

PESTICIDE REPORTS

Division of Agricultural Sciences and Natural Resources • Oklahoma State University

<http://pested.okstate.edu>



December, 2014

CHEM

- 1 LAST TEST HELP SESSION FOR 2014
- 2 EPA RESPONDS TO NRDC'S 2ND PETITION TO CANCEL PET USES OF TWO PESTICIDES
- 2 EXPANDING OPPORTUNITIES FOR MINOR CROPS - PROPOSED RULE TO REVISE CROP GROUPING
- 3 FLORIDA HARVESTER ANTS REGULARLY RELOCATE
- 3 MONSANTO SETTLES GM WHEAT DISPUTE WITH US FARMERS
- 4 US WATCHDOG FAULTS PESTICIDE MONITORING PROGRAMS
- 5 DONALD STERLING SUED OVER BED BUGS
- 5 US REGISTRANTS TO DROP METHOMYL USES
- 5 BED BUGS CAN TRANSMIT PARASITE THAT CAUSES CHAGAS DISEASE
- 8 CEU Meetings
- 9 Online CEU Links
- 9 ODAFF Test Session Information
- 10 Renewal Form

LAST TEST HELP SESSION FOR 2014

The OSU Pesticide Safety Education Program will conduct the last test help sessions for 2014. The workshop will be held December 16th at the Oklahoma County Extension Center, 930 N Portland in Oklahoma City.

The help sessions will focus on information covered in the core and service tech tests. OSU PSEP will answer any questions over other category tests during this session.

Applicators should acquire and study the manuals before coming to the help session for optimum success. Study manuals can be purchased by using the manual order form available at our website <http://pested.okstate.edu/pdf/order.pdf> or by calling University Mailing at 405-744-5385.

ODAFF Testing fees are not included in the registration fee and must be paid separately.

Register online at the Pesticide Safety Education Program (PSEP) website at <http://pested.okstate.edu/html/practical.htm>. Registration forms can also be downloaded from the website.

Registration will start at 8:45 and the program will run from 9:00 am to 12:30 pm. Testing will begin at 1:30 pm.

NO CEU's will be given for this program!

Test Help Workshop dates for 2015 are being set and will be posted soon. When finalized, the dates will be posted at the website below.

<http://pested.okstate.edu/html/practical.htm>

EPA RESPONDS TO NRDC'S 2ND PETITION TO CANCEL PET USES OF TWO PESTICIDES

In 2009, EPA considered two petitions from the Natural Resources Defense Council to cancel the use of propoxur and tetrachlorvinphos (TCVP) in pet products. In response, EPA developed new human health risk assessments for the pet uses of both pesticides. In 2013, EPA found unacceptable risks to children from exposure to propoxur pet collars. EPA and the manufacturers reached an agreement to cancel propoxur pet collar products. This decision was reached as a result of discussions about how to reduce children's exposure to propoxur in pet collars. Read more about the [March 2014 propoxur decision](#).

Unlike propoxur, EPA found no risks of concern regarding pet uses of TCVP. Based on the risk assessment findings, EPA has denied the petition to cancel pet uses of TCVP.

To view EPA's response and the supporting documents for TCVP, search for [EPA-HQ-OPP-2009-0308](#) at www.regulations.gov. More information on TCVP is available on [EPA's Chemical Search Database](#).

(EPA November 6, 2014)
http://www.epa.gov/oppfead1/cb/csb_page/updates/2014/nrdc-petition.html

EXPANDING OPPORTUNITIES FOR MINOR CROPS - PROPOSED RULE TO REVISE CROP GROUPING

EPA is making available for public comment a proposed rule to revise the pesticide crop grouping regulations that allow the establishment of tolerances (maximum residue levels) for groups of related crops. The proposed revisions will expand the number of crops that can have tolerances established and thus will allow minor-use growers a wider choice of pest control tools, including lower-risk pesticides, to be used on minor crops, both domestically and in countries that export food to the United States.

Crop groupings allow petitioners to request tolerances for multiple related commodities based on research data on a representative crop. This is the fourth in a series of revisions to the crop groupings. The proposed revisions, published in a [November 14, 2014, Federal Register Notice](#), would revise the existing leafy vegetable and brassica vegetable crop groups, as well as establish new crop groups, including: stalk, stem and leaf petioles; tropical fruit, inedible peel; and tropical fruit, edible peel.

This proposed crop group rule is in response to several petitions submitted to EPA by U.S. Department of Agriculture's Interregional Research Project Number 4 (IR-4). [IR-4 helps growers](#) by conducting research to support tolerances for products and crops that pesticide companies do not find profitable enough to support investment in the research.

The petitions and supporting monographs are available in docket [EPA-HQ-OPP-2006-0766](#) at www.regulations.gov. Comments on the proposed rule will be accepted until January 13, 2015.
http://www.epa.gov/oppfead1/cb/csb_page/updates/2014/minorcrops.html (EPA November 17, 2014)

FLORIDA HARVESTER ANTS REGULARLY RELOCATE

Florida harvester ants move and construct a similar subterranean nest about once a year, according to a study published November 19, 2014 in the open-access journal PLOS ONE by Walter Tschinkel from Florida State University.

The Florida harvester ant excavates up to 2 meter deep nests in the sandy soils of the Gulf and Atlantic coastal plains. Scientists tracked and mapped nest relocations of over 400 colonies in a north Florida coastal plains pine forest from 2010 to 2013 and monitored the progress of entire relocations of 20 of these nests.

The researchers found that the architecture of old and new nests was very similar. The entire relocations were completed in 4 to 6 days and averaged 4 m, with few moves exceeding 10 m.

The PLOS ONE article can be accessed at <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0112981>

(pctonline, November 25, 2014)
<http://www.pctonline.com/Florida-harvester-ants-relocate.aspx>

MONSANTO SETTLES GM WHEAT DISPUTE WITH US FARMERS

Monsanto has agreed to pay US Pacific Northwest wheat farmers and grower groups nearly \$2.4 million to settle several class action lawsuits that arose last year after an unauthorized strain of genetically modified glyphosate-tolerant wheat was found in an Oregon field. The **discovery** in April 2013 upset the export market for US wheat with Japan and South Korea temporarily suspending imports and the EU threatening to follow suit.

The USDA quickly called the discovery an **isolated event** in a single field and the export market returned within a few months, but the incident prompted a **flood of litigation** against Monsanto. Wheat farmers from the Pacific Northwest and across the nation alleged that the company negligently allowed its GM wheat to contaminate conventional crops, causing them undue economic harm by depressing wheat prices and damaging the export market.

Monsanto has not admitted liability, but determined that settling the case was the best course of action. “Resolution in this manner is reasonable and in the best interest of all of the parties,” says Monsanto chief litigation counsel Kyle McClain.

The settlement only covers complaints filed by soft white wheat growers. It does not impact claims made by farmers who grew other types of wheat. It requires Monsanto pay some \$2.1 million into a settlement fund to pay farmers in Washington, Oregon and Idaho who sold soft white wheat between May 30th 2013 and November 30th 2013.

The company has also agreed to pay regional wheat grower groups a total of \$250,000. “We believe this is a unique and fair mechanism for resolving the claims of soft white wheat farmers,” says James Pizzirusso of Hausfeld LLP, one of the attorneys for the plaintiffs.

The USDA **closed its official investigation** into the issue in September, reiterating its view that the discovery was an isolated incident and finding no evidence of any GM wheat in commerce. The agency also launched a new probe into the discovery of Roundup Ready wheat volunteers at a Montana State University research center where field trials of the crop were conducted between 2000 and 2003.

The Montana discovery has not, however, caused any issues thus far for US wheat exporters.

(Pesticide & Chemical Policy/AGROW, November 14, 2014)

US WATCHDOG FAULTS PESTICIDE MONITORING PROGRAMS

US federal programs created to test fruits and vegetables for pesticide residues rely on questionable methods that undermine their effectiveness, according to a new report by the Government Accountability Office (GAO), the independent investigative arm of the US Congress. The **report** takes aim at three programs run by the FDA and the USDA, concluding that they fall short of their stated goals.

For the FDA, the GAO concludes that limitations in its testing program “hamper its ability to determine the national incidence and level of pesticide residues in the foods it regulates, one of its stated objectives”. The program is intended to help enforce pesticide tolerance levels set by the EPA. But the GAO report raises concerns about its scope and effectiveness. It found that the FDA tests less than 0.1% of all imported fruits and vegetables and less than 1% of domestic produce. The FDA also fails to disclose in its annual monitoring reports that it does not test for several commonly used pesticides that have had tolerance levels set by the EPA, according to the GAO. The report criticizes the FDA for not using statistically valid methods to collect national information on the incidence and level of pesticide residues.

Although the FDA countered that it would be expensive to calculate national estimates for the foods it regulates, the GAO criticizes the agency for not providing documentation on the cost of doing so or an assessment of the trade-offs of doing less targeting and more random sampling. But the FDA largely defended its program, arguing it is doing the best it can. "The agency has already increased its monitoring of pesticide residues by taking actions consistent with GAO's recommendations," Health and Human Services assistant secretary for legislation Jim Esquea states.

Resource limitations preclude the FDA testing for all pesticides, he told the GAO, adding that in the past five years, the agency's pesticide regulatory program "has grown to include testing for over 800 pesticides, making it among the most robust globally". Mr Esquea said that the FDA would investigate the recommended improvements to its methods, but would not carry out the GAO's recommendation that it name the pesticides not assessed. Such disclosure would "enable users to more easily circumvent the pesticides monitoring program", he wrote.

The GAO was less critical of the two programs run by the USDA to monitor pesticide residues in foods, but still raised concerns about data limitations. It largely praised the Agricultural Marketing Service's (AMS) Pesticide Data Program, which provides data to the EPA to help the Agency with its assessment of the potential dietary exposure to various pesticides.

The GAO found the AMS effort provides an effective level of testing for pesticide residues on "highly consumed commodities" but concludes that the agency's data collection effort lacks techniques to ensure the data are nationally representative. “As AMS does not disclose these limitations in its annual monitoring reports, users of the data may misinterpret information in these reports and draw erroneous conclusions based on the data," the GAO concludes.

The GAO also highlights data problems with the USDA's Food Safety and Inspection Service's (FSIS) National Residue Program, which monitors domestic and imported meat, poultry and processed egg products for pesticide residue and is tasked with taking enforcement action if levels exceed the EPA's tolerances. The report notes that between 2000 and 2011, the FSIS did not test meat, poultry and processed egg products for all pesticides with established EPA tolerance levels, according to the GAO. But the report praises the FSIS for increasing the number of pesticides it has tested for and for

engaging with the EPA to better provide the Agency with "data it needs to assess the risks of pesticides."

The USDA responded favorably to the report, largely agreeing with the suggested changes to its monitoring programs and agreeing to name the pesticides tested for by the FSIS.

(Pesticide & Chemical Policy/AGROW, November 14, 2014)

DONALD STERLING SUED OVER BED BUGS

Former Los Angeles Clippers owner Donald Sterling faces a new lawsuit, over an alleged bed bug infestation at one of the apartments he owns, [Courthouse News Service reported](#).

Darryl Williams, the article noted, sued Sterling on Tuesday in Superior Court under fair housing and civil rights laws, claiming Sterling refused to exterminate a bed bug infestation in his apartment, and then used the bugs as an excuse to threaten him with eviction.

According to the lawsuit, Sterling hired exterminators to get rid of bed bugs in apartments on both sides of Williams' place, but "purposely ignored" his residence.

[Click here](#) to read the entire article (PCT Online, November 26, 2014) <http://www.pctonline.com/Sterling-bed-bug-lawsuit.aspx>

US REGISTRANTS TO DROP METHOMYL USES

The US EPA has **notified** receipt of an application from registrants of the carbamate insecticide, methomyl, to cancel its use on barley, oats and rye. The application was made by the technical registrants, DuPont, Rotam and Sinon Corporation, and the end-use registrants, DuPont, MacDermid Agricultural Solutions, Rotam and Sinon USA. The

registrants **agreed** to remove some uses from labels earlier this year in order to reduce dietary risks from drinking water exposure. The restrictions were agreed during the risk assessment phase of the registration review for methomyl. Once the EPA has approved labels reflecting the requested amendments, the registrants will be allowed to sell previously labelled stocks for up to 18 months. Persons other than the registrants would be able to sell the products until stocks are exhausted.

(Pesticide & Chemical Policy/AGROW, November 7, 2014)

BED BUGS CAN TRANSMIT PARASITE THAT CAUSES CHAGAS DISEASE

The bed bug may be just as dangerous as its sinister cousin, the triatomine, or "kissing" bug. A new study from Penn Medicine researchers in the Center for Clinical Epidemiology and Biostatistics demonstrated that bed bugs, like the triatomines, can transmit *Trypanosoma cruzi*, the parasite that causes Chagas disease, one of the most prevalent and deadly diseases in the Americas.

The role of the bloodsucking triatomine bugs as vectors of Chagas disease—which affects 6 to 8 million worldwide, mostly in Latin America, and kills about 50,000 a year—has long been recognized. The insects infect people not through their bite but feces, which they deposit on their sleeping host, often around the face, after feeding. Bed bugs, on the other hand, are usually considered disease-free nuisances whose victims are left with only itchy welts from bites and sleepless nights.

In a [study published online](#) this week in the American Journal of Tropical Medicine and Hygiene, senior author Michael Z. Levy, PhD, assistant professor in the department of Biostatistics and Epidemiology at the University of Pennsylvania's Perelman School of Medicine, and researchers at the Universidad Peruana Cayetano Heredia in Peru conducted a series of laboratory experiments that demonstrated bi-directional transmission of *T. cruzi* between mice and bed bugs.

In the first experiment run at the Zoonotic Disease Research Center in Arequipa, Peru, the researchers exposed 10 mice infected with the parasite to 20 uninfected bed bugs every three days for a month. Of about 2,000 bed bugs used in the experiment, the majority acquired *T. cruzi* after feeding on the mice. In a separate experiment to test transmission from bug to mouse, they found that 9 out of 12 (75 percent) uninfected mice acquired the parasite after each one lived for 30 days with 20 infected bed bugs.

In a third experiment, investigators succeeded in infecting mice by placing feces of infected bed bugs on the animal's skin that had either been inflamed by bed bug bites, or scraped with a needle. Four out of 10 mice (40 percent) acquired the parasite by this manner; 1 out of 5 (20 percent) were infected when the skin was broken by the insect's bites only. A final experiment performed at the Penn bed bug lab in Philadelphia demonstrated that bed bugs, like triatomines, defecate when they feed.

"We've shown that the bed bug can acquire and transmit the parasite. Our next step is to determine whether they are, or will become, an important player in the epidemiology of Chagas disease," Levy said. "There are some reasons to worry—bed bugs have more frequent contact with people than kissing bugs, and there are more of them in infested houses, giving them ample opportunity to transmit the parasite. But perhaps there is something important we don't yet understand about them that mitigates the threat."

T. cruzi is also especially at home in the guts of bed bugs. "I've never seen so many parasites in an insect," said Renzo Salazar, a biologist at the Universidad Peruana Cayetano Heredia and co-author on the study. "I expected a scenario with very low infection, but we found many parasites—they really replicate well in the gut of the bed bugs."

Wicked Cousins

Bed bugs and kissing bugs are distant cousins but share many striking similarities. Both insects hide in household cracks and crevices waiting for nightfall and the opportunity to feed on sleeping hosts. They are from the same order of insects (Hemiptera) and

both only feed on blood. (One main difference is their size: kissing bugs are five times as big as a bed bug). With so much in common, it seemed logical to the authors that the kissing bug's most infamous trait, the transmission of *T. cruzi*, is also shared by the bed bug.

Other investigators have shared this suspicion. In 1912, just three years after Carlos Chagas described the transmission of the disease by kissing bugs, French parasitologist Émile Brumpt recounted that he had infected almost 100 bed bugs exposed to an infectious mouse, and then used them to infect two healthy mice. Decades later an Argentine group replicated his work. These experiments, largely ignored during the recent bed bug resurgence, missed one key point.

"Mice can hunt and eat bed bugs," said Ricardo Castillo-Neyra, DVM, PhD, coauthor and postdoctoral fellow at the Universidad Peruana Cayetano Heredia and Penn. "The older studies were almost certainly only documenting oral transmission of the parasite. Our work shows for the first time that bed bugs can transmit the parasite when their feces are in contact with broken skin, the route by which humans are usually infected." Emerging Problem

More people in the U.S. are infected with *T. cruzi* now than ever before. The Centers for Disease Control and Prevention estimates that the number of Chagas disease cases in the U.S. today could be as high as 300,000.

"There have always been triatomine bugs and cases of Chagas disease in the U.S., but the kissing bugs we have here don't come into homes frequently like the more dangerous species in South and Central America do," Levy said. "I am much more concerned about the role of bed bugs. They are already here—in our homes, in our beds and in high numbers. What we found has thrown a wrench in the way I think about transmission, and where Chagas disease could emerge next."

Equally worrying is the invasion of bed bugs into areas where Chagas disease is prevalent, especially in countries where traditional insect vectors of the parasite have been nearly eliminated, Levy said. In

HAPPY HOLIDAYS

these areas, bed bugs will be repeatedly exposed to *T. cruzi*, and could re-spark transmission where it had been extinguished.

“Bed bugs are harder to kill than triatomines due to their resistance to common insecticides.” Levy said. “No one is prepared for large scale bed bug control. If the parasite starts to spread through bed bugs, decades of progress on Chagas disease control in the Americas could be erased, and we would have no means at our disposal to repeat what had been accomplished.”

Often referred to as a silent killer, Chagas disease is hard to diagnose in its early stages because the symptoms are mild or absent. The parasites are hidden mainly in the heart and digestive muscle and over time can cause cardiac disorders and sometimes digestive or neurological problems. In later years, the infection can lead to sudden death or heart failure caused by progressive destruction of the heart muscle. Although there are some drugs to treat Chagas disease, they become less effective the longer a person is infected.

The long asymptomatic period of Chagas disease complicates surveillance for new outbreaks of transmission. In Arequipa, Peru, thousands became infected with the parasite before a case appeared in the hospital. The same could happen in cities in the United States if the parasite were to emerge in the bed bug populations, the authors say.

“Carlos Chagas discovered *T. cruzi* in triatomine insects before he saw a single case of the disease,” Levy said. “We need to learn from his intuition—check the bugs for the parasite.”

Other co-authors of the study include Aaron W. Tustin, Katty Borrini-Mayorí and César Náquira.

(PCT online November 19, 2014)

<http://www.pctonline.com/bed-bug-chagas.aspx>



In-State and Neighboring State CEU Meetings

Date: December 2, 2014

Title: 69th Annual Oklahoma Turfgrass Conference

Location: Wes Watkins Center, Stillwater OK

Contact: David Gerken (405) 945-3352

Course #: OK-14-162

turf.okstate.edu

CEU's:	Category(s):
--------	--------------

6	3A
---	----

6	10
---	----

Date: December 9, 2014

Title: OSU Winter Crop School

Location: Wes Watkins Center, Stillwater OK

Contact: Jeff Edwards (405) 744-9617

Course #: OK-14-158

www.wheat.okstate.edu

CEU's:	Category(s):
--------	--------------

3	1A
---	----

3	10
---	----

Date: December 9, 2014

Title: Pesticide Safety & Stored Product Pest Control Recertification

Location: Salina KS

Contact: Ted Graham (855) 377-3444

Course #: OK-14-142

www.foodprotectionservices.net

CEU's:	Category(s):
--------	--------------

6	7A
---	----

5	7C
---	----

Date: December 15, 2014

Title: Texas Vegetative Management Association

Location: Lubbock TX

Contact: Kay Dippel (979) 968-5612

Course #: OK-14-140

www.tvma.net

CEU's:	Category(s):
--------	--------------

1	5
---	---

4	6
---	---

Date: January 19-21, 2015

Title: 2015 OAAA Annual Meeting

Location: Reed Center Midwest City OK

Contact: Sandy Wells (405) 341-3548

Course #: OK-14-160

www.okaaa.org

CEU's:	Category(s):
--------	--------------

8	A
---	---

5	1A
---	----

2	2
---	---

1	3A
---	----

2	5
---	---

3	6
---	---

5	10
---	----

Date: February 12, 2015

Title: IFC 2015 Technical Conference

Location: Kansas City MO

Contact: Deborah Murphy (913) 397-1185

Course #: OK-14-166

www.fisaconsulting.com

CEU's:	Category(s):
--------	--------------

4	7A
---	----

2	7C
---	----

2	10
---	----

Date: March 10, 2015

Title: Pest Management in the Food Industry

Location: Little Rock AR

Contact: Deborah Murphy (913) 397-1185

Course #: OK-14-163

www.fisaconsulting.com

CEU's:	Category(s):
--------	--------------

4	7A
---	----

2	7C
---	----

2	10
---	----

ODAFF Approved Online CEU Course Links

Technical Learning College
<http://www.abctlc.com/>

Green Applicator Training
<http://www.greenapplicator.com/training.asp>

All Star Pro Training
www.allstarce.com

Wood Destroying Organism Inspection Course
www.nachi.org/wdocourse.htm

CTN Educational Services Inc
http://ctnedu.com/oklahoma_applicator_enroll.html

Pest Network
<http://www.pestnetwork.com/>

Univar USA
<http://www.pestweb.com/>

Southwest Farm Press Spray Drift Mgmt
<http://www.pentonag.com/nationalsdm>

SW Farm Press Weed Resistance Mgmt in Cotton
<http://www.pentonag.com/CottonWRM>

Western Farm Press ABC's of MRLs
<http://www.pentonag.com/mrl>

Western Farm Press Biopesticides Effective Use in Pest Management Programs
<http://www.pentonag.com/biopesticides>

Western Farm Press Principles & Efficient Chemigation
<http://www.pentonag.com/Valmont>

For more information and an updated list of CEU meetings, click on this link:
<http://www.state.ok.us/~okag/cps-ceuhome.htm>

Pesticide applicator test sessions dates and locations for December 2014/January 2015 are as follows:

December		January	
1	McAlester	5	McAlester
2	Goodwell	9	OKC
4	Tulsa	12	Atoka
8	Atoka	14	Lawton
8	OKC	15	Tulsa
10	Lawton	23	OKC
11	Enid	29	Tulsa
18	Tulsa		
22	OKC		

Altus: Western OK State College
 2801 N Main, Room A23

Enid: Garfield County Extension Office,
 316 E. Oxford.

Goodwell: Okla. Panhandle Research &
 Extension Center, Rt. 1 Box 86M

Hobart: Kiowa County Extension Center
 Courthouse Annex, 302 N. Lincoln

Lawton: Great Plains Coliseum, Annex Rm.
 920 S. Sheridan Road.

OKC: Oklahoma County Extension Office,
 930 N. Portland.

Tulsa: NE Campus of Tulsa Community
 College, (Apache & Harvard)
 Large Auditorium

McAlester: Kiamichi Tech Center on
 Highway 270 W of HWY 69

ATOKA KIAMICHI TECH CENTER 1301
 W Liberty Rd, Seminar Center

Pesticide Safety Education Program

**RENEWAL FORM TO REMAIN ON OR BE ADDED TO
PESTICIDE REPORT's MAILING LIST**

PLEASE PRINT - THANK YOU!

Name _____

Company/Business Name _____

Address _____

City _____ **State** _____ **Zip Code** _____

E-Mail _____

Please send to: Charles Luper or Kevin Shelton
Pesticide Safety Education Program
127 NRC
Oklahoma State University
Stillwater, OK 74078-3033

or E-mail us at: Sharon.hillock@okstate.edu. Please type Pesticide Report in the subject box.

If this is not returned your name will be removed from the *Pesticide Report's* mailing list.

Oklahoma State University EXTENSION personnel ARE NOT TO RETURN this form.