

# PESTICIDE REPORTS



Division of Agricultural Sciences and Natural Resources • Oklahoma State University  
<http://pested.okstate.edu>

## July, 2012

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Topics to be covered: Flea and Tick Control for Lawns, Lawn Measurements and Sprayer Calibration, Lawn Fertility (Does Not Qualify for Pesticide CEU).

Registration cost is \$30 for pre-registration by July 6 and \$50 after July 6. You can find registration forms or register online at <http://pested.okstate.edu/practical.htm>. Please contact Charles Luper at 405-744-5808 for any questions. (PSEP)

### TERMINIX RELEASES LIST OF MOST-INFESTED BED BUG CITIES

MEMPHIS, Tenn. -- Philadelphia has won the dubious title of most bedbug-infested U.S. city, according to the annual Most Bedbug-Infested Cities ranking, released today by Terminix, the world's largest pest control provider and a division of the ServiceMaster Company.

Philadelphia took the top spot from New York City, which held the title for two years.

The 2012 most bed bug-infested cities include:

### OSU PSEP LAWNCARE PEST MANAGEMENT & FERTILITY PROGRAM

The OSU Pesticide Safety Education Program will conduct a Lawn care CEU programs in July. The program will be held July 13 at the Oklahoma County Extension Office (930 N Portland). The program will run from 9 am to 12:30 pm. 2 CEU's for categories 3A and 10 will be available

1. Philadelphia
2. Cincinnati
3. New York City
4. Chicago
5. Detroit
6. Washington, D.C.
7. Columbus, Ohio
8. San Francisco
9. Denver
10. New Haven, Conn.
11. Dallas
12. Houston
13. Indianapolis
14. Miami
15. Cleveland

The list was created by compiling data from the 300 Terminix branches across the country. The company created the ranking by evaluating service calls from customers, as well as confirmed cases by service professionals.

The 2012 ranking proves bedbugs continue to be a problem across the country, with five cities - Cleveland, Houston, Indianapolis, Miami and New Haven - joining the top 15 this year. Other cities, such as Columbus, Dallas, Philadelphia, San Francisco and Washington, D.C., saw growing bedbug populations this year.

Ohio continues to be a hotbed of activity, with three of its cities making the top 15.

"Bedbugs continue to increase their presence across the U.S.," said Stoy Hedges, an entomologist with Terminix. "While major metropolitan areas are most at risk, it is important to note that bedbugs have been spotted in cities and towns across the country."

Terminix, the country's largest provider of pest control services, has seen an increase in the prevalence of bedbugs in most states since releasing its first bedbug ranking in 2010. The company expects bedbugs to continue to plague the nation this summer as travelers encounter the tiny pests in hotels, airports and public transportation.

(PCT June 12, 2012)

[http://www.pctonline.com/Terminix-bed-bug-infested-cities-2012.aspx?List\\_id=426](http://www.pctonline.com/Terminix-bed-bug-infested-cities-2012.aspx?List_id=426)

## **REPORT: FUNGICIDE USED ON FARM CROPS LINKED TO INSULIN RESISTANCE**

A fungicide used on farm crops can induce insulin resistance, a new tissue-culture study finds, providing another piece of evidence linking environmental pollutants to diabetes. The results will be presented Saturday at The Endocrine Society's 94th Annual Meeting in Houston.

"For the first time, we've ascribed a molecular mechanism by which an environmental pollutant can induce insulin resistance, lending credence to the hypothesis that some synthetic chemicals might be contributors to the diabetes epidemic," said investigator Robert Sargis, M.D., Ph.D., instructor in the endocrinology division at the University of Chicago.

The chemical, *tolyfluanid*, is used on farm crops in several countries outside of the United States to prevent fungal infestation, and sometimes is used in paint on ships to prevent organisms from sticking to their hulls. Animal studies have indicated that the chemical may adversely affect the thyroid gland, as well as other organs, and that it may increase the risk of cancer in humans.

Within the last decade, research attention has increasingly focused on the link between environmental contaminants and the rising rates of obesity and diabetes throughout many parts of the world. In the United States alone, nearly 26 million adults and children have some form of diabetes, according to the American Diabetes Association. A serious disease by itself, diabetes also increases the risk of other medical complications, including heart and blood-vessel diseases.

Normally, the pancreas secretes the hormone insulin, which acts to regulate blood-sugar levels. Among diabetic patients, insulin secretion either decreases or stops altogether, or cells become resistant to the hormone's activity. These conditions then disrupt the process that transports sugar, or glucose, from the blood to the body's other cells, which can lead to the dangerously high blood-sugar levels associated with diabetes.

In this project, Sargis and his co-investigators used mouse fat to examine the effects of tolyfluanid on insulin resistance at the cellular level. They found that exposure to tolyfluanid induced insulin resistance in fat cells, which play a critical role in regulating the body's blood glucose and fat levels. When exposed to tolyfluanid in culture the ability of insulin to trigger action inside the fat cell, or adipocyte, was reduced, which is an early indication of diabetes.

"The fungicide and antifouling agent tolyfluanid may pose a threat to public health through the induction of adipocytic-insulin resistance, an early step in the pathogenesis of type 2 diabetes," Sargis said. "Based on these studies, further efforts should be undertaken to clarify human exposure to tolyfluanid and the possible metabolic consequences of that exposure."

At the same time, tolyfluanid-exposed cells stored more fat, or lipids, in a similar action to a steroid called corticosterone. Like this steroid, tolyfluanid bound receptors in fat cells, called glucocorticoid receptors, which help regulate blood-sugar levels, as well as many other important body processes.

"For the public, this raises the specter of environmental pollutants as potential contributors to the metabolic disease epidemic," said Sargis, adding that, "hopefully, it will put further pressure on public policy makers to reassess the contribution of environmental pollution as a contributor to human disease in order to encourage the development of strategies for reversing those effects."

The National Institute of Environmental Health Sciences and the University of Chicago Diabetes Research and Training Center funded this research.

(Crop Life June 27, 2012)

<http://www.croplife.com/article/28927/report-fungicide-used-on-farm-crops-linked-to-insulin-resistance>

## **FARM, CHEMICAL INTERESTS PUSH EPA TO SET TERMS FOR NEW USES OF 2,4-D ON BIOTECH CORN, SOYBEANS**

A coalition of specialty farming groups, a chemical company, environmental groups and more than 110,000 public commenters are among those seeking delays, preconditions and restrictions for three new uses of 2,4-D on new herbicide-tolerant corn and soybeans from Dow AgroSciences.

Multiple groups filing public comments on the three new use applications, posted in the *Federal Register* on May 23, request that EPA publish supplementary risk assessments and other additional information about the proposed use and provide time for further comment. The public comment period closed June 22.

The three new use applications are for 2,4-D choline salt, a new formulation that Dow says reduces volatilization by 92% and drift by 90%. Dow has developed two genetically modified 2,4-D-tolerant crops, known as Enlist corn and Enlist soybean, along with the 2,4-D choline salt, as the answer to glyphosate-tolerant weeds, the spread of which is threatening Roundup Ready crops across the country.

Dow, however, has faced mounting opposition from environmental groups and specialty crop interests, who worry about the problems associated with 2,4-D, an older herbicide that historically has been more prone to volatilization and drift. Those traits can cause damage to nearby crops or lead to residential exposure.

Environmental and advocacy groups, in comments filed on the notice, express concern about the lack of supporting information from EPA and request additional time for comment. The public's review of the three new use applications "has been paralyzed and delayed due to the fact that the agency has neglected to release any non-confidential supporting materials related to Dow's 2,4-D proposed new use applications," writes Center for Food Safety Senior Attorney George Kimbrell, who in his May 29 comments requests a 30-day comment period once EPA publishes that supplemental material.

The Natural Resources Defense Council, in comments filed June 22, says EPA "has provided scant information" about the new uses, and calls for a "thorough risk assessment" that looks at the consequences of USDA deregulation of 2,4-D tolerant corn and soybeans. NRDC, which cites estimates that 2,4-D use could increase 5 to 30 fold with deregulation of Enlist corn alone, asks EPA to publish all the underlying risk assessments and to provide a 90-day comment period. Food & Water Watch, in comments filed June 22, also asks EPA to include more data in future dockets.

EPA tells *Pesticide & Chemical Policy* that during this first stage of the public participation process, which gives "notice to the public that an application has been received," EPA includes basic information such as the applicant name, product name and type,

active ingredient name, proposed use and target pests.

EPA says "other submitted materials are not released at this stage" and that it does not plan to extend the public comment on this notice. However, EPA tells *P&CP* that a risk assessment on the new uses is in the works.

"After EPA completes the assessment, we plan to add the risk assessment documents and supporting information to the public docket" and provide 30 days for public comment, EPA says.

Dow, in comments filed June 22, says EPA has repeatedly extended the deadline for registering the 2,4-D choline salt, aiming to wait until USDA's Animal and Plant Health Inspection Service (APHIS) grants deregulation for Enlist corn and soybeans, but "as far as Dow AgroSciences is aware, there is no written policy, law or regulation that would require EPA to wait until APHIS deregulation on a herbicide-tolerant crop before it makes a registration decision."

Dow says further delay would be "inconsistent with Congress's intent that pesticide registrations be granted 'as expeditiously as possible' and could actually result in harm to growers looking for a new way to combat growing glyphosate-resistance problems."

#### Groups seek restrictions

Aiming to prevent damage to non-target plants, the Save Our Crops Coalition (SOCC), a group of farming interests worried about off-target drift and volatilization of pesticides, asks EPA to impose restrictions and requirements on the new use applications for Dow's 2,4-D choline salt.

SOCC wants EPA to consider border and buffer requirements, an application recordkeeping requirement and a label requirement that the choline salt "should be the only herbicide considered for registration for use on 2,4-D tolerant crops." It also wants EPA to consider putting a label statement on generic 2,4-D "that explicitly states that use on 2,4-D tolerant crops is prohibited."

The coalition wants such a statement because it worries that Dow's contractual agreements requiring the use of its low-volatilization formulation are not "an adequate proxy for effective systems to discourage the use of generic 2,4-D," particularly because of the economic incentives to use generic 2,4-D.

On the other hand, Drexel Chemical Co. says that giving Dow exclusive access to the 2,4-D market would provide "Dow with the ability to charge the farmer a price without regard to competitive 2,4-D products." Drexel, which says Dow's choline salt formulation would be similar to other salt formulations, requests that exclusivity for Dow's new 2,4-D formulation associated with Enlist corn and soybeans be denied.

#### Concerns over new use patterns

Some of the commenters worry about changes in the application method itself. The proposed new use would allow post-emergent applications when the corn has reached 48 inches, compared to the current limit of 8 inches, SOCC says in comments. The group says the new post-emergence application would take place later in the season, when higher temperatures increase volatilization.

Kimbrell, of the Center for Food Safety, also shares this concern, saying that the new use patterns "would be characterized by more frequent applications of 2,4-D, applied at (much) higher rates, and during a broader application window that extends later into the season."

CREDO Action, an advocacy group, also delivered "the public comments of 110,149 Americans who oppose the applications to register new uses of pesticide products containing 2,4-D." The majority of these comments are the same, saying EPA should deny the new use application because of negative consequences on farmers, consumers and the environment.

(Pesticide & Chemical Policy, June 29 2012, Volume: 40 Issue: 29)

## **BUG BOMBS NO MATCH FOR BED BUGS, OHIO STATE UNIVERSITY RESEARCH REPORTS**

Over-the-counter "foggers" or "bug bombs" may do little to kill bed bugs if they're already infesting your home, according to new research from scientists at The Ohio State University.

The study appears in the June 2012 issue of the *Journal of Economic Entomology*, a peer-reviewed publication of the [Entomological Society of America](#). "There has always been this perception and feedback from the pest-management industry that over-the-counter foggers are not effective against bedbugs and might make matters worse," Susan Jones, an urban entomologist with the university's Ohio Agricultural Research and Development Center and a household and structural pest specialist with Ohio State University Extension, said in a prepared statement.

"But up until, now there has been no published data regarding the efficacy of foggers against bedbugs."

Here's what the study, in part, concluded, according to the news release: Jones and research associate Joshua Bryant evaluated three different fogger brands obtained from a nationwide retailer, all of which have pyrethroids as their active ingredient. Only one of the foggers is specifically labeled against bedbugs. The other two are labeled for use against flying and crawling pests in homes, but can be used to treat bedbugs in many states, Jones said.

Experiments were conducted in three rooms in a vacant office building on Ohio State's Columbus campus. The researchers used five different bedbug populations collected from homes in Columbus between 2010 and 2011. Additionally, they included the Harlan strain -- which has been laboratory-raised since 1973 and is susceptible to pyrethroids -- as a control. (PCT June 12, 2012) [http://www.pctonline.com/bed-bug-bombs-ohio-state.aspx?List\\_id=426](http://www.pctonline.com/bed-bug-bombs-ohio-state.aspx?List_id=426)

## **INDUSTRY STAKEHOLDERS SEEK MORE CLARITY ON SAFETY DATA SHEETS AS PESTICIDE LABELING**

Industry stakeholders are expressing concerns about the lack of clarity and non-binding nature of EPA guidance meant to resolve potential conflicts between pesticide labels and Safety Data Sheets (SDSs) for pesticides.

Pursuant to a final rule issued by the Occupational Safety and Health Administration in March, stakeholders will have to revise their SDSs for pesticides and other chemicals to comply with OSHA's revised Hazard Communications Standard. The new standard brings the U.S. in line with the U.N. Globally Harmonized System for Classification and Labeling of Chemicals.

But with the modifications to SDSs required by the revised Hazard Communications Standard, there is now the potential for inconsistency between EPA-approved labels for pesticides and pesticide SDSs, which are considered part of the pesticide labeling, as there are differences between EPA's current labeling requirements and the GHS related to classification criteria, hazard statements, pictograms and signal words.

As a result, EPA in April came out with guidance in the form of Pesticide Registration (PR) Notice 2012-01, which shows how stakeholders can deal with such inconsistencies. The deadline to submit comments related to the guidance was June 19.

But the PR Notice - as EPA asserts in the notice itself - is non-binding. "This guidance is not binding on either EPA or any outside parties, and EPA may depart from the guidance where circumstances warrant and without prior notice," the notice states.

In some cases, stakeholders might welcome such flexibility, but given what stakeholders see as a lack of clarity and continued potential for confusion from the PR Notice, they want more explicit directions on what they must do to comply with the different standards of FIFRA and GHS.

Stakeholders are also seeking certainty that adhering to such steps will be accepted as compliance by EPA.

"Neither registrants nor workers are well served by transitory guidance," Beth Law, assistant general counsel and vice president for international affairs at the Consumer Specialty Products Association, writes in comments submitted June 19. Her concerns about the lack of clarity regarding compliance requirements are echoed in comments filed by the International Sanitary Supply Association and the Professional Landcare Network.

The "PR Notice does not provide the certainty that registrants of FIFRA pesticide products need as they attempt to change their processes for writing and editing SDSs and reviewing them against the FIFRA labels," she asserts.

CropLife America and RISE did not submit substantive comments themselves, but indicated that they support the comments filed by CSPA.

While four industry trade groups filed substantive comments on the PR notice, the only registrant to do so was Syngenta Crop Protection. In a two-page comment filed June 19, Senior Stewardship Manager Carol Somody describes "several serious concerns about EPA's proposed approach in the PR notice."

"We are concerned about the potential for contradictions or conflicts concerning information in a document that is considered labeling," she writes. "We are also concerned about the potential for confusion for anyone who uses a pesticide label and refers to both the label and the SDS, or to different sections of the SDS ... Conflicts could exist in many cases between the SDS and the label, (e.g., two signal word options versus three)."

Somody also notes, as do other industry commenters, that EPA underestimates the burden of updating SDSs "because every marketing label registered by a state must be accompanied by an SDS."

Syngenta recommends "that EPA and OSHA collaborate to develop clear and consistent SDS language that prevents any possible confusion, with a comparison and explanation of the FIFRA and OSHA language at the beginning of the SDS."

In comments dated June 18, Hasmukh Shah, manager of ACC's Biocides Panel, notes that EPA issued the PR notice as final, without the opportunity for public comment, and sought comments only on the necessity and utility of the information collection associated with the PR Notice.

"The Panel believes that this is inconsistent with PR Notice 2003-3, which clearly requires the opportunity for public comment on policy statements and guidance that are significant, [and] the Panel believes that PR 2012-1 is significant," Shah writes.

Using some of the same language as CSPA, Shah also expresses concern about the non-binding nature of the PR notice, asserting that it "creates the potential for both significant confusion and potential enforcement."

He notes that "EPA has not addressed in any policy or guidance statement whether a user who follows the information on the SDS will be in violation of the pesticide label when these differ. The burden of resolving the jurisdictional conflict between OSHA and EPA should not fall on the worker," he writes.

As for whether the information collection is necessary and will have practical utility, Shah writes that the guidance "will have limited practical utility in addressing the inconsistencies between FIFRA and the OSHA regulations." The guidance lacks "adequate clarity and does not provide clear enough direction for users to avoid potential enforcement under FIFRA."

(Pesticide & Chemical Policy, June 29 2012, Volume: 40 Issue: 29)

## **BED BUGS AND ALCOHOL DON'T MIX, SAYS UNL RESEARCHER**

New research suggests bed bugs don't have much taste for boozy blood and lay fewer eggs when their feedings contain alcohol.

This penchant for a sober meal could mean fewer bites for hosts who imbibe, a New York entomologist now studying at the University of Nebraska-Lincoln found.

"(Bed bugs) need a blood meal to grow and to molt and to reproduce," Ralph Narain, the University of Nebraska Ph.D. candidate from Suffolk County, told the [website LifesLittleMysteries.com](http://www.lifeslittlemysteries.com). "And one of their main hosts are humans, and we consume a lot of (alcohol)."

Narain fed blood mixed with different levels of alcohol to groups of the bugs in his lab and presented his findings to the National Conference on Urban Entomology in Atlanta last month.

The bed bugs that fed on clean blood reportedly doubled their body mass and laid an average of 44 eggs each.

The more alcohol the bugs received, the less they grew. Those that drank blood laced with the most alcohol grew only 12.5 percent and laid only a dozen eggs, Life's Little Mysteries reported.

(PCT June 7, 2012) [http://www.pctonline.com/bed-bugs-alcohol-research.aspx?List\\_id=426](http://www.pctonline.com/bed-bugs-alcohol-research.aspx?List_id=426)

## **In-State CEU Meetings**

Date: July 13, 2012

Title: OSU Lawncare MGMT

9 am to 12:30 pm      Fee: \$30

Location: OK County Extension Center OK

Contact: Charles Luper 405 744-5808

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

Course #: Pending

CEU's:              Category(s):

2                      3A

2                      10

Date: July 19, 2012

Title: BWI Tulsa Summer Seminar

Location: Bass Pro Shops Tulsa/Broken Arrow OK

Contact: Kelly Keech (918) 251-6461

Course #: OK-12-048

CEU's:              Category(s):

4                      3C

4                      10

Date: September 17-19, 2012

Title: OKVMA Fall Training

Location: Norman OK

Contact: Kathy Markham (918) 251-6461

Course #: OK-12-081

CEU's:              Category(s):

5                      6

5                      10

4                      3A

3                      5

1                      8

## **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](http://www.allstarce.com)

**Wood Destroying Organism Inspection Course**

[www.nachi.org/wdocourse.htm](http://www.nachi.org/wdocourse.htm)

**CTN Educational Services Inc**

[http://www.ctnedu.com/oklahoma\\_applicator.html](http://www.ctnedu.com/oklahoma_applicator.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>

## ODAFF Test Information

Pesticide applicator test sessions dates and locations for July\August 2012 are as follows:

July		August	
12	Tulsa	6	OKC
23	OKC	9	Tulsa
26	Tulsa	16	Enid
		20	OKC
		23	Tulsa

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.

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

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

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

**Pesticide Safety  
Education Program**