and the agency's position on use of false and misleading claims like "Professional Strength." The letter, dated May

15, 2009 and posted on EPA's website last week, addresses pesticide products that are sold and distributed and labeled "Professional" and "Professional Grade" among others, in product names and advertising. EPA finds that such statements are "inappropriate." According to the letter, "*Section 12 (a) (1) (E) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), states that it is unlawful to distribute or sell 'any pesticide which is....misbranded.'* A pesticide is misbranded if 'its labeling bears any statement, design or graphic representation relative thereto or to its ingredients which is false or misleading in any particular.' FIFRA § 2(q)(1)(A) [emphasis added]. The following describes why EPA finds use of "Professional Grade" in these products' labeling and marketing to be a false and misleading claim and therefore unacceptable." The letter continues, "... 'Professional Grade' implies a falsehood that pesticides are classified by grade, which they are not. This is a false and misleading comparison to other pesticides under 40 CFR § 156.10(a)(5)(ii). "Professional Grade" implies or could well imply that the products are more efficacious than competitors' products. This is likely a false and misleading statement about the comparative effectiveness of the product under 40 CFR §156 (a)(5)(iv)." The use of 'Professional' is misleading, according to EPA, since not only does it not explain which professionals are being referenced, but the products labelled in this manner are not restricted use products (those only available to licensed pest control operators),

and are legally available to average consumers. EPA also goes on to state these claims, which were not accepted at the time of the products' registration, are in violation of 40 CFR § 152.132(d), and thus, both the distributor and the basic registrant are liable for the violations. However, while EPA is aware of these misleading label claims and violations, the Office of Pesticide Programs (OPP), which oversees pesticide registration, has yet to take any definitive action on such misbranding. The letter states that OPP is "considering whether to refer this and similar matters to the Office of Enforcement and Compliance Assurance for potential enforcement action." In the past, EPA has maintained that pesticide labels should, on the whole, be free from any symbol or claim that might mislead consumers or give a false sense of a product's safety. Crackdowns concerning the sale and distribution of unregistered, mislabeled pesticides have occurred in the past, with EPA maintaining that this is a serious violation that can result in harm to public health and the environment. However, EPA enforcement against non-compliance is generally very limited. Last fall, EPA withdrew its draft notice on label statements regarding cause marketing and third-party endorsements. In this particular case, the Clorox Company submitted an application to EPA to add cause marketing language and the Red Cross symbol to some of its labels, specifically to display a philanthropic partnership between it and the American Red Cross. After a two-year process of EPA proposals and public comment periods, and a large public outcry by states, environmental and activists groups, including Beyond Pesticides denouncing this action, the agency determined that such label statements do nothing to promote "consumer understanding" of the risks and applications of pesticide products, and will not be encouraging further submissions. Currently, limited label information, including the non-disclosure of inert ingredients, provide consumers with little information with which they can make informed decisions when buying pesticides and choosing less hazardous products.

## **EPA Long-Term Pesticide Safety Tests Criticized for Falling Short**

(*Beyond Pesticides*, August 17, 2009) The four-day testing period the U.S. Environmental Protection Agency (EPA) commonly uses to determine 'safe' levels of pesticide exposure for humans and animals could fail to account for the long-term effects of toxic chemicals, University of Pittsburgh researchers report in the September edition of *Environmental Toxicology and Chemistry*. The team found that the highly toxic pesticide endosulfan, a neurotoxin banned in several nations but still used extensively in U.S. agriculture, can exhibit a "lag effect" with the fallout from exposure not surfacing until after direct contact has ended. The findings build on a 10-year effort by Rick Relyea, Ph.D., an associate professor of biological sciences in Pitt's School of Arts and Sciences, to understand the potential links between the global decline in amphibians, routine pesticide use, and the possible threat to humans in the future. The team exposed nine species of frog and toad tadpoles to endosulfan levels "expected and found in nature" for the EPA's required four-day period, then moved the tadpoles to clean water for an additional four days, Jones reported. Although endosulfan was ultimately toxic to all species, three species of tadpole showed no significant sensitivity to the chemical until after they were transferred to fresh water. Within four days of being moved, up to 97 percent of leopard frog tadpoles perished along with up to 50 percent of spring peeper and American toad tadpoles. Of most concern, explained Dr. Relyea, is that tadpoles and other amphibians are famously sensitive to pollutants and considered an environmental indicator species. The EPA does not require testing on amphibians to determine pesticide safety, but Dr. Relyea previously found that endosulfan is 1,000-times more lethal to amphibians than other pesticides. Yet, he said, if the powerful insecticide cannot kill one the world's most susceptible species in four days, then the four-day test period may not adequately gauge the long-term effects on larger, less-sensitive species. "When a pesticide's toxic effect takes more than four days to appear, it

raises serious concerns about making regulatory decisions based on standard four-day tests for any organism,” Dr. Relyea said. “For most pesticides, we assume that animals will die during the period of exposure, but we do not expect substantial death after the exposure has ended. Even if EPA regulations required testing on amphibians, our research demonstrates that the standard four-day toxicity test would have dramatically underestimated the lethal impact of endosulfan on even this notably sensitive species.” Andrew Blaustein, a professor in Oregon State University’s nationally ranked Department of Zoology, who is familiar with the Pitt study, said the results raise concerns about standards for other chemicals and the delayed dangers that might be overlooked. Some of the frog eggs the Pitt team used had been collected by Blaustein’s students for an earlier unrelated experiment, but he had no direct role in the current research. “The results are somewhat alarming because standards for assessing the impacts of contaminants are usually based on short-term studies that may be insufficient in revealing the true impact,” Blaustein said. “The implications of this study go beyond a single pesticide and its effect on amphibians. Many other animals and humans may indeed be affected similarly.” Tadpoles in the Pitt project spent four days in 0.5 liters of water containing endosulfan concentrations of 2, 6, 7, 35, 60, and 296 parts-per-billion (ppb), levels consistent with those found in nature. The team cites estimates from Australia-where endosulfan is widely used-that the pesticide can reach 700 ppb when sprayed as close as 10 meters from the ponds amphibians typically call home and 4 ppb when sprayed within 200 meters. The EPA estimates that surface drinking water can have chronic endosulfan levels of 0.5 to 1.5 ppb and acute concentrations of 4.5 to 23.9 ppb. Leopard frogs, spring peepers, and American toads fared well during the experiment’s first four days, but once they were in clean water, the death rate spiked for animals previously exposed to 35 and 60 ppb. Although the other six species did not experience the lag effect, the initial doses of endosulfan were still devastating at very low concentrations. Grey and Pacific tree frogs, Western toads, and

Cascades frogs began dying in large numbers from doses as low as 7 ppb, while the same amount killed all green frog and bullfrog tadpoles. A second paper by Dr. Relyea and Devin Jones, a recent Pitt biological sciences graduate, also in the current Environmental Toxicology and Chemistry expands on one of Dr. Relyea’s most notable investigations, a series of findings published in Ecological Applications in 2005 indicating that the popular weed-killer Roundup®(active ingredient glyphosate is “extremely lethal” to amphibians in concentrations found in the environment. The latest work determined the toxicity of Roundup Original Max for a wider group of larval amphibians, including nine frog and toad species and four salamander species. In November 2008, Dr. Relyea reported in Oecologia that the world’s 10 most popular pesticides-which have been detected in nature-combine to create “cocktails of contaminants” that can destroy amphibian populations, even if the concentration of each individual chemical is within levels considered safe to humans and animals. The mixture killed 99 percent of leopard frog tadpoles and endosulfan alone killed 84 percent. A month earlier, Dr. Relyea published a paper in Ecological Applications reporting that gradual amounts of malathion, one of the most popular insecticides in the U.S., too small to directly kill developing leopard frog tadpoles instead sparked a biological chain reaction that deprived them of their primary food source. As a result, nearly half the tadpoles in the experiment did not reach maturity and would have died in nature. Last month, Beyond Pesticides reported on a new study that found that insecticides, such as endosulfan, used in highly populated agricultural areas of California’s Central Valley affect amphibians that breed in the Sierra Nevada Mountains to the east. See Beyond Pesticides’ Daily News Blog for additional news stories on pesticides’ impact on frogs.

*(Source: University of Pittsburgh August 2009)*

## **Study Finds that Mosquito Repellent DEET Affects Nervous System**

(*Beyond Pesticides*, August 12, 2009) A new study examining the effects of the mosquito repellent DEET on insects, mice and human proteins reports that the chemical interferes with a prominent central nervous system enzyme. This effect is magnified when exposure to DEET is combined with exposure to certain other pesticides. Entitled, "Evidence for inhibition of cholinesterases in insect and mammalian nervous systems by the insect repellent deet," and published in *BioMed Central (BMC) Biology*, the study utilized toxicological, biochemical and electrophysiological techniques to show that DEET is not simply a behavior-modifying chemical, but that it also inhibits cholinesterase activity in both insect and mammalian neuronal preparations. The researchers examined DEET's effects on mosquitoes, cockroach nerves, mouse muscles, and enzymes purified from fruit flies and humans. Applications of DEET slowed or halted the actions of the enzyme acetylcholinesterase. This enzyme is crucial for regulating nerve impulses in both insects and mammals, and once its functions are disrupted, neuromuscular paralysis, leading to death by asphyxiation result. In humans, symptoms include headache, exhaustion and mental confusion together with blurred vision, salivation, chest tightness, and muscle twitching and abdominal cramps. The study also investigated the consequences of DEET interactions with carbamate insecticides on the cholinergic system, and found that DEET has the capacity to strengthen the toxicity of carbamates, a class of insecticides known to block acetylcholinesterase. The results are consistent with previous studies, says Mohammed Abou-Donia, PhD, of the Duke University Medical Center in Durham, N.C, who was not involved in the new work. "DEET is a good chemical for protection against insects," Dr. Abou-Donia says. "But prolonged exposure results in neurological damage, and this is enhanced by other chemicals and medications." In light of these recent findings, SC Johnson, manufacturer of a variety of DEET repellent products released a statement

claiming that such concerns were "unfounded." However, this is not the first study that has highlighted the adverse impacts associated with DEET and its use with other pesticides. Several studies done by a team of Duke University researchers suggest that DEET, in conjunction with permethrin-impregnated clothing, may be linked to Gulf War Syndrome. DEET (N,N-diethyl-meta-toluamide) is commonly used as an insect repellent but its use has become highly controversial. Scientists have raised concerns about the use of DEET and seizures among children, even though the U.S. Environmental Protection Agency (EPA) claims that there is not enough information to implicate DEET with these incidents. DEET is quickly absorbed through the skin and has caused adverse effects including severe skin reactions including large blisters and burning sensations. Laboratory studies have found that DEET can cause neurological damage, including brain damage in children. DEET was originally developed for military use in 1946 and was then registered for use on the general public in 1957. According to the EPA, more than one third of the U.S. population uses DEET-containing products every year. However, safer alternatives to DEET include citronella and other essential oils, like oil of lemon eucalyptus which has been recommended as an efficacious alternative by the Center for Disease Control and prevention (CDC). For more information on safer methods to protect yourself from mosquitoes and other insects, please visit *Beyond Pesticides'* fact sheet on mosquito repellents.

(Source: *U.S. News and World Report August 2009*)

## **EPA Seeks Comments on its Reevaluation of the Chemical Perchlorate**

(WASHINGTON, August 5, 2009) U.S. Environmental Protection Agency Administrator Lisa P. Jackson announced that the agency is taking an important step to ensure children's health is taken into account when evaluating the chemical perchlorate. To enhance transparency, the agency is seeking public comment on its re-

evaluation of the scientific information on perchlorate in drinking water. Under the previous administration, EPA made a preliminary decision not to regulate perchlorate. Administrator Jackson directed EPA staff to review that decision and, as part of that review, the agency is putting special emphasis on evaluating the impact of perchlorate on infants and young children. "It is critically important to protect sensitive populations, particularly infants and young children, from perchlorate in drinking water," said EPA Administrator Lisa P. Jackson. "As we re-evaluate the science around perchlorate, we will seek public input before making a regulatory determination based on the best science." The analysis presented in the notice announced today more directly evaluates children's exposure to perchlorate. This step takes into account the fact that infants and children consume more water per body weight than do adults. EPA is now considering a broader range of alternatives for interpreting the available data on the level of health concern, the frequency of occurrence of perchlorate in drinking water, and the opportunity for health risk reduction through a national primary drinking water standard. These alternative interpretations may impact the agency's final regulatory determination for perchlorate. In response to a 2008 preliminary determination not to regulate perchlorate, EPA received and reviewed comments from more than 32,000 individuals and organizations. EPA will consider those comments, as well as new comments received during the 30-day comment period on the current notice, before making a final decision on whether to regulate perchlorate under the Safe Drinking Water Act. Perchlorate is both a naturally occurring and man-made chemical. Perchlorate is used in the manufacture of fireworks, flares and solid rocket propellant. The current notice will be available for public comment 30 days after publication in the Federal Register. More information:

<http://www.epa.gov/safewater/contaminants/unregulated/perchlorate.html>

**Contact Information:**

Enesta Jones, [jones.enesta@epa.gov](mailto:jones.enesta@epa.gov), 202-564-7873, 202-564-4355 (Source: EPA August 2009)

## **EPA Seeks Public Input on Clean Water Enforcement Action Plan through Online Forum**

(WASHINGTON, August 7, 2009) The U.S. Environmental Protection Agency has launched an online discussion forum to receive public input on the future direction of EPA's national water enforcement program. The public will be able to provide feedback through the EPA Web site, between now and August 28, giving them a forum to address any concerns about EPA's efforts to protect the water in their communities. The forum is part of a larger agency effort to improve the performance and enhance public transparency of state and federal Clean Water Act enforcement programs. In a memo issued on July 2, Administrator Lisa Jackson called for stronger enforcement performance at federal and state levels and a transformation of EPA's water quality and compliance information systems. As part of this effort, Jackson directed the Office of Enforcement and Compliance Assurance to develop an action plan. All ideas from the public will be evaluated and considered for recommendations to the EPA Administrator about the future direction for EPA's water enforcement program. More information on the development of the clean water enforcement action plan:

<http://www.epa.gov/compliance/civil/cwa/cwaenplan.html>

**To comment on the action plan:**

<http://blog.epa.gov/cwaactionplan> or contact: Deb Berlin, [berlin.deb@epa.gov](mailto:berlin.deb@epa.gov), 202-564-4914, 202-564-4355

(Source: EPA August 2009)

## **U.S., West Virginia Sue Town of Fort Gay for Violations of Clean Water and Safe Drinking Water Acts**

(PHILADELPHIA, August 18, 2009) The Justice Department and the West Virginia Departments of Environmental Protection, and Health and Human Resources have sued the town of Fort Gay, W. Va. to stop discharges of untreated sewage from pipes, manholes, and pumping

stations into Mill Creek. The complaint, filed on behalf of the U.S. Environmental Protection Agency and the state agencies alleges the discharges pose a threat to human health because of potential contamination of the town's drinking water. The complaint also alleges numerous violations of the Clean Water Act, the Safe Drinking Water Act and the West Virginia Water Pollution Control Act. According to the government's complaint, on numerous occasions since January 2007, Fort Gay discharged untreated sewage from several of its pumping stations into Mill Creek, a tributary of the Tug Fork River. The intake to the Fort Gay Water works, which provides water for the town, is located along the Tug Fork River less than a half-mile downstream from Mill Creek. The complaint also alleges that the untreated sewage has flowed into residential yards, basements, streams and the river; that Fort Gay has failed to take all reasonable steps to minimize or prevent any discharge and; the town failed to comply with a 2003 EPA order to take actions to prevent these discharges. Overall, the complaint alleges that the town did not properly operate and maintain its sewage treatment system. Untreated sewage contains viruses and protozoa as well as other parasites. People coming in contact with these organisms can suffer adverse health effects ranging from minor ailments such as sore throats, stomach cramps and diarrhea, to life-threatening illnesses such as cholera, dysentery, infectious hepatitis and severe gastroenteritis. Children, the elderly, people with weakened immune systems and pregnant women are more at risk of illness. The complaint seeks an injunction directing Fort Gay to eliminate or minimize the risk to human health posed by the discharge of raw sewage, and come into compliance with federal requirements and its state-issued pollution discharge permit. Fort Gay could be subject to financial penalties for the violations. Penalties are assessed based on the seriousness of the violations, the economic benefit from non-compliance, compliance history, the economic impact of the penalty and other factors.

(Source: EPA August 2009)

## Creating the Ultimate Drought-Resistant Lawn/Pasture Grass

Bluegrass hybrids ideal for pasture and for lawns could be developed faster using genetic markers developed by an Agricultural Research Service (ARS) scientist. ARS geneticist Jason Goldman at the agency's Southern Plains Range Research Station in Woodward, Okla., identified nine DNA primers that produce markers that can verify successful bluegrass hybrids from DNA samples. This saves time because breeders currently have to wait for the plant to mature before they can verify a hybrid by physical characteristics. The markers can be used on seedlings. Goldman's goal is a Kentucky bluegrass-like lawn or pasture grass that is highly tolerant to drought. The research is part of the laboratory's program for breeding perennial cool-season forage grasses for the southern Great Plains as alternatives to wheat and other annual crops. Texas bluegrass is native to southern Kansas, Oklahoma, western Arkansas and most of Texas. It tolerates heat and drought, but produces seed that is difficult to harvest and re-plant. It also lacks the turf quality of Kentucky bluegrass. Kentucky bluegrass is not tolerant to heat and drought, but has excellent turf characteristics and produces seed that is easy to harvest and clean. Goldman's goal is to combine them into one variety with a broader geographic range than Kentucky bluegrass, while retaining Kentucky bluegrass' good qualities. The hybrid must also retain Kentucky bluegrass' ability to produce seed that breeds true, ensuring identical progeny. Goldman plans further tests to cross Texas bluegrass with other bluegrass species in addition to Kentucky bluegrass, and to see if the markers can be used for other purposes, such as identifying markers linked to desirable or undesirable plant traits. This research was published in the journal *Plant Breeding*. ARS is the principal intramural scientific research agency of the U.S. Department of Agriculture.

(By: Don Comis, Agricultural Research Service, August 17, 2009)

## Chocolate Pod: Not So Sweet for Bean Growers

New, virus-resistant snap beans could soon be on tap, thanks to genetic sleuthing by Agricultural Research Service (ARS) scientists in Prosser, Wash. The target of their investigation, a strain of the clover yellow vein virus, is the culprit behind chocolate pod, a disease that causes unsightly defects on snap bean pods, ruining their marketability. Soybean aphids transmit the virus while feeding on bean plants, but spraying insecticide to prevent such feeding isn't always effective or economically feasible. Incorporating genes for resistance into the crop offers a better approach, according to ARS plant pathologist Richard Larsen. Toward that end, he and ARS geneticist Phil Miklas developed a polymerase chain reaction (PCR)-based test for detecting the chocolate pod virus and distinguishing it from other bean pathogens. They were able to do so by identifying the sequence of amino acids that make up the virus' coat protein, explains Larsen, who, along with Miklas, works in the ARS Vegetable and Forage Crops Research Laboratory at Prosser. The research was published in the journal *Plant Disease*. The test, which yields results in less than a day versus weeks by traditional methods, has become a critical screening tool in the search for resistant bean germplasm. Only one snap bean variety out of 63 the researchers screened showed some resistance to chocolate pod. Fortunately, a gene found in dry edible beans conferred stronger resistance. Even better, the gene "coexists" with another, dubbed bc-3, which confers resistance to other bean pathogens, including bean common mosaic virus and bean yellow mosaic virus. Larsen and Miklas plan on crossing the resistant dry beans with the susceptible snap beans so that they, too, will reap the benefits of possessing multiple virus-resistance genes. Commercial cultivars developed from such crosses will be especially important for snap bean farmers in Wisconsin, Michigan and other Great Lakes states, where the first outbreak of chocolate pod occurred in 2001. Read more about this research in the August 2009 issue of *Agricultural Research* magazine.

(By: Jan Suszkiw, Agricultural Research Service, August 11, 2009)

### Funding Opportunity

- Agriculture and Food Research Initiative Competitive Grants (general program announcement). This is a Program Announcement (PA) for the Agriculture and Food Research Initiative (AFRI). AFRI combines elements of the former National Research Initiative (NRI) and Initiative for Future Agriculture and Food Systems (IFAFS) programs and is the new core competitive grant program for research, education, and extension. It is anticipated that the complete Request for Applications, which will contain the application submission instructions and be accompanied by required application forms, will be made available in early 2009 on the CSREES Web site and the Grants.gov Web site. This AFRI PA contains opportunities for support of research, education, and extension priorities. This PA is being released prior to the passage of the Fiscal Year (FY) 2009 Agricultural Appropriations Act. The release of this PA is to inform the applicant community of upcoming research, education, and extension opportunities through the AFRI program to fund issues critical to agriculture. The enactment of the FY 2009 Appropriations Act may impact the overall level of funding for the AFRI program. Hence, the Cooperative State Research, Education, and Extension Service (CSREES) reserves the right to amend, delete, or otherwise alter any programs. Depending on the FY 2009 Appropriations Act, CSREES may be issuing a supplemental RFA to address topics already identified in this PA. **Deadline: ??????** Updated information about the AFRI program will be made available on the AFRI Web site: <http://www.csrees.usda.gov/funding/afri/afri.html> and the CSREES funding page <http://www.csrees.usda.gov/fo/funding.cfm>
- The USDA Animal and Plant Health Inspection Service (APHIS) Plant Protection and Quarantine (PPQ) supports research on various

aspects of emerald ash borer biology, ecology and impacts, in furtherance of the EAB Program's strategic goals to minimize human assisted spread of the pest, to develop enhanced survey and detection tools and methods, and to develop pest management tools and techniques.

**Proposal Requirements:** The proposal should contain enough detail to allow APHIS-PPQ to evaluate the merits of the project and how information obtained will benefit the EAB Program and the overall effort to manage the pest. Interested applicants should contact Paul Chaloux, USDA-APHIS-PPQ EAB National Program Leader (Phone: 301-734-0917; E-mail: Paul.Chaloux@aphis.usda.gov)

**Web sites:**

[http://www.aphis.usda.gov/plant\\_health/plant\\_pest\\_info/emerald\\_ash\\_b/index.shtml](http://www.aphis.usda.gov/plant_health/plant_pest_info/emerald_ash_b/index.shtml)

[http://www.aphis.usda.gov/plant\\_health/](http://www.aphis.usda.gov/plant_health/)

[http://www.aphis.usda.gov/plant\\_health/cphst/index.shtml](http://www.aphis.usda.gov/plant_health/cphst/index.shtml)

- Northeastern IPM Center - Vegetable IPM Working Group: Vegetable and Strawberry IPM Travel Grants. Would you like to visit another state to see the field work that is being done in Vegetable or Strawberry IPM? Do you wish you had funds to get to a twilight meeting, field day, or spend a few days with a colleague in another state in the Northeast or another region? The Northeast Vegetable IPM Working Group, funded by the Northeastern IPM Center, offers IPM Travel Grants that will pay up to \$800 for qualified expenses to help agricultural professionals in the Northeast learn about and share integrated pest management practices in vegetables and strawberries. The application process is simple. Write an application letter and state your work or job, how your travel will help you learn about IPM and how you will share what you learn with growers back at home. Funds are available for agriculture professionals in the private sector as well as those who work for public universities. For complete information on how to apply, see the Request for Applications at the following link:

[http://northeastipm.org/work\\_vegtravelgrants.cfm](http://northeastipm.org/work_vegtravelgrants.cfm)

## **Don't Forget to Take Advantage of Online First Detector Training**

The National Plant Diagnostic Network (NPDN) is pleased to announce that the Online First Detector Training modules are up and running and can be found at: <http://cbc.at.ufl.edu/>. The site allows anyone to participate in the First Detector Program. The course is composed of several modules, and includes topics such as:

- The NPDN Mission
- Agricultural Biosecurity
- Purpose of a First Detector
- Monitoring for Exotic Pests
- How to Submit a Suspicious Sample
- The Art and Science of Plant Pest Diagnostics
- And more....

Each module takes anywhere from 40 to 60 minutes and the course can be completed at your own pace. To get started, first register for the First Detector Training Workshops to get your user name and password.

The general goal of the program is to get the public involved in protecting our plant related industries and our natural plant resources from being impacted by exotic and potentially damaging plant pests be they insects, weeds or pathogens. Upon completion of the training, First Detectors receive a certificate of training completion. Trained First Detectors are also provided with the opportunity to receive the national NPDN First Detector newsletter as well as pest alerts via e-mail through the National First Detector registry. For more information, go to <http://cbc.at.ufl.edu/> or contact Dr. John Baniecki at: [John.Baniecki@mail.wvu.edu](mailto:John.Baniecki@mail.wvu.edu).

# Events



## **5th National Small Farm Conference September 15-17, 2009 Springfield, Illinois**

**For information contact:** Deborah Cavanaugh-Grant, Conference Chair Extension Specialist, Small Farm and Sustainable Agriculture University of Illinois Extension SARE Coordinator  
P.O. Box 410  
Greenview, IL 62642  
217-968-5512  
cvnghgrn@illinois.edu

## **2009 USDA/IR-4 Food Use Workshop September 15-16, 2009, Cleveland OH**

**For information contact:**  
Cheryl Ferrazoli at ferrazoli@aesop.rutgers.edu  
or call 732.932.9575 ext.4601  
**Or visit:**  
<http://ir4.rutgers.edu/FoodUse/FUWorkshop/index.html>

## **2009 IR-4 Ornamental Horticulture Workshop October 6-8, 2009, Cleveland OH**

**For information contact:**  
Edith Lurvey at 315-787-2308  
**Or visit:**  
[http://northeastipm.org/ipm\\_news\\_popover.cfm?id=4039](http://northeastipm.org/ipm_news_popover.cfm?id=4039)

## **USDA/CSREES Grantsmanship Workshops November 10-11, 2009, Kansas City, MO November 18-19, 2009, Washington, D.C.**

**For information contact:**  
Paularie Knox  
Title: Program Specialist  
Unit: Competitive Programs

Phone: (202) 401 - 1950  
Fax: (202) 401 - 6488  
Email: [pknox@csrees.usda.gov](mailto:pknox@csrees.usda.gov)

## **10th Annual Pesticide Stewardship Conference February 21-24, 2010, Savannah, Georgia**

**For information:**  
<http://tpsalliance.org/conference/Introduction.htm>

## **Questions?**

If you have any comments or questions regarding any of the material presented, please let us know by sending an e-mail to:

[John.Baniecki@mail.wvu.edu](mailto:John.Baniecki@mail.wvu.edu)