

Look What's Out There

in

Integrated Pest Management

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Lawn Pesticide Awareness

The application of pesticides such as herbicides and fungicides to lawns is common during the spring and summer months and people must take precautions to avoid exposure to the chemicals used to treat these areas. Once a lawn or grassy area has been treated, placement of warning flags around the treated area is required. Many people do not know the meaning of these pesticide warning flags. The flags indicate that poisonous chemicals have been applied to the turf and that everyone, especially children, should STAY OFF THE GRASS. Often the rule of thumb is that everyone should stay off the treated area for at least 24-hours or longer if possible. A longer wait time reduces the risk of tacking pesticide residue into indoor environments where it can persist in carpet or household dust for days or even months, further exposing children, adults and pets to these chemicals. Exposure to pesticides can lead to respiratory ailments and hyperactivity or attention deficit disorder in children and have been linked to diseases such as Parkinson's disease and non-Hodgkin's Lymphoma. As spring approaches watch for pesticide caution signs so you can avoid exposure. One way to eliminate pesticide exposure is to eliminate pesticide use. If you plan on applying pesticides to your lawn, be aware of the facts about the chemicals you want to use and consider if it is really necessary to use them and risk exposing yourself to these sometimes harmful compounds. Today, many parks, playing fields, and private lawns are being

converted to organic land care. The National Coalition for Pesticide-Free Lawns has numerous resources and works toward these goals. (*Beyond Pesticides Mar 2007*)

Declining Honeybee Populations

According to an article in the New York Times last week, beekeepers from 24 states in the US have been finding that bees are inexplicably disappearing at an alarming rate. The bee losses are ranging from 30 to 60 percent on the West Coast, with some beekeepers on the East Coast and in Texas reporting losses of more than 70 percent; beekeepers consider a loss of up to 20 percent in the off-season to be normal. This loss of honeybees threatens not only beekeeper livelihoods but also the production of numerous crops, including California almonds, one of the nation's most profitable crops. David Bradshaw was shocked to discover that as of February of this year half of his 100 million bees were missing and stated that he had never seen anything like it. "Box after box after box are just empty" said the California beekeeper. This is the first national affliction that beekeepers have encountered. Bees are flying off in search of pollen and nectar and simply never returning to their colonies. And nobody knows why. Researchers say the bees are presumably dying in the fields, perhaps becoming exhausted or simply disoriented and eventually falling victim to the cold. Investigators are exploring a range of theories, including viruses, pesticides, a fungus and poor bee nutrition. Mites have also damaged

bee colonies, and the insecticides used to try to kill mites are harming the ability of queen bees to spawn as many worker bees. The queens are living half as long as they did just a few years ago. While researchers are scramble to find answers to the syndrome they call “colony collapse disorder,” growers are becoming openly nervous about the capability of the commercial bee industry to meet the growing demand for bees to pollinate dozens of crops, from almonds to avocados to kiwis. Over the last two decades, the number of beehives, now estimated by the U.S. Department of Agriculture to be 2.4 million, has dropped by a quarter and the number of beekeepers by half. “There are less beekeepers, less bees, yet more crops to pollinate,” stated Zac Browning, vice president of the American Beekeeping Federation. The sudden mysterious loss in honeybee populations highlights the critical link that honeybees play in the long chain that gets fruit and vegetables to supermarkets and dinner tables across the country. A Cornell University study has estimated that honeybees annually pollinate more than \$14 billion worth of seeds and crops in the United States, mostly fruits, vegetables and nuts. Mr. Browning estimates that every third bite we consume in our diet is dependent on a honeybee to pollinate that food. The news of honeybee losses comes amidst a recent trend of declining pollinator populations. An October 2006 report by the National Research Council found that long-term population trends for some North American pollinators – including bees, birds, and bats – are “demonstrably downward.” The U.S. Senate (S.Res. 580) and the U.S. Department of Agriculture has designated June 24-30, 2007, as National Pollinator Week. The Pollinator Partnership offers resources, as well as a listing of Pollinator Week events happening across the country for those who want to be involved. (*Beyond Pesticides Mar 2007*)

EPA Phosmet Restricted-Entry Intervals

EPA has issued its final decision on the restricted-entry intervals (REIs) for nine uses of the organophosphate (OP) pesticide phosmet being used as an alternative to azinphos-methyl

on several major crops including apples, blueberries, and pears because of the phasing out of azinphos-methyl due to occupational and ecological concerns. Consistent with EPA’s June 2006 proposal, most REIs will be lengthened and additional mitigation will be implemented to protect workers and bystanders. This risk mitigation will be included on labels of phosmet products sold or distributed by the registrant after June 2008. The nine uses include: apples (including crabapples), apricots, highbush blueberries, grapes, nectarines, peaches, pears, plums, and prunes.

Additional mitigation includes:

- lower seasonal maximum application rates
- prohibition of phosmet application until after certain high-exposure activities have occurred
- a 25-foot buffer zone around occupied dwellings for ground applications
- a 50-foot buffer zone around occupied dwellings for aerial applications
- health protective entry restrictions for pick-your-own operations

Additional biomonitoring or other data is also required to address residual uncertainties in the existing data base. After evaluating the risks and benefits of phosmet use, EPA found in its 2001 Phosmet Interim Re-registration Eligibility Decision (IRED) that 36 uses were eligible for re-registration, three uses would be cancelled, and nine uses would be available on a time limited basis for a period of five years, contingent on the submission of biomonitoring and other data by Gowan Company, the sole technical registrant. EPA announced in the IRED that it would reevaluate these uses in 2006, and this decision completes that process.

The phosmet decision document and supporting materials are available electronically in docket number EPA-HQ-OPP-2002-0354 at [Regulations.gov](http://www.epa.gov/oppssrd1/op/phosmet/phosmet_summary.htm). For a summary of phosmet go to: http://www.epa.gov/oppssrd1/op/phosmet/phosmet_summary.htm (*EPA Jan 2007*)

EPA Risk Mitigation for Rodenticides

The EPA's announces the availability of their proposed risk mitigation decision for nine rodenticides, the economic impact assessment for the proposed risk mitigation decision, the revised comparative ecological risk assessment, updated human health and ecological incident reports, and other related documents, and opens a 60-day public comment period on the proposed risk mitigation decision. The nine rodenticides covered by this risk mitigation decision are brodifacoum, bromadiolone, difethialone, chlorophacinone, diphacinone, warfarin, zinc phosphide, bromethalin, and cholecalciferol. As part of the proposed risk mitigation decision, EPA anticipates classifying all products containing the active ingredients brodifacoum, bromadiolone, and difethialone as restricted use products. EPA also anticipates requiring that all products available for sale to consumers be sold only in refillable tamper-resistant bait stations. Furthermore, EPA is proposing certain additional restrictions and labeling improvements to mitigate the risks associated with these nine rodenticides.

(EPA Dec 2006)

Agricultural and Environmental News

Natural Enzyme Deters Corn Feeding Insects

According to an Agricultural Research Service (ARS) studies, genes for producing the enzyme β -N-acetyl hexosaminidase (NAHA) may offer a way to fend off mold-spreading caterpillars and beetles on corn plants. ARS scientists Pat Dowd, Eric Johnson and Scott Pinkerton are testing modified strains of corn that produce NAHA throughout the crop plant's tissues. Fall armyworm caterpillars feed on corn plant leaves after hatching from eggs. They then advance to the ears and feed on the kernels among the other caterpillar and beetle pests. Husks that have been chewed open can be exposed to mycotoxin-producing fungi. Control of the caterpillars with insecticides can be effective, but is costly and harmful to beneficial insects. NAHA producing

corn plants may provide an effective alternative. In laboratory trials at the ARS National Center for Agricultural Utilization Research in Peoria, Ill., 100 percent of newly hatched fall armyworms that ingested NAHA-containing leaf tissue died within three days. Corn earworm caterpillars were also adversely affected by NAHA-containing plants. Researchers consider NAHA a promising defense for corn because it occurs in foods eaten by humans, such as cabbage and apple, and it targets chitin, a key component of insects but not of humans or other animals.

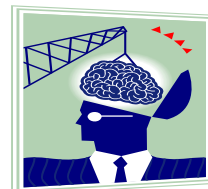
(ARS Feb 2007)

Funding Opportunities

- U.S. Department of Agriculture (USDA) Grant and Partnership Programs that can Address Invasive Species Research, Technical Assistance, Prevention and Control January, 2007. For more information see:

http://northeastipm.org/ontarget/2007/usdagrants_workbook.pdf

Did You Know That



The sugar beet root maggot, *Tetanops myopaeformis*, can survive for up to five years at storage temperatures of 41 to 45 degrees Fahrenheit. Studies by researchers at North Dakota State University found that approximately 54 percent of the *Tetanops* larvae stored at refrigerator temperatures develop into adult flies when warmed up. The larvae also can survive submersion in tap water at room temperature for three months. (ARS News and Events Jan 2007)

Events



April 17-18, 2007

National Extension Risk Management Education Conference will be held in Phoenix, AZ. For more information, go to:
<http://www.agrisk.umn.edu/conf07/default.aspx>

April 18-20, 2007

VIIth National Stored Product Integrated Pest Management Training Conference will be held at Oklahoma State University in Stillwater, OK. For more information go to:
<http://www.ento.okstate.edu/spipm/>

April 27-28, 2007

Organic Beekeeping Workshop to be held in Chestnut Ridge, NY. This workshop is for active beekeepers as well as for beginners. In this workshop we will look at the bee colony as an organism and what it needs in order to further its health and vitality. Lots of practical advice and demonstrations will give novices enough information to get started with their own hive, and encourage experienced beekeepers to adopt organic procedure. For More Information on this event please send email to beework@pfeiffercenter.org or call 845-352 5020 ext.20 or visit this website:
www.pfeiffercenter.org.

May 5-8, 2007

All things Organic Conference and Trade Show, McCormick Place, Chicago IL Conference 5th-8th, Trade Show 6th-8th. For more information, go to:
<http://www.organicexpo.com/07/>

May 7-9, 2007

Invasive Arthropod Workshop, Clemson, South Carolina. For more information go to:
<http://conference.ifas.ufl.edu/arthropod/>

June 17-29, 2007

The International Short Course in Agroecology, IPM, and Sustainable Agriculture will be held in East Lansing, MI. For more information contact: K.M. Maredia, IIA, 416 Plant/Soil Sci. Bldg., Michigan State Univ., East Lansing, MI 48824, USA.
KMaredia@msu.edu. Fax: 1-517-432-1982.
Phone: 1-517-353-5262.

July 11-14, 2007

The Second National Conference on Facilitating Sustainable Agriculture Education. Cornell University. For more information contact Kathi Colen Peck, Conference Coordinator, kscp@turbonet.com.

August 19-23, 2007

234th ACS National Meeting
The topic for the meeting is: Rodenticides for the protection of public health, agriculture and natural resources and will be held in Boston, MA. For more information go to:
<http://northeastipm.org/ontarget/2007/rodenticidepapers.pdf>

September 10-12, 2007

Convergence of Genomics and the Land Grant Mission: Emerging Trends in the Application of Genomics in Agricultural Research. Purdue University, West Lafayette, Indiana. For more information go to:
<http://northeastipm.org/ontarget/2006/GenomicsConf1stAnnounce.pdf>

Comments or Questions?

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