

# Look What's Out There

in

## Integrated Pest Management

John F. Baniecki, Ph.D., Coordinator, Pesticide Safety Education Program  
David P. McCann, Graduate Assistant, West Virginia University  
Rakesh S. Chandran, Ph.D. Coordinator, Integrated Pest Management Program  
**West Virginia University Extension Service.**

Issue 11 December 2008  
<http://www.wvu.edu/~agexten>

### Farmworkers Face Highest Risk of Pesticide Poisonings, EPA Worker Protection Standards Failing

(*Beyond Pesticides*, December 8, 2008) A new study by a National Institute for Occupational Safety and Health (NIOSH) researcher finds the pesticide poisoning incidence rate among U.S. agricultural workers is thirty-nine times higher than the incidence rate found in all other industries combined. The study, "Acute Pesticide Poisoning Among Agricultural Workers in the United States, 1998-2005," published in the December issue of the *American Journal of Industrial Medicine*, is believed to be the first detailed multi-state assessment of acute pesticide poisonings among agricultural workers. From 1998 to 2005, a total of 3,271 cases of acute occupational pesticide-related illness/injury among agricultural workers were identified in ten states. According to EPA, the Worker Protection Standards are designed to reduce the risk of injury or illness to agricultural field workers resulting from exposure to pesticides. Although the WPS was expanded in 1995 and in 2005 EPA developed a new WPS How to Comply (HTC) Manual, the NIOSH findings indicate that agricultural workers continue to have an elevated risk for acute pesticide poisoning. Furthermore, female agricultural workers experienced nearly twice the risk of pesticide poisoning of male agricultural workers. The most common factors that contributed to pesticide exposure included off-target drift, early reentry into a treated area, and use in conflict with the pesticide label. The

study concludes that "The rates provided should be considered low estimates of the magnitude of acute pesticide poisoning among agricultural workers." According to the lead author of the report, Geoffrey Calvert, MD, MPH, "The NIOSH findings reinforce the need for heightened efforts to better protect farmworkers from pesticide exposure. EPA is currently in the process of revising the Worker Protection Standard. The findings in this paper can help inform EPA about the most problematic risk factors that need to be targeted by the WPS." The study findings show that more than half of the pesticide poisoning incidents are attributed to insecticides, either by themselves or in combination with other pesticides) and just barely over half of incidents involved exposure to the most toxic category of pesticides by EPA, Toxicity Category I. The 17 pesticides most commonly implicated in the study data include: sulfur, metam-sodium, glyphosate, chlorpyrifos, sodium hypochlorite, methamidophos, abamectin, imidacloprid, methomyl, myclobutanil, propargite, spinosad, methyl bromide, dimethoate, malathion, and diazinon. The data was pooled from the California Department of Pesticide Regulation and NIOSH's Sentinel Event Notification System for Occupational Risks-Pesticides (SENSOR-Pesticides) program, which collects information from ten state health departments. According to the study, 87 percent of poisoning incidents were of low severity illness, 12 percent were of

medium severity, less than one percent was of high severity and one case was fatal. The criteria for each definition are stated in the study: “Low severity illness/ injury consist of illnesses and injuries that generally resolve without treatment and where minimal time (<3 days) is lost from work. Such cases typically manifest as eye, skin and/or upper respiratory irritation. Moderate severity illness/injury consists of nonlife-threatening health effects that are generally systemic and require medical treatment. No residual disability is detected, and time lost from work is less than 6 days. High severity illness/injury consists of life threatening health effects that usually require hospitalization, involve substantial time lost from work (>5 days), and may result in permanent impairment or disability.” This past summer, Beyond Pesticides reported that EPA, which has long been criticized for its abysmal record of instituting and enforcing even the most basic human health protections from pesticides for those who are responsible for planting and harvesting much of the nation’s food, announced that, “Through recent settlements with four Puerto Rico farms, the U.S. Environmental Protection Agency (EPA) is sending a message to farm owners that protecting their workers must be their first priority.” On January 19, 2007, EPA assessed the second highest penalty for violating worker protection provisions of U.S. pesticide laws to an agricultural company based in Puerto Rico. According to the EPA, Martex Farms has been ordered to pay a total penalty of \$92,620 by EPA’s Administrative Law Judge (ALJ). Earlier this year, a coalition of farmworker, public health, and environmental groups filed several lawsuits challenging EPA’s decision to allow continued use of the toxic pesticides such as methidathion, oxydemeton-methyl, methamidophos, and ethoprop, diazinon, and endosulfan. “The lack of action [sic] is yet another example of EPA’s failure to fully consider the risks to farmworkers, children, and the environment from pesticides,” said Jay Feldman, executive director of Beyond Pesticides.

## Study Links Genetically Engineered Corn to Infertility

(*Beyond Pesticides*, December 5, 2009) On November 10, 2008, the Austrian government released a report of long term research showing genetically engineered (GE) corn fed to mice significantly reduced their fertility over three to four breeding cycles within one generation. Similar effects were found in mice fed GE corn and bred over four generations. The study, “Biological effects of transgenic maize NK603xMON810 fed in long term reproduction studies in mice,” was sponsored by the Austrian Ministry of Health, Families, and Youth, and led by Dr. Jürgen Zentek, Professor of Veterinary Medicine at the University of Vienna. Three series of experiments were done. The first was a multigeneration feeding trial in which the mice were fed and bred for four successive generations, beginning with the parents that were fed the diets from birth. The second was a multi-cycle breeding trial lasting 20 weeks in which breeding pairs of mice were fed beginning one week prior to co-habitation until the end of experiment, and allowed to go through four breeding cycles in the same generation. The third was a life-term trial involving feeding the mice without breeding from conception (via the pregnant mothers) to their eventual death. The researchers report that it was not possible to obtain a GE test crop plus parental line from the agro-business companies, which was why the test diets consisting of 33 percent GE corn had to be compared with a non-GE corn variety (also at 33 percent) that was closely related to the GE corn. Both were grown under identical conditions. The GE corn was the transgene hybrid NK603 x MON810 containing three gene cassettes, two conveying glyphosate herbicide tolerance and one insect resistance coding for endotoxin Cry1Ab. The transgenic protein was estimated to be 0.11-0.24 microgram per gram of fresh grain. In the multigeneration study, the parental generation was fed since birth with either GE or non-GE corn diet, and four generations were bred. Less pups were born in successive generations in both control and GE-fed mice. But the controls tended to do better than GE fed. The

average litter size and weight as well as number of weaned pups were greater in the non-GE corn group, although the difference was not statistically significant. Over all generations, about twice as many pups were lost in the GE group as compared with the control group (14.59 percent vs. 7.4 percent). More litters with eight or more pups were seen in the control compared with GE group. And a greater number of pups were lost at weaning in the GE fed. Comparison of organ weights did not indicate direct dietary effects in the multigeneration study, except for the kidneys. Kidney weight of females in the GE-fed group were significantly lower in the F2, F3 and F4 generations than controls; and males in the GE-fed group also had significantly lower kidney weight than controls in the F2 generation. The electron microscope investigations revealed differences in the liver cells indicative of reduced core metabolism in the GE-fed mice. In addition, DNA microarray analyses showed important differences in gene expression between both groups fed non-GE corn and the group fed GE corn. In the multi-cycle breeding trial, the same differences between GE-fed and controls were evident and reached statistically significant levels in the 3rd and 4th litters. There were clearly fewer and smaller litters in the GE-fed mice. The average number of pups born was always lower in the GE fed but did not reach statistical significance before the 3rd and 4th deliveries. The number of pups at weaning was also always smaller in the GE-fed group. Over all the deliveries, more pups were born in the controls than in the GE group (1035 vs. 844). Consistent with these findings, the life-term feeding trial showed no significant differences in the average life-span of the GE-fed mice compared with controls. "This meticulous study suggests that a popular type of genetically engineered corn may harbor fertility-reducing substances," said Bill Freese, Science Policy Analyst at the Center for Food Safety and co-author of a peer-reviewed study on GE crop regulation. "It's no surprise to us that U.S. regulators did not catch this. None of our regulatory agencies require any long-term animal feeding trials before allowing genetically engineered crops on the market."

The Center notes that the GE corn used in the study (NK603 x MON810) was developed by the Monsanto Company, and is sold under the brand names YieldGard (Plus)/Roundup Ready. Monsanto's figures show that U.S. plantings of this GE corn have exploded in recent years, from just 2.2 million acres in 2002 to 38.2 million acres in 2008[2]. The corn is a so-called "stacked" variety with two traits: the Roundup Ready trait allows the corn to survive direct spraying with Roundup herbicide, while a built-in insecticide kills certain above-ground insect pests. The Center further notes that U.S. regulators allow biotech companies to cross GE crops at will to develop "stacked" crops with virtually any combination of traits without any regulatory oversight, despite expert warnings that stacked crops may pose special risks. "This study should serve as a wake-up call to governments around the world that genetically engineered foods could cause long-term health damage," said Andrew Kimbrell, Executive Director of the Center for Food Safety. "The Center calls upon national and international authorities to place a moratorium on the distribution of GE products for human consumption unless or until their safety can be undeniably established." "We hope this study will finally persuade the U.S. Food and Drug Administration to completely overhaul its 'rubber-stamp' regulatory process," added Mr. Freese. "The FDA must stop letting biotech companies self-certify their GE crops as safe, and instead establish strict, mandatory testing requirements, including long-term animal feeding trials, for every GE crop," he added. For more information on GE crops, see Beyond Pesticides Genetic Engineering program page

*(Sources: Institute of Science in Society, Center for Food Safety)*

[Pesticide News Story: EPA Requests Comment on Chemigation Labeling Paper](#)

(December 9, 2008) EPA has published on its Web site a chemigation labeling discussion paper to allow any interested parties to give the Agency preliminary, informal comments on the best approaches to take in developing useful guidance

on chemigation labeling before the Agency begins drafting a specific proposal that may be issued for public notice and comment. The Agency is considering developing new guidance for the labeling of pesticide products applied through irrigation systems, or "chemigation." Such guidance would supersede the existing Agency guidance on this subject contained in Pesticide Registration Notice 87-1 (PRN 87-1) published March 11, 1987. State pesticide regulatory officials representing the State FIFRA Issues Research and Evaluation Group (SFIREG) requested EPA to consider this step in an issue paper submitted to the Agency in 2007. Comments on this paper should be submitted by February 6, 2009, to:

[opp\\_labeling\\_consistency@epa.gov](mailto:opp_labeling_consistency@epa.gov). Do not submit information considered to be Confidential Business Information or otherwise protected from disclosure. Any comments submitted may be made available to the public. To assist the Agency in responding to comments, please include your name, organizational affiliation, and a telephone number. Information about other Pesticide Program labeling activities is available at [http://www.epa.gov/pesticides/regulating/labels/label\\_review.htm](http://www.epa.gov/pesticides/regulating/labels/label_review.htm)

*(EPA December 2008)*

### [Pesticide Experimental Use Permit; Receipt of Application; Comment Request](#)

This notice announces EPA's receipt of an application 68467-EUP-O from Mycogen Seeds c/o Dow Agrosciences LLC requesting an experimental use permit (EUP) for the plant-incorporated protectants *Bacillus thuringiensis* Cry1A.105 protein and the genetic material necessary for its production (vector PV ZMIR245) in MON 89034 corn, *Bacillus thuringiensis* Cry2Ab2 protein and the genetic material necessary for its production (vector PV ZMIR245) in MON 89034 corn, *Bacillus thuringiensis* Cry3Bb1 protein and the genetic material necessary for its production (vector PV ZMIR39) in MON 88107 corn, *Bacillus thuringiensis* Cry34Ab1 and Cry35Ab1 proteins

and the genetic material necessary for their production (vector PHP 17662) in Event DAS-59122-7 corn, and *Bacillus thuringiensis* Cry1F protein and the genetic material necessary for its production (vector PHP8999) in Event TC1507 corn. The Agency has determined that the permit may be of regional and national significance. Therefore, in accordance with 40 CFR 172.11(a), the Agency is soliciting comments on this application. DATES: Comments must be received on or before December 29, 2008.

ADDRESSES: Submit your comments, identified by docket identification (ID) number EPA-HQ-OPP-2008-0837, by one of the following methods:

- Federal eRulemaking Portal:  
<http://www.regulations.gov>.

Follow the on-line instructions for submitting comments.

- Mail: Office of Pesticide Programs (OPP) Regulatory Public

Docket (7502P), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001.

- Delivery: OPP Regulatory Public Docket (7502P), Environmental Protection Agency, Rm. S-4400, One Potomac Yard (South Bldg.), 2777 S. Crystal Dr., Arlington, VA. Deliveries are only accepted during the Docket Facility's normal hours of operation (8:30a.m. to 4 p.m., Monday through Friday, excluding legal holidays). Special arrangements should be made for deliveries of boxed information. The Docket Facility telephone number is (703) 305-5805.

Instructions: Direct your comments to docket ID number EPA-HQ-OPP-2008-0837. EPA's policy is that all comments received will be included in the docket without change and may be made available on-line at <http://www.regulations.gov>, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through [regulations.gov](http://www.regulations.gov)

or e-mail. The regulations.gov website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through regulations.gov, your e-mail address will be automatically captured and included as part of the comment that is placed in the docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment.

Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. Docket: All documents in the docket are listed in the docket index available at <http://www.regulations.gov>.

Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either in the electronic docket at <http://www.regulations.gov>, or, if only available in hard copy, at the OPP Regulatory Public Docket in Rm. S-4400, One Potomac Yard (South Bldg.), 2777 S. Crystal Dr., Arlington, VA. The hours of operation of this Docket Facility are from 8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The Docket Facility telephone number is (703) 305-5805.

FOR FURTHER INFORMATION CONTACT: Mike Mendelsohn, Biopesticides and Pollution Prevention Division (7511P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001; telephone number: (703) 308 8715; e-mail address: [mendelsohn.mike@epa.gov](mailto:mendelsohn.mike@epa.gov).

*(EPA December 2008)*

## [Pioneer Hi-Bred International, Inc.; Availability of Petition and Environmental Assessment for Determination of Nonregulated Status for Corn Genetically Engineered for Tolerance to Glyphosate and Acetolactate Synthase-Inhibiting Herbicides](#)

We are advising the public that the Animal and Plant Health Inspection Service has received a petition from Pioneer Hi-Bred International, Inc., seeking a determination of nonregulated status for corn designated as transformation event 98140, which has been genetically engineered for tolerance to glyphosate and acetolactate synthase-inhibiting herbicides. The petition has been submitted in accordance with our regulations concerning the introduction of certain genetically engineered organisms and products. In accordance with those regulations, we are soliciting comments on whether this genetically engineered corn is likely to pose a plant pest risk. We are also making available for public comment an environmental assessment for the proposed determination of nonregulated status.

DATES: We will consider all comments we receive on or before February 6, 2009.

ADDRESSES: You may submit comments by either of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov/fdmspublic/component/main?main=DocketDetail&d=APHIS-2008-0094> to submit or view comments and to view supporting and related materials available electronically.
- Postal Mail/Commercial Delivery: Please send two copies of your comment to Docket No. APHIS-2008-0094, Regulatory Analysis and Development, PPD, APHIS, Station 3A-03.8, 4700 River Road Unit 118, Riverdale, MD 20737-1238. Please state that your comment refers to Docket No. APHIS-2008-0094. Reading Room: You may read any comments that we receive on this docket in our reading room. The reading room is located in room 1141 of the USDA South Building, 14th Street and Independence Avenue SW., Washington, DC. Normal reading room hours are 8 a.m. to 4:30 p.m.,

Monday through Friday, except holidays. To be sure someone is there to help you, please call (202) 690-2817 before coming.

Other Information: Additional information about APHIS and its programs is available on the Internet at <http://www.aphis.usda.gov>.

FOR FURTHER INFORMATION CONTACT:

Dr. Natalia Weinsedel, Biotechnology Regulatory Services, APHIS, 4700 River Road Unit 147, Riverdale, MD 20737-1236; (301) 734-0809,

e-mail: [natalia.a.weinsedel@aphis.usda.gov](mailto:natalia.a.weinsedel@aphis.usda.gov).

To obtain copies of the petition or the draft environmental assessment, contact Ms. Cindy Eck at (301) 734-0667,

e-mail: [cynthia.a.eck@aphis.usda.gov](mailto:cynthia.a.eck@aphis.usda.gov).

The petition and the draft environmental assessment are also available on the Internet at [www.aphis.usda.gov/brs/aphisdocs/07\\_15201p.pdf](http://www.aphis.usda.gov/brs/aphisdocs/07_15201p.pdf) and [www.aphis.usda.gov/brs/aphisdocs/07\\_15201p.ea.pdf](http://www.aphis.usda.gov/brs/aphisdocs/07_15201p.ea.pdf).

(EPA December 2008)

### Gene-silencing Technique to be Deployed Against Soybean Fungus

The soybean rust fungus *Phakopsora pachyrhizi* may meet its match, thanks to a gene-silencing technique that scientists of the Agricultural Research Service (ARS) plan to deploy to identify genes that enable plants to naturally resist this fungal foe. Molecular biologist Kerry Pedley, at the ARS Foreign Disease-Weed Science Research Unit at Fort Detrick, Md., will use gene silencing to discover plant genes that play a role in orchestrating defense responses to *P. pachyrhizi* in resistant soybeans. The fungus causes substantial losses to soybeans worldwide, and its September 2004 detection in the continental United States has accelerated efforts to protect the \$18 billion U.S. soybean crop. Gene silencing allows scientists to identify a gene's function by disabling that gene in plants or other organisms, challenging the organism in some way—such as with exposure to a pathogen—and observing the consequences that result from that gene having been "missing in

action." In Pedley's studies, the gene-silenced plants will be inoculated with spores of *P. pachyrhizi*, and monitored for a breakdown in resistance. Pedley's research plan was the top-ranked in a total of 450 proposals recently submitted to the ARS Postdoctoral Research Associate Program. In honor of his top ranking among the proposals, Pedley has received the agency's T.W. Edminster Award, named for a former ARS administrator, plus \$120,000 to fund a postdoctoral associate position for two years. The ultimate goal of Pedley's research is to streamline the development of new soybean cultivars that can withstand *P. pachyrhizi*, which causes a foliar disease that severely weakens the plant and diminishes its seed yields and quality. Pedley is collaborating with Iowa State University scientists, and this award will expand upon those efforts. ARS officials also selected 50 other research proposals for two years of funding at \$100,000 per proposal under this year's Postdoctoral Research Associate Program. Other plans approved for funding include research on development of molecular-based pesticides for control of varroa mites in honey bees, methods to produce antimicrobial cotton wipes, use of remote sensing to monitor rangelands, and replacing fish meal with grain-protein concentrates in feed for Atlantic salmon production. ARS is a scientific research agency of the U.S. Department of Agriculture.

(By Jan Suszkiw, Agricultural Research Service November 5, 2008)

### Funding Opportunity

- Fairfax, VA – December 12, 2008 – The National Pest Management Association's charitable organization - the Pest Management Foundation - today issued a solicitation for grant proposals related to the management of structural pests and pests in urban and suburban environments. Any submission deemed worthwhile by the Foundation will be eligible for a grant of up to \$35,000. Eligible entities include, but are not limited to institutions of higher learning, non-profit

organizations, for-profit businesses, and individuals. While the solicitation lists specific project ideas, the Foundation is interested in any proposal that pertains to the management of pests in structures and urban and suburban environments. The Foundation recently funded research published by Cornell University, University of Kentucky, and Spokane Falls Community College researchers on the effectiveness of yellow jacket trapping, the efficacy of residential mosquito control, and various methods of controlling the black widow and hobo spiders. The Foundation also supported the World Health Organization's recently published research on the public health significance on public health pests, and is funding ongoing research on the efficacy of canines as bedbug detectors, the significance of an emerging invasive ant species in the Southeastern U.S., and the odorous house ant. "Our main intent is to generate the submission of numerous different proposals," said Gene Harrington, the executive director of the Foundation. "We recognize that there are countless valuable research ideas and issuing anything too prescriptive could preclude many worthy proposals. We look forward to carefully reviewing any and all proposals." The deadline for submissions is Friday, February 20, 2009 and the target for identifying a worthwhile applicant is by the end of April. The solicitation is available at <http://www.npmapestworld.org/PMFoundation>. Questions and proposals should be directed to Gene Harrington at [gharrington@pestworld.org](mailto:gharrington@pestworld.org) or 800-678-6722.

- The FY 2009 Extension Integrated Pest Management Coordination and Support Program (EIPM-CS) contains two components, the EIPM-CS Coordination Program and the EIPM-CS Support Program. Both programs support state and local contributions in advancing the goals of the National Roadmap for Integrated Pest Management (IPM) by addressing priority needs associated with the coordination, design, development, implementation, and evaluation of Extension IPM programs. EIPM-CS funds will help

agricultural producers and other pest managers adopt alternative pest management practices through training, demonstration, and evaluation of methods and strategies. All EIPM-CS efforts are intended to contribute to the achievement of National IPM goals through the demonstration and evaluation of IPM practices in production agriculture and other settings. Only Cooperative Extension Services at 1862 and 1890 Land-Grant Universities and Colleges are eligible to apply. Award recipients may subcontract to other organizations provided such organizations are necessary for the conduct of the project. Deadline: January 6, 2009 You can view the announcement at: <http://www.csrees.usda.gov/fo/extensionipmcoordinationandsupportprogram.cfm>

- The 2009 Educational Aids Competition is sponsored by the ED-208 Extension Committee of ASABE. All ASABE members are encouraged to submit their new extension materials for peer evaluation. New material is considered that which was produced in the 18 months prior to the entry deadline. Entries will be displayed at the annual meeting so others can become aware of the educational materials that have been developed. Beginning in 2009, winners will be recognized in print and with presentation of their Blue Ribbon Certificate at the Annual International Meeting Update and Recognition Luncheon. This is an opportunity to recognize authors who do exceptional work. Educational Aids are those aids which contribute to the understanding of agricultural engineering subjects. Major emphasis is placed upon how well the needs of the intended audience are met. **Entries should be submitted by a member of ASABE** within 18 months of publication. Please restrict entry to items that are new or greatly revised (include previous version if revised.) An entry can be submitted for judging in only one of the categories listed below. Entrants are limited to two entries per category. Bilingual publications, those in a non-English language, and translations will be accepted. Both an English and non-English version should be submitted. These must still meet this

requirement that the original publication was created within 18 months of the entry deadline. If you will submit a non-English language publication please contact the Category Judge early so a qualified judge or translator can be identified. **Educational Aids entries must be received on or before January 15, 2009.**

Please submit entries to appropriate judging coordinators as shown in the table below.

Notice that the entry form includes the criteria on which the entry will be judged. The judging coordinators will use the form as you submit it, so that all information on your entry is together.

1) Fill out the boxes on the first page of the entry form for your category, including the one person to notify if a blue ribbon is received, an explanation of the purpose and intended audience of your entry, and a brief description of how this educational aid meets a clear educational need or moves your educational program forward.

2) E-mail the form as an attachment along with your entry to the judging coordinator.

3) Electronic submission is preferred, but paper entries will be accepted. If you choose paper entry print the entire form and mail it with your entry to the judging coordinator listed for the category you are entering. If you have problems accessing or editing the entry form in MS Word, please contact: Thomas G. Franti, tfranti@unl.edu, (402)472-9872, to receive it in an alternative format.

All entries will be on display during the ASABE Annual International Meeting in Reno, Nevada, June 21-24, 2009. **You will be responsible for picking up your entry before 12 noon on the last day of the meeting.** The educational aids committee, ASABE, and meeting hosts assume no responsibility for entries not picked up. You can view the announcement at:

<http://www.asabe.org/awards/educomp/index.html>

- The ISE supports research, extension, and teaching activities that will enhance the capabilities of American colleges and universities to conduct international collaborative research, extension and teaching. ISE projects are expected to enhance the international content of curricula; ensure that faculty work beyond the U.S. and bring lessons learned back home; promote international research partnerships; enhance the use and application of foreign technologies in the U.S.; and strengthen the role that colleges and universities play in maintaining U.S. competitiveness. All U.S. 4-year institutions that award BS level degrees are eligible to apply. Deadline: January 16, 2009  
Amounts: maximum \$150,000 per award. For information contact: Patty Fulton 202-690-3852, pfulton@csrees.usda.gov. You can view the announcement at:  
<http://www.csrees.usda.gov/fo/educationinternationalscience.cfm>

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

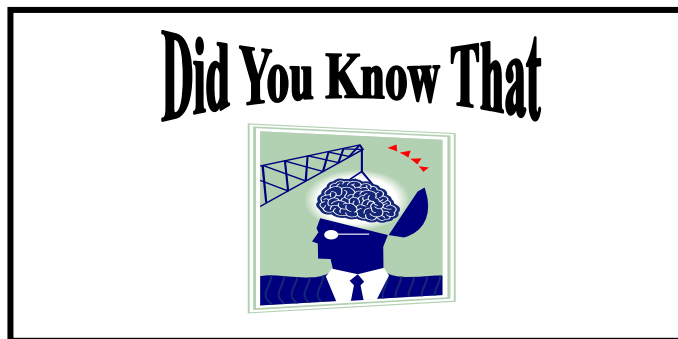
The National Plant Diagnostic Network (NPDN) is pleased to announce that the Online First Detector Training modules are up and running and can be found at: <http://cbc.at.ufl.edu/>. The site allows anyone to participate in the First Detector Program. The course is composed of several modules, and includes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



### Timing is Everything

It is necessary to apply pest management procedures at the proper time. Whether management will include chemical or other methods knowing the life cycle of your pest or host is the key. Fungal pathogens have specific times and conditions conducive to the spread of inoculum and chemicals need to be applied at the proper time for maximum cost effectiveness. Insect pests have specific life cycles and infective/damaging stages that need to be targeted. Also, knowing your host and how or when to prune, plant, or harvest to avoid causal agents of disease is important.



### Tree Farm Area Meetings 2009

#### Locations:

**Feb. 17:** Ramada Inn, Morgantown, WV

**Feb. 18:** WV Forestry Association, Ripley, WV

**Feb. 19:** New River Community College,  
Summersville, WV

#### For information:

Sherry Barnett: 304-372-1955, or send an e-mail to [wvtreefarm@wvadventures.net](mailto:wvtreefarm@wvadventures.net)

### 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).