THE CONNECTION

NEWSLETTER OF THE NORTH CENTRAL INTEGRATED PEST MANAGEMENT CENTER

North Central IPM Center

promoting environmental stewardship
and enhancing human health and safety.

february 2007

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NC IPM Center Welcomes Scott Martin

In January, Scott Martin joined the North Central IPM Center as the visiting Marketing and Communications Specialist.

Scott will be responsible for the overall design and creation of various center publications and special projects, including the North Central IPM Center Connections newsletter, annual reports, and First Detector Training literature for soybean rust. Scott will also play an active role in developing new marketing materials aimed at communicating the center's programs and goals.

Scott earned his Bachelor's degree from Illinois State University where he double majored in Public Relations and Communication Studies. He also holds a minor in Art. After his undergraduate studies were completed, Scott earned his Master's degree in Communication from San Diego State University.

As a graduate student at San Diego State, Scott was employed as a Communication Instructor where he taught over 150 students the art of public speaking. Most recently Scott was employed by the Magdalena Ecke Family YMCA where he served as a Marketing Associate and Graphic Designer.

If you have any thoughts, suggestions, or ideas on how to better communicate the message of the North Central IPM Center, please let him know. You can contact Scott at martinsd@uiuc.edu or (217) 244-9634.

Late Summer Outbreak Leads To Increased Alert for Soybean Rust

URBANA--Although soybean rust has caused little or no damage during the past two years, growers are advised to be on high alert during the coming season. One particular concern is a major change in the 2006 distribution of soybean rust and the over-wintering areas for the fungus that causes the disease, according to Glen Hartman, U.S. Department of Agriculture plant pathologist in the Department of Crop Sciences at the University of Illinois.

"The current situation is different than it has been during the last two years," Hartman said. "There has been a marked increase in the size and location of the areas where the fungus occurs since moving into the upper Midwest late in the 2006 growing season and where it will potentially overwinter this year. That presents the real possibility that there could be an increased threat to the major growing areas during 2007."

In 2005, the fungus that causes the disease overwintered only in a few areas of southern Florida. Last year, the fungus stayed mostly in parts of Florida, Georgia, and Alabama, before spreading into the lower Mississippi River Valley and to the Midwest late in the growing season.

"During the 2006 season, rust infection and spores occurred over large sections of Louisiana," Hartman said. "This is especially significant because spores from that part of the country have a direct pathway up the Mississippi River Valley into Illinois and other major soybean growing areas in the Midwest. The situation has changed enough that soybean growers will need to be on heightened alert during the early part of the growing season."

Hartman notes, however, that there still could be a hard freeze that would serve to greatly reduce the risk of a major outbreak."

But, if we have a mild or even average winter, the situation could be set up for an earlier development of rust," Hartman said. "At the same time, rust could still remain in check if we have a very dry spring. The outcome will be dictated by the early season weather in the south. Right now, rust on kudzu has been found much farther north and west compared to the previous two winters."

He points out that any spread of the fungus into the Midwest soybean-growing region will most likely be preceded by a major build up of rust in the South. The result would be a huge amount of spores that could be swept north with the prevailing moisture from the Gulf of Mexico.

"It is important for growers to keep an eye on what is going in Louisiana, Alabama, and Mississippi during the spring and early summer," Hartman said. "If we see lots of rust building up in those areas of the country during that part of the season, the threat from the disease reaching soybean fields in much of the Midwest will go up considerably."

Hartman notes that growers in Illinois have access to a great deal information on rust from groups such as the USDA, the Illinois Soybean Association, the North Central Soybean Research Program, the Illinois Department of Agriculture, and University of Illinois Extension.

"One of the most important tools for monitoring the situation is the soybean sentinel network," Hartman said. "This system for keeping track of the spread of rust is operating in more than 30 soybean-producing states. Detailed information is provided by the USDA on its soybean rust information website. A map on the website is used to clearly indicate each county where rust has been diagnosed."

The map covering the entire country is located on the USDA's website at http://www.sbrusa.net/. Reports from the sentinel plots in Illinois and other useful information on rust can be found at www.soybeanrust.org.

"Growers should check the map frequently as the spring season moves along," Hartman said. "Rust will not show up in Illinois out of nowhere. The key will be when the map begins to light up in northern Kentucky and Arkansas and southern Missouri. When that happens, they can begin to take appropriate actions based on their own risk tolerance."

Another important consideration will be the timing of an impending outbreak of rust. Hartman notes that the disease could cause some significant problems as late as the first part of August.

"After about mid-August the level of concern is much less," Hartman said. "The worst case scenario would be if rust shows up during mid-season and spreads all over the state. The arrival of the disease when the plants are flowering in June or early July would be a major concern. That means that growers would probably have to spray twice with a fungicide to control the problem."

Even so, the application of a fungicide has proven to be quite effective in controlling the disease. Additional research is under way to improve the timing of the applications. Other work is moving ahead on the long-term goal of developing soybean varieties with resistance to rust.

"There certainly is no reason for growers to overreact about the current situation," Hartman said. "The key is for them to maintain their vigilance. They should take the time to closely monitor the situation through the first part of the growing season. If a problem develops, they will have plenty of time to take whatever steps fall within their own risk tolerance."

EPA Rules Out Wood Preservative ACC for Residential Use

Maintaining the highest standards in the world for pesticide safety, EPA is taking legal action to deny the registration for acid copper chromate, commonly known as ACC, for residential use.

EPA's scientific review process concluded that the risks associated with residential uses of ACC outweigh the minimal benefits. The proposed residential uses of ACC would pose a cancer risk to treatment and manufacturing workers, as well as non-cancer risks to homeowners, children and contractors.

In addition, disposal of the ACC-treated wood could require that it be handled and disposed of as a hazardous waste since the wood may contain high levels of chromium. ACC contains hexavalent chromium, a known human carcinogen when inhaled and a dermal irritant and sensitizer.

Western Bean Cutworm Teleconference Training

Regional field crop entomologists Kevin Steffey, University of Illinois; Marlin Rice, Iowa State University; Eileen Cullen, University of Wisconsin; Gary Hein, University of Nebraska; and Dave Feltes, University of Illinois Extension IPM Educator, are planning a regional educational opportunity to assist growers address an emerging pest in the region, the western bean cutworm.

WESTERN BEAN CUTWORM SHORT COURSE
a distance education short course

February 28, 2007
9:00 am - 12:00 pm (CST)

Until 2000, the western bean cutworm, *Richia albicosta* (Smith), occurred no farther east than western Iowa. From 2000 through 2006, the range of this corn ear-attacking pest expanded rapidly to the east. From 2000 through 2004, western bean cutworms were annually found farther east in Iowa. Moths were found in pheromone traps for the first time in Illinois and Missouri in 2004. In 2005 and 2006, an extensive pheromone trap network coordinated by specialists at Iowa State University provided ample evidence that the range of the western bean cutworm had expanded as far east as Indiana, Michigan, and Ohio. Reports of significant damage caused by western bean cutworms to corn ears have been common in Iowa for a few years, and noticeable injury was documented in some areas of Illinois, Minnesota, and Wisconsin in 2006. As the distribution of the western bean cutworm continues to expand and the insect becomes an established pest in new areas, corn growers will have to include this pest in their corn insect management plans.

So, what do we know about the western bean cutworm, and what do we need to know? How can corn growers prepare for its management in 2007? Answers to these questions will be provided on February 28, 2007, during a short course delivered via distance education technology to sites in at least four states. Entomologists from Illinois, Iowa, Nebraska, and Wisconsin will deliver the program:

- Review of the situation, 2000–2006 (Iowa, Illinois, Wisconsin, and elsewhere)
- History and biology of the western bean cutworm
- Economic impact
- Look alikes—moths and larvae
- Managing western bean cutworms—trapping, degree-days, scouting, economic thresholds, making management decisions
- Options for control

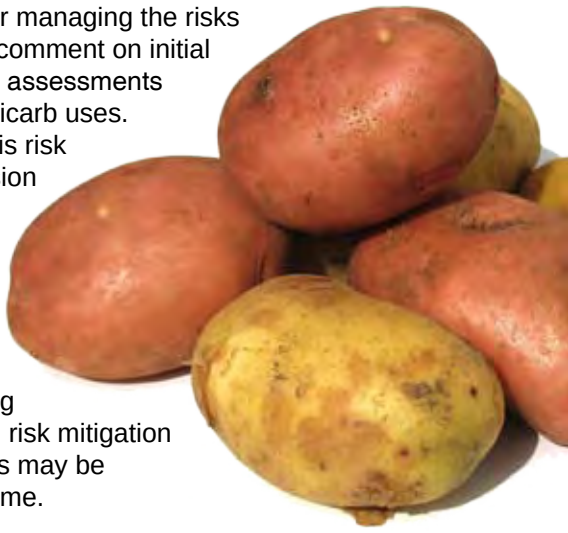
Sign-in for the short course will begin at 8:30 a.m., the program will begin at 9:00 a.m., and a question-and-answer session from 12:00 noon to 12:30 p.m. will conclude the program. Interaction among presenters and the audience will be encouraged.

The anticipated audience for this short course will be corn growers, members of state corn associations, agribusiness professionals (CCA CEUs will be applied for), Extension personnel, and other interested groups. Look for promotional information from state Extension groups and other organizations.

Extension personnel and other individuals interested in hosting the short course should register at http://www.ncipmc.org/teleconference/register.cfm?id=4. There is no cost for the program, which is sponsored by the North Central IPM Center, although site hosts may elect to charge a small fee to cover the costs for refreshments, room charges, copying, and related expenses.

Aldicarb Risk Management Suggestions Invited

EPA has released for public comment revised human health and ecological risk assessments for the N-methyl carbamate pesticide aldicarb. Aldicarb poses certain drinking water and ecological risks, but also provides substantial benefits to agriculture. The Agency is encouraging the public to submit information and suggestions for managing the risks of aldicarb, and to comment on initial impacts or benefits assessments for a number of aldicarb uses. After completing this risk management decision for aldicarb, EPA will complete a cumulative risk assessment for the N-methyl carbamate pesticides, including aldicarb. Additional risk mitigation for dietary concerns may be necessary at that time.



A systemic insecticide, acaricide and nematicide, aldicarb is registered for use on agricultural crops including citrus, cotton, dry beans, peanuts, pecans, potatoes, sorghum, soybeans, sugar beets, sugarcane, and sweet potatoes, and on seed alfalfa in California. Aldicarb also may be applied to tobacco, field grown ornamentals in California, and coffee grown in Puerto Rico. Aldicarb is classified as a Restricted Use Pesticide. No aldicarb products are intended for use in residential settings.

While aldicarb provides significant benefits to crop growers, it also presents certain risks of concern. Aggregate food and water dietary risks to infants less than one year of age are associated with aldicarb residues leaching to rural drinking water wells in peanut and cotton growing regions of the southern coastal plain (Alabama, Georgia, and South Carolina). Ecological risks are posed to birds, mammals, fish, and aquatic invertebrates. The Agency is requesting information on effective and practical measures to mitigate these risks.

Chloropicrin Risk Assessments Available for Comment

EPA is requesting public comment on the Agency's human health and ecological risk assessments for chloropicrin, a non-selective, pre-plant soil fumigant used in the production of tobacco, tomatoes, strawberries, and other crops. Chloropicrin is used alone and in combination with other soil fumigants. EPA is concurrently assessing the risks of five soil fumigant pesticides, including chloropicrin, to ensure that its assessment approaches are consistent and to ensure that risk trade-offs and economic outcomes can be adequately predicted in reaching risk management decisions.

A fungicide, herbicide, insecticide, and nematicide, chloropicrin is used primarily for pre-plant soil fumigation in agricultural crops and greenhouses, most often in combination with methyl bromide or telone. Chloropicrin also is used in the fumigation of empty grain and storage bins, tree replant sites, and wood telephone poles and timber.

North Central IPM Center Evaluation and Measurement Teleconference

On September 7, 2006 the North Central IPM Center conducted an Evaluation and Measurement Training Teleconference. Susan Ratcliffe, Co-Director of the North Central Region IPM Center, coordinated the program. Carol Pilcher (Iowa State University) and Michelle Miller (University of Wisconsin) served as the speakers for the teleconference. A total of 145 individuals from 27 states, the District of Columbia and the Virgin Islands participated in the two-hour teleconference.

The purpose of the teleconference was to provide an overview of program evaluation by addressing the following topics: (1) commenting on the increasing need to conduct program evaluation (i.e., increased focus on accountability), (2) introducing a useful program evaluation framework (i.e. Logic Models[1]), (3) providing a "real-world" example of program evaluation and (4) leaving participants with useful sources of information and references to conduct their own program evaluations.

Individual presentations included:
Program Evaluation: Why Is It So Important? (Carol Pilcher)
Program Evaluation: How to Effectively Evaluate Your Own Program (Carol Pilcher)
Developing a Project with Measurable Goals: The Wisconsin Eco-Apple Project (Michelle Miller)
Program Evaluation: Useful Sources of Information (Carol Pilcher)

At the end of the teleconference, participants were asked to complete a post-training survey. Of the 145 participants, 80 completed the survey (55% response rate). Individuals were asked to rate their knowledge of two general concepts (i.e., program evaluation and Logic Models) prior to the conference and at the conclusion of the conference. These questions had response options ranging from (1) "Low Level of Knowledge" to (5) "High Level of Knowledge". Results indicate that the teleconference resulted in an increased level of knowledge for participants.

Means for Teleconference Participants

Knowledge Factor	Mean
Knowledge of Program Evaluation Prior to Teleconference	2.90
Knowledge of Program Evaluation After Teleconference	3.89
Knowledge of Logic Models Prior to Teleconference	2.76
Knowledge of Logic Models After Teleconference	3.72

In addition, the participants were asked to rank the usefulness of the information provided during the teleconference. This question had response options ranging from (1) "Strongly Disagree" to (5) "Strongly Agree". Overall, the participants "Agreed" that the information presented in the teleconference was useful (mean 4.16). The individuals also were asked to rate the conference from (1) "Poor" to (5) "Excellent". The teleconference received a "Very Good" rating (mean 3.76).

The participants were then asked to identify one program evaluation concept they planned to adopt as a result of the teleconference. Many participants planned to implement the Logic Model framework to evaluation their programs.

1 University of Wisconsin-Extension. Program Development and Evaluation Unit Web site.

Participants had these comments:

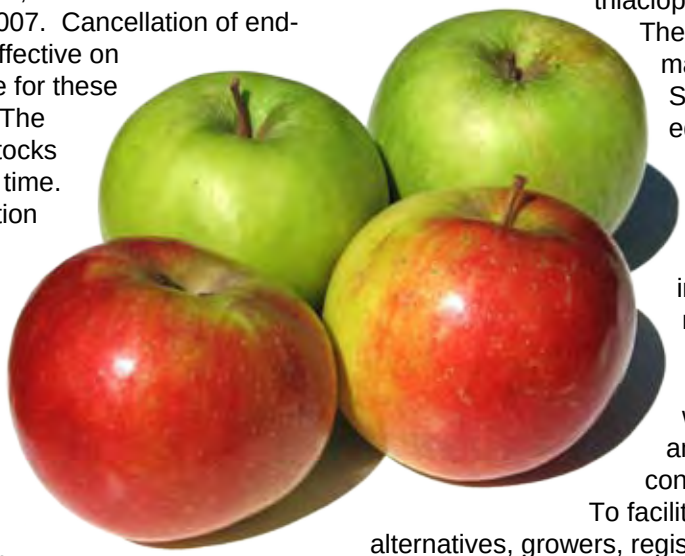
- *Employ the Logic Model (planning, research proposals, evaluation).*
- *I will adopt/use the Logic Model in my program planning and evaluation.*

Many participants indicated that they would use the information presented in the teleconference for their specific programs. These comments suggest that the teleconference provided useful information for participants to transfer knowledge from the presentation to their area of expertise.

To view the archived training session, please visit http://ncipmc.org/teleconference/evaluation/videos.cfm.

Remaining Lindane Registrations Cancelled

EPA has issued final orders cancelling the registrations of all remaining pesticide products containing lindane. Technical (manufacturing use) products were cancelled effective October 4, 2006, and the last date for use of these products will be July 1, 2007. Cancellation of end-use product registrations will be effective on July 1, 2007, and the last use date for these products will be October 1, 2009. The Agency expects that all existing stocks of lindane will be depleted by that time. This action results in the cancellation of all remaining lindane pesticide products registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) for use in the United States.



Lindane is a broad spectrum, organochlorine insecticide used to treat the seeds of barley, corn, oats, rye, sorghum, and wheat. EPA announced in early August 2006 that it had determined that the risks of continued lindane registration outweigh the benefits, and therefore the remaining uses of lindane are not eligible for reregistration. EPA expects the cancellation of these uses to result in no significant loss to U.S. agriculture due to the successful development and registration of safer alternative pesticides in recent years. Once the cancellation process is complete, EPA will propose to revoke the existing tolerances (or allowable residues of lindane) for animal fat.

The six seed treatment use cancellations are the last of many lindane voluntary cancellations that have taken place since the Food Quality Protection Act of 1996 (FQPA) was enacted. Lindane is a toxic, persistent, and bio-accumulative pesticide that has been of international as well as domestic concern.

Phaseout of Azinphos-methyl Marks Milestone in Protection of Human Health and the Environment

EPA has issued its decision to phase-out the remaining uses of the organophosphate (OP) insecticide azinphos-methyl (AZM) over the next several years. Under the agreement,

• Brussels sprouts and nursery stock will be phased out by September 30, 2007;
• Almonds, pistachios and walnuts by October 30, 2009;
• Apples, blueberries, cherries, parsley, and pears by September 30, 2012.

All other uses of AZM have been voluntarily cancelled by the registrants. During the phase-out, additional use restrictions will help minimize risks. For example, reduced annual application rates will be phased in, buffers for water bodies will be increased, and buffers for occupied dwellings will be added. The Agency expects growers to successfully adapt and make the transition to available safer alternative pesticides, including acetamiprid, lambda-cyhalothrin, methoxyfenozide, novaluron, tebufenozide, thiacloprid, and thiamethoxam.

The registrants will develop training materials in both English and Spanish that are designed to educate workers regarding (1) work practices that can reduce exposure to AZM; (2) the recognition of symptoms associated with cholinesterase inhibition; and (3) how to seek medical attention in the event that workers experience such symptoms. These materials will include a description of how, and by whom, the training will be conducted.

To facilitate the transition to safer alternatives, growers, registrants, and other stakeholders will meet with EPA periodically during the phase out to discuss alternatives to AZM, as well as newer pesticides in the pipeline to replace AZM. The EPA has established the AZM Workgroup and Co-Director Larry Olsen is on the panel.

Methyl Bromide for U.S. 'Critical Uses' Continues Steady Decline under International Ozone Layer Protection Treaty

At the 18th Meeting of the Parties to the Montreal Protocol in New Delhi, India, the United States was authorized 91 percent of its request for critical use allocations of the ozone-depleting soil fumigant methyl bromide for the year 2008. The amount authorized at the New Delhi meeting represents 21 percent of the nation's 1991 baseline consumption (U.S. baseline is 25,528 metric

tons). Some 18 percent of baseline (4,595 metric tons) will be authorized new production and import, and the remainder will come from pre-phaseout inventories. EPA will allocate these quantities to users with critical needs through the notice-and-comment rulemaking process.

As methyl bromide alternatives have been adopted and uses scaled back, the quantity of the critical use exemption in the United States has decreased steadily -- the authorizations have decreased from 9,553 metric tons for 2005 to 8,082 metric tons for 2006 and 6,749 metric tons for 2007. The authorization for 2008 continues the downward trend.

The level of pre-phaseout inventory has also continued to decrease – from approximately 16,422 metric tons in 2003 to 12,994 metric tons in 2004 and 9,975 metric tons last year. The United States has substantially reduced methyl bromide consumption since the early 1990s, and is committed to further reductions of methyl bromide use as alternatives

North Central IPM Center Stakeholder Panel Annual Meeting

During their annual meeting (October 2006) in St. Louis, the North Central IPM Center Stakeholder Panel began development of a strategic plan. The plan defines the mission of the North Central IPM Center, articulates the Center's goals and identifies strategies to achieve the goals through core activities. The strategies to achieve the goals are under review by the Stakeholder Panel. Upon finalization of the strategies, core activities will be added to the plan. The mission statement and goals are aligned with the National IPM Roadmap. To view the Roadmap, please visit http://ncipmc.org/ipmroadmap/index.cfm.

North Central IPM Center Mission Statement: To provide leadership and cooperate with our partners in promoting and improving the economic, environmental and human health benefits of IPM adoption.

North Central IPM Center Goals: 1) Improve economic benefits of adopting IPM practices; 2) Reduce potential risks to human health; and 3) Reduce potential risks to the environment.

Upcoming Soybean Aphid Teleconference

The overwintering populations of soybean aphids are very high in some areas of the Midwest, so there is significant potential for damaging soybean aphid infestations in 2007. Natural enemies can play a significant role in regulation of soybean aphids populations in 2007, so their conservation early in the summer is vital.

A short course delivered via distance education technology will address many aspects of soybean aphid biology and management for 2007.

Kevin Steffey, University of Illinois will serve as moderator during for the training session and has coordinated the development of this program with other regional entomologists.

MANAGING SOYBEAN APHIDS IN 2007 - HOW WILL BIOLOGICAL CONTROL CONTRIBUTE
a distance education short course

MARCH 6, 2007
8:30 am - 12:30 pm (CST)

Program participants will receive the most current knowledge about managing soybean aphids in 2007 from experts in the field.

Topics addressed during the short course will include**:**

- Brief history and biology of soybean aphids, David Voegtlin (Illinois Natural History Survey)
- Review of the situation with soybean aphids in the Midwest, Dave Ragsdale (University of Minnesota)
- Biological control of soybean aphids—What is it, and what do we have to work with in the U.S.?, Bob O'Neil (Purdue University)
- The Players: Predators, parasitoids, pathogens, Dan Mahr (University of Wisconsin) and Kelley Tilmon (South Dakota State University)
- Practices to conserve and use natural enemies in soybean aphid IPM, Matt O'Neal (Iowa State University)
- Introducing new natural enemies into the U.S., Bob O'Neil
- Natural Enemies: Foreign exploration, Kim Hoelmer (USDA/ARS, Delaware)
- Natural Enemies: Host specificity testing, George Heimpel (USDA/ARS, Minnesota)
- Natural Enemies: Studies with non-target aphids, Claudio Gratton, Cory Straub (University of Wisconsin)
- Preparing for soybean aphids in 2007—Management guidelines, and the potential for biological control, Chris DiFonzo (Michigan State University)
- What is it we don't know that will help us?, Marlin Rice (Iowa State University)

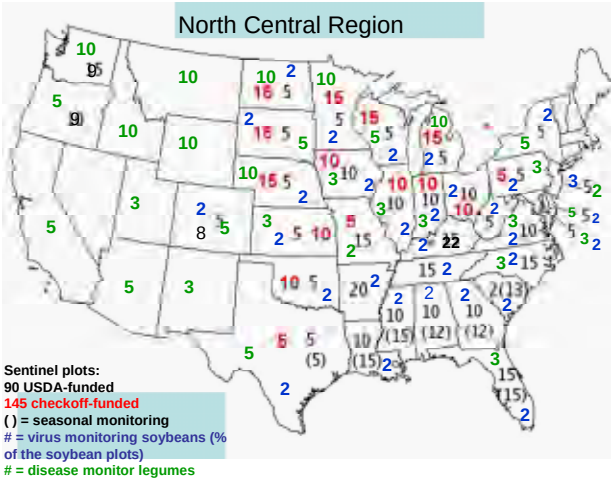
For more information and to register for the short course, please visit http://www.ncipmc.org/teleconference/.

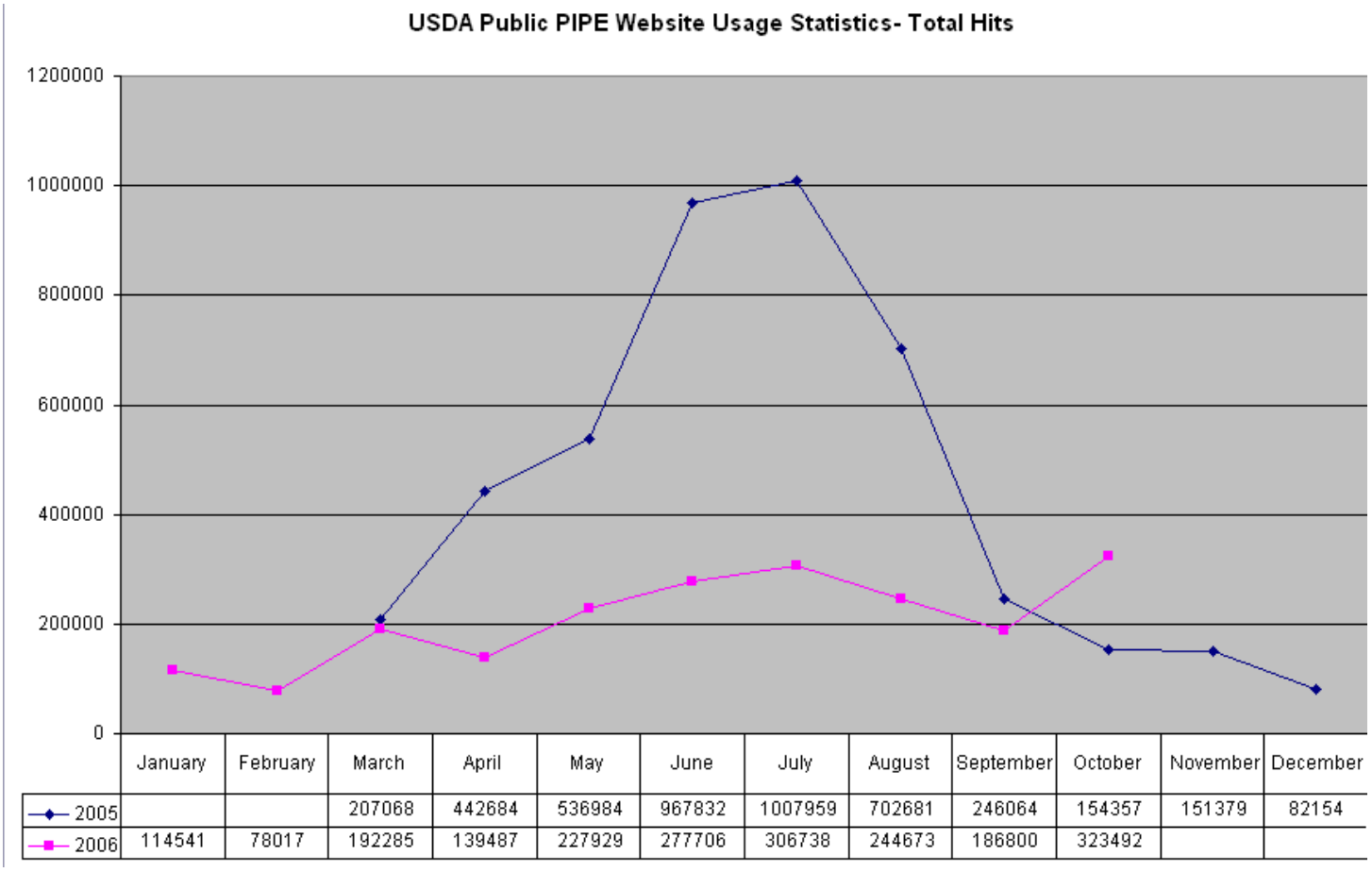
Pest Information Platform for Extension and Education (PIPE): Usage Statistics and the 2007 Sentinel Plots

Perhaps the best indicator of interest and usefulness of the new PIPE system is the number of hits throughout the 2005 and 2006 seasons. With the presence of soybean rust, *Phakopsora pachyrhizi*, in the United States confirmed in November, 2004 it is not surprising the PIPE web site was visited frequently throughout the 2005 growing season with a peak in July with over one million hits. Due to the limited movement of the pathogen during 2005 and what

appeared to be low levels of inoculum early in the 2006 growing season, the number of hits in 2006 was much less than 2005. About the time many growers were harvesting the 2006 soybean crop, reports of soybean rust in the Mississippi River Valley began to come in from Extension Plant Pathologists. While the pathogen was not a threat to the soybean crop, it piqued the interest of individuals as evidenced by the number of hits in October, 2006.over twice the number for October 2005. By providing "on-demand" pest information, the PIPE system and Extension specialists are meeting the needs of the growers. During 2007, the PIPE project will add a Legume component that will aid in assessing virus incidence in legumes.

2007 sentinel plot system





	January	February	March	April	May	June	July	August	September	October	November	December
2005			207068	442684	536984	967832	1007959	702681	246064	154357	151379	82154
2006	114541	78017	192285	139487	227929	277706	306738	244673	186800	323492		

NC IPM Center Enhancement RFP Results

The IPM Center released a Request for Proposal by Implementation, Working Groups and Documents grants on September 28, 2006. By October 27 we received 33 letters of intent to submit proposals. By the due date of November 27 we received 13 proposals for new projects and 11 proposals for additional year funding. On January 23 we convened a peer review panel to review and rank proposals to be funded or renewed this year. On January 26 the Steering Committee and Directors met via conference call to discuss the peer review panel's recommendation for funding the top rated proposals.

We decided to:

- fund five new Implementation projects
- fund one new Document project
- provide second year funding to seven existing Implementation projects
- provide final year funding for four Working Groups

We are working with our Contracts and Grants office to move the funds out to the PIs before the season begins so they have time to comlete their projects this year.

NEW IMPLEMENTATION PROJECTS

Institution	PI	Title	Amount
Michigan State University	Mathieu Ngouajio Mary Hausbeck	Alternative Planting Methods for Management of Soil-borne Diseases in Asparagus	$48,595
University of Minnesota	Mary Meyer Dan Miller	Development of Educational IPM Exhibits at the Minnesota Landscape Arboretum	$18,750
University of Minnesota	Mike Ascerno Mike McDonough	Distance Delivery of Integrated Pest Management Training	$51,745
Michigan State University	Karen Renner Erin Hill Christy Sprague Dale Mutch	Advancing Existing Knowledge of Integrated Weed Management	$84,798
Michigan State University	William Kirk Phil Wharton Kathleen Baker	Managing Late Blight of Potato in the NCR by Combining Weather Based Disease Risk Management Systems with Web-based and Traditional Information Delivery Systems	$49,908

NEW DOCUMENTS PROJECT

Institution	PI	Title	Amount
South Dakota State University	Brad Ruden	Sunflower Pest Management Strategic Plan	$5,000

EPA SAP Workshop:

As Co-Director of the NC IPM Center, Larry Olsen has agreed to represent the Centers at EPA on issues related to worker and occupational exposure to pesticides. In this role Larry testified on January 9, 2007 before the EPA Scientific Advisory Panel on "Review of Worker Exposure Assessment Models" used by EPA to determine registration, reregistration and risk mitigation measures for handler and worker occupational exposures. Following is a small portion of Larry's comments on the issues being considered by the SAP review panel.

1. Data needs:

"To more fully evaluate agricultural handler worker safety, there needs to be an emphasis on improving the database of exposure data that exists in the Pesticide Handlers Exposure Database (PHED) for use in risk assessments. Many of the studies now in PHED do not meet current Good Laboratory Practices requirements. Studies will need to be conducted where exposure is measured using modern application equipment (over the row applicators or air-curtain sprayers), pesticide formulations (seed treatment with polymer coatings which eliminate dust) and application techniques (lock and load which prevents any exposure). It is

important for the data to be high quality, peer reviewed and applicable to all pesticide handlers.

Similarly, to generate more refined agricultural reentry worker risk assessments, there will need to be a more comprehensive database to estimate worker exposure for more worker activities involving a greater number of workers and conducted in multiple locations.

For both agricultural handlers and agricultural reentry workers, protocols for full body exposure estimates and bio-monitoring need to be developed and standardized so all who conduct the studies will be able to provide high quality data that EPA can use in probabilistic risk assessments. Also, the descriptions of worker and handler activities needs to be reassessed from the current 1,200+ activities to more fully reflect the actual exposure scenarios. All this will take time and resources, but will result in greater safety to pesticide users and those who work in pesticide treated fields.

General comments:

I strongly urge the EPA office which approves the final decisions on pesticide risk mitigation measures to remember the Land Grant University system. I suggest the EPA office develop a list serve for outreach to share the results of the decisions with the Land Grant University and state department of agriculture partners in pesticide education. Including us in the distribution will tremendously aid in the awareness of your decisions, and provide applicators the information they need to comply with the label changes through attendance at Extension pesticide applicator training sessions.

The North Central IPM Center has made it easier to access the archived training teleconferences as streaming videos by adding “training videos” to the educational resources pull-down menu for its web site. Or you may access the training video web page directly by visiting http://www.ncipmc.org/videos/index.cfm.

The Great Lakes Vegetable Working Group has a web site that provides information about their membership and many links to related resources. To view their site, please visit http://glvwg.ag.ohio-state.edu/.

Many agricultural producers may not appreciate how their actions affect water quality, nor are they fully aware of what environmental requirements apply to them, what actions they can take to meet those requirements, and what incentive programs are available to them. North Carolina State University, in partnership with NC A&T State University, Cornell University, California Polytechnic University, Purdue University, University of North Carolina at Chapel Hill, US EPA, USDA-CSREES, and Ice.Nine Environmental Consulting, have developed an educational resource for agricultural producers and agricultural service professionals to help them.

This resource is presented as a web site that contains extensive information, as well as links to additional detailed information. Printable fact sheets that summarize major points are available for use in other settings. The web site is titled “A Farmers Guide to Agriculture and Water Quality Issues,” and is broken down into five major water quality focus areas:

-- Erosion and sediment control;
-- Nutrient management;
-- Pesticides;
-- Pathogens; and
-- Wetlands and riparian area protection.

The website material is national in scope. Much of the content is available in Spanish, as well as English. Information providers, such as Cooperative Extension Agents and NRCS District personnel, will find the site useful for conducting outreach. Please visit the website at http://www.cals.ncsu.edu/wq/wqp. The site is also linked to US EPA’s AgCenter at http://www.epa.gov/agriculture. The web site’s home page offers access to feedback forms where users can send comments, corrections, and questions about both the web pages and the fact sheets to staff at NCSU.

Illinois Natural History Survey--Educational Publication

New Invaders Watch List: An Early Detection and Rapid Response Network to Limit the Spread of New Invasive Exotic Species in the Chicago Area

by Michael R. Jeffords and Carie Nixon

The laminated card set contains 15 new plant and two new insect invaders for the Chicago area. The cards have photos of the invaders and include descriptions, line drawing(s) provided for several invaders, plus descriptions of look-alikes. The set is designed to help volunteers identify and report the occurrence of exotic and invasive plant and insect species not known from or currently rare in the Chicago Wilderness Area. Cost is $2 for each set, plus postage.