

PESTICIDE REPORTS

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



September, 2014

CHEM

- 1 OCTOBER TEST HELP SESSION
- 2 AGREEMENT TO CANCEL METHOMYL USE ON SOME CROPS
- 2 NEONICS WIDESPREAD IN US CORN BELT WATERS
- 3 USDA TO HOLD VIRTUAL PUBLIC MEETING 9/11/14 ON DEIS FOR HERBICIDE-RESISTANT COTTON & SOYBEAN
- 3 MOSQUITOES 'SMELL' AND 'TASTE' DEET AND OTHER REPELLENTS
- 4 US HOUSE REVIVES AND PASSES BILL TO VOID CWA PESTICIDE PERMITS
- 4 U.S. REPRESENTATIVE QUESTIONS EPA'S RISK ASSESSMENT OF 2,4-D-BASED HERBICIDE
- 5 PESTICIDE INTERESTS ASK US EPA TO PULL FARMWORKER PROTECTION PLAN
- 6 BEES ARE NO. 1 BUG KILLER OF WORKERS, LABOR DEPARTMENT REPORTS
- 7 LOUVRE GARDEN TEEMING WITH RATS
- 7 WHERE ARE NEW YORK'S BED BUGS NOW?
- 9 CEU Meetings
- 10 Online CEU Links
- 10 ODAFF Test Session Information

OCTOBER TEST HELP SESSION

The OSU Pesticide Safety Education Program will conduct the next test help session in October. The workshop will be held October 15th at the Oklahoma County Extension Center 930 N Portland in Oklahoma City.

This testing session will focus on information covered in the core/service tech test. 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!

All of the 2014 Test Help Workshop dates for 2014 are listed on our website.

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

AGREEMENT TO CANCEL METHOMYL USE ON SOME CROPS

EPA and the manufacturers of the insecticide methomyl have agreed to cancel the use of methomyl on barley, oat, and rye, limit its use on wheat to Idaho, Oregon, and Washington, and reduce the application rates and the number of applications for some crops by 20-50%. These actions are in response to EPA's evaluation of data showing risk from methomyl in drinking water. EPA is taking this action to protect human health and the environment.

We expect to release the human health and ecological risk assessments for methomyl for public comment in early 2016. Additional mitigation measures may be identified as EPA continues its evaluation of this pesticide.

EPA is taking steps to make sure that the new use restrictions appear on all methomyl product labels beginning in late 2014. This will ensure timely implementation of changes to the number of applications and maximum seasonal rate for several crops. Specifically, the mitigation measures include:

- cancelling the use of methomyl on barley, oat, and rye and limiting its use on wheat to Idaho, Oregon, and Washington;
- reducing the number of applications for celery, head lettuce, and peppers by 20% and reducing the seasonal maximum rate by 12% to 20%;
- adding label language for corn to change the timing of applications so that only two applications can occur prior to tassel push at the 1-2 leaf stage and to disallow applications on bare soil; and

- reducing the number of applications to leaf lettuce, field corn, popcorn, and seed corn by 25% to 50%.

The nationwide mitigation measures can be viewed in the risk mitigation decision document available at [Regulations.gov](http://www.epa.gov/oppfead1/cb/csb_page/updates/2014/methomyl-cancel.html).

(EPA August 11, 2014)

http://www.epa.gov/oppfead1/cb/csb_page/updates/2014/methomyl-cancel.html

NEONICS WIDESPREAD IN US CORN BELT WATERS

A new study by researchers with the US Geological Survey (USGS) finds neonicotinoid insecticides are commonly found in streams throughout the state of Iowa, suggesting the pesticides are both mobile and persistent in the environment. The USGS [study](#), published last week in the peer-reviewed journal *Environmental Pollution*, is the first major investigation of neonicotinoid insecticides in rivers and streams in the Mid-West US.

Recent studies have focused on the possible link of neonicotinoids to honeybee declines, but to date there has been little research on the occurrence of the insecticides in surface water. The researchers say that their findings indicate neonicotinoids are moving from farm run-off to nearby water bodies because the chemicals dissolve easily in water, but do not break down quickly in the environment.

"We noticed higher levels of these insecticides after rain storms during crop planting, which is similar to the spring flushing of herbicides that has been documented in Midwestern US rivers and streams," says lead author Michelle Hladik, a USGS scientist. "In fact, the insecticides also were detected prior to their first use during the growing season, which indicates that they can persist from applications in prior years."

The research team took 79 water samples from nine rivers and streams in Iowa during the 2013 growing

season and found neonicotinoids in each one. The waters analysed in the study included the Missouri and Mississippi Rivers, which drain most of Iowa and parts of Minnesota, Montana, Nebraska, North Dakota, South Dakota and Wisconsin. The seven states have the highest use of neonicotinoid insecticides in the nation.

The researchers said levels of neonicotinoids found during the growing season often exceeding chronic aquatic toxicity levels of 10-100 ng/litre. Clothianidin was the most commonly detected neonicotinoid in the study, found at 75% of the sites and at concentrations up to 257 ng/ litre. Thiamethoxam was found at 47% of the sites, with a maximum concentration of 185 ng/litre, while imidacloprid was found at 23% of sites surveyed with a maximum concentration of 42.7 ng/litre.

(Pesticide & Chemical Policy/AGROW, August 8, 2014)

USDA TO HOLD VIRTUAL PUBLIC MEETING 9/11/14 ON DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR HERBICIDE-RESISTANT COTTON & SOYBEAN

The U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) is holding a virtual public meeting on **September 11, 2014, from 5 to 8pm EDT**, to receive comments on a draft Environmental Impact Statement (DEIS) as part of its review to determine whether to deregulate genetically engineered (GE) cotton resistant to the herbicides glufosinate and dicamba, and soybean resistant to dicamba. The DEIS analyzes the potential environmental impacts of these GE cotton and soybean varieties developed by Monsanto Company.

Participation instructions for the virtual meeting and all associated documents can be found online at <http://www.aphis.usda.gov/APHISVirtualMeetings/>.

To provide written comments through September 25, visit:

<http://www.regulations.gov/#!submitComment;D=APHIS-2013-0043-0067>

(USDA August 25,2014)

<http://content.govdelivery.com/accounts/USDAAPHIS/bulletins/cbde19>

MOSQUITOES 'SMELL' AND 'TASTE' DEET AND OTHER REPELLENTS

Mosquitoes not only have a sense of smell for certain insect repellents, but they also have a sense of taste for these chemicals, according to scientists at the U.S. Department of Agriculture (USDA).

Joseph Dickens, an entomologist with the USDA's Agricultural Research Service, discovered for the first time that a taste receptor located on a mouthpart of mosquitoes is sensitive to DEET, the most common active ingredient in insect repellents.

Scientists have known for some time that DEET works by interacting with the mosquito's smell (olfactory) receptor cells, causing the insect to become confused and to fly away. Dickens' findings, published in *Naturwissenschaften*, demonstrate that DEET also interacts with a specific mosquito taste (gustatory) receptor, which could indicate the existence of a sensory pathway for taste that deters blood feeding by the insects.

(PCT Online, August 13, 2014)

<http://www.pctonline.com/mosquitoes-smell-taste-DEET.aspx>

US HOUSE REVIVES AND PASSES BILL TO VOID CWA PESTICIDE PERMITS

The US House of Representatives last week approved legislation that eliminates a controversial requirement that some pesticide users obtain Clean Water Act (CWA) permits.

Although approval of the legislation is a victory for the pesticide industry, there is a noted sense of *déjà-vu* about the matter. The House passed virtually the same bill in 2011, but the measure went nowhere in the Senate (*Agrow No 613, p 13*). Several Senate Democrats blocked consideration of the bill and appear resolute in their opposition, voicing concern that the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) is inadequate for ensuring waters are protected from pesticides.

The House vote on the bill came only three days after proponents had failed to get the two-thirds majority needed to consider the measure.

Frustrated by that defeat, Republican supporters successfully attached a rule allowing a simple majority vote on the measure to an unrelated resolution - one that gave House Speaker John Boehner the authority to file suit against President Obama for his implementation of the new US healthcare law. The House Republican majority passed that resolution easily on July 30th, setting up the vote on the CWA pesticide permit bill the following day.

The legislation, which the House passed by a vote of 267 to 161, amends the FIFRA to specifically eliminate the CWA permitting requirement for application of any federally approved pesticides.

Proponents contend that the legislation is needed to remedy a 2009 court ruling that required the US EPA to develop the CWA permit for pesticide applications near water (*Agrow No 559, p14*). The new permitting regime has drawn the ire of the pesticide industry, farm groups and mosquito control officials, who contend that it is unnecessary and costly. "Pesticide registration and enforcement programmes under FIFRA take into account

environmental and human health risks just like the Clean Water Act does," says Representative Bob Gibbs, an Ohio Republican and author of the legislation. "This is a good bill that reduces burdensome regulations without rolling back any environmental safeguards."

But critics of the bill contend that there is little evidence the permit requirements are a problem. "We have heard about the dramatic effect that the regulations would have but in fact, for almost three years now, there has been no drama," says Representative Donna Edwards, a Democrat from Maryland. "The sky has not fallen." The permit requirements are "commonsense precautionary measures that limit the contamination of local waters by pesticides," she adds. "I am unaware - despite repeated requests to both EPA and the states - of any specific example where the current Clean Water Act requirements have prevented a pesticide applicator from performing their services."

(Pesticide & Chemical Policy/AGROW, August 4, 2014)

U.S. REPRESENTATIVE QUESTIONS EPA'S RISK ASSESSMENT OF 2,4-D-BASED HERBICIDE

U.S. Representative Henry Waxman (D-Calif.) sent a letter to the U.S. Environmental Protection Agency (EPA) last week asking them a poignant question: Why didn't the human health risk assessment of Dow's newest 2,4-D-based herbicide apply the ten-fold safety factor required by national law to protect children and infants?

The question is a good one and events leading up to it began back in April 2014, when EPA opened up a public comment period for Dow AgroSciences's application to expand the use of its 2,4-D choline salt herbicide, known as Enlist Duo®, on 2,4-D-tolerant corn and soybeans. This application was the next step in ushering in a new wave of genetically-engineered (GE) crops sought to replace the quickly

waning glyphosate-resistant or Roundup Ready® varieties.

As EPA described on its Enlist-Duo® webpage, “Weeds are becoming increasingly resistant to glyphosate-based herbicides and are posing a problem for farmers. If [the Enlist Duo® application is] finalized, this action would provide an additional tool to reduce the spread of glyphosate resistant weeds.”

In other words, because of the overuse of glyphosate on GE glyphosate-resistant crops and the resulting development of weeds across the U.S. showing resistance to glyphosate, chemically-dependent farmers remain desperate for another chemical. The application for approval of the new Enlist Duo® uses follows on the tail of a similar application from Dow to the U.S. Department of Agriculture to deregulate the GE corn and soybean seeds developed to withstand application of Enlist Duo®.

Although a new pesticide-use application and registration requires several important components, one of the primary components is the human health risk assessment. In this document, EPA must review the proposed pesticide’s use and examine it against the known toxicological hazards of the chemical and its exposure (ranging from dietary to occupational) risks.

Under the *Food Quality Protection Act (FQPA)*, these toxicological reviews and risk assessments must also consider the increased risks that pesticides pose to children and infants and apply a ten-fold safety factor in many instances.

As Rep. Waxman’s letter reminds the EPA, “The ten-fold safety factor] resulted from a recommendation in a report by the National Research Council that ‘the 10-fold factor traditionally used by EPA and FDA for fetal developmental toxicity should also be considered when there is evidence of postnatal developmental toxicity and when data from toxicity testing relative to children are incomplete.’”

EPA’s human health risk assessment for Enlist Duo® decided not to apply the ten-fold safety factor

and found that “the toxicology database is adequate to assess this [Enlist Duo’s] proposed use” and that “[t]here are no residual uncertainties for pre-and/or postnatal toxicity.”

Troubled by this finding, Rep. Waxman enlisted the expertise of Dr. Philip Landrigan, the former chair of the National Research Council Committee on Pesticides in the Diets of Infants and Children. According to the Representative’s letter, after reviewing the EPA’s report and, specifically, the EPA’s justification for not using the ten-fold child-protective safety factor, Dr. Landrigan concluded that the database for assessing potentially harmful health endpoints of 2,4-D was thin and appeared to be based entirely on old studies. Dr. Landrigan also pointed out, among other issues, that it appeared that the developmental toxicity data relied on by EPA to justify its finding consisted of only two studies, a 1983 study on pregnant rats and a 1990 study on pregnant rabbits.

To remedy these deficiencies, Rep. Waxman’s asked the EPA for a better and more complete explanation of both the studies used, assumptions based on those studies, and decisions to exclude certain exposure routes in the assessment. (*Beyond Pesticides*, September 2, 2014) <http://www.beyondpesticides.org/dailynewsblog/?p=13963>

PESTICIDE INTERESTS ASK U.S. EPA TO PULL FARMWORKER PROTECTION PLAN

Pesticide manufacturers and grower groups are calling on the US EPA to abandon a plan to overhaul regulations intended to protect the nation's more than 2 million farmworkers and their families from pesticide exposures, arguing that the revisions will do little to improve upon the existing rules.

Given the "deficiencies" in the proposed changes to the Worker Protection Standard (WPS), "we strongly urge EPA not to proceed on promulgating

this rule," says the industry association, CropLife America (CLA). "Instead, the Agency should withdraw the rule and focus on improving the necessary training on the current WPS." The comments from the CLA add to the controversy over the proposed revamp of the WPS, which the Agency announced in February ([Agrow No 683, p 14](#)).

Critics of the current WPS, particularly farmworker advocates and environmental groups have long argued that the regulations fall far short of providing adequate protections and are nearly impossible to enforce. They note that the EPA acknowledged in 2000 that risks to workers still exceeded its level of concern even when there was full compliance with the WPS. The Agency estimates that some 10,000-20,000 farmworkers suffer from injuries and illness related to pesticide exposure every year. Environmental and labor groups suggest that figure likely understates the number of acute poisonings since many affected farmworkers may not seek care from a physician.

But while critics of the current WPS have largely welcomed the proposed changes, the Agency plan faces strong opposition from powerful farm interests and the CLA. The CLA says that the Agency's plan rests on data that are outdated and argues that the revisions will impose undue burdens while failing to improve safeguards for farmworkers. "The significant advances in science, regulatory requirements and technology used to apply pesticides over the last 20 years are not referenced at all in the proposed revisions," the CLA comments. "There is no justification for the proposed revisions based on the data for acute or chronic illness, and the benefits that are argued to accrue are simply not there."

There is ample data that show a "steep and ongoing reduction in incidents of acute poisoning and a lack of evidence to support elevated levels of chronic disease in farmworkers," according to the CLA. "The farmworker demographics have also significantly changed since 1992, and since 2005, the most recent data cited in the WPS revision preamble." The group also contends that the Agency has "significantly under-estimated" the costs of the rule. The EPA says that the costs of

additional recordkeeping and training requirements will be some \$196 million, but a CLA-commissioned report suggests that the figure is likely to be more than \$340 million. The CLA concludes that the EPA would be better served by "focusing on the gaps in the implementation of the current WPS, rather than by adding layers of bureaucracy and prescription."

The comment period for the WPS closed on August 18th. The Agency will review the more than 1,600 comments submitted before determining whether to pursue the proposal.

(Pesticide & Chemical Policy/AGROW, August 21, 2014)

BEES ARE NO. 1 BUG KILLER OF WORKERS, LABOR DEPARTMENT REPORTS

A new 16-page government report from the U.S. Labor Department implies an important warning: Watch out for bees when working in Texas, the Wall Street Journal reports.

Of the 83 people to die on the job due to insect-related injuries from 2003 to 2010, 63% were killed by bees and one in four fatalities occurred in Texas. That's according to a new Labor Department's report, "Fatal injuries and nonfatal occupational injuries and illnesses involving insects, arachnids, and mites."

Bees were responsible for more workplace deaths—52—than spiders, wasps and ants combined.

Almost all the deaths were caused by the bugs' stings, venomous bites or injections, but five fatalities were due to falls from a vehicle. (PCT Online, August 15, 2014) <http://www.pctonline.com/Bees-top-bug-killer-workplace.aspx>

LOUVRE GARDEN TEEMING WITH RATS

Many Parisians and tourists complain rats on the Louvre's garden detract from their visit to one of the world's most prestigious museums, the Telegraph reports.

The gardens are attractive to rats because they are close to the river. The Louvre normally relies on the city authorities to keep the rodents under control, but managers have now decided that the numbers of rats are intolerable and have called in a private pest control agency.

However, their efforts so far have failed to stop dozens of rats scurrying among people relaxing or picnicking on the lawns of the Jardin du Carrousel. "Food waste left on the lawns attracts rats and encourages their proliferation," a spokesman for the museum said. "We're asking people to be more careful."

(PCT Online, August 1, 2014)

<http://www.pctonline.com/Louvre-gardens-rodent.aspx>

WHERE ARE NEW YORK'S BED BUGS NOW?

Jeremy Ecker saw the potential in bed bugs early. In 2009, he spent \$20,000 on two bedbug-sniffing dogs and launched the Bed Bug Inspectors, a detection service. What happened next surprised even him.

"The bedbug industry blew out," he says.

At the height of the city's bedbug panic, his canine teams were handling 18 jobs a day. Every time the media reported a new infestation, his phones went bananas. He added a third dog.

And now?

"It didn't last," he says. "Bedbug dogs is a great service, but it isn't what it used to be."

The sweltering summer of 2010 was New York's bedbug peak. The little red vampires were invading schools, shopping at Niketown and catching flicks at AMC AMCX +0.44% theaters.

The bedbug industry boomed. New pest-control services offered options ranging from oxygen-depletion domes to thermal-radiant heat. Lawyers took cases from victims suing hotels. Therapists treated new clients racked with bedbug anxiety.

How's the industry faring now? Judging by the city's stats, not so hot.

The Department of Housing Preservation and Development says it issued 2,735 bedbug violations to landlords in the 12 months ending in June, a 43% drop from the peak. Complaints are down as well.

Observers say we've done a lot to quell the problem. Landlords are now required to inspect and treat apartments adjoining any unit where bedbugs are found. Many businesses are scheduling regular inspections. Most of us realized it's a bad idea to adopt an old sofa found on the curb.

But the bedbug industry is adapting. Mr. Ecker, for one, says that by 2012, he realized he couldn't survive on bedbugs alone. His new outfit, Rest Easy Pest Control, battles invaders ranging from cockroaches to rodents.

For a year or so, though, it was rough going. For one, the competition heightened. According to the state's Department of Environmental Conservation, the number of extermination businesses registered in the five boroughs grew from 542 in 2009 to a current high of 628.

Mr. Ecker says that when he launched, there were just four bedbug dogs in the city. Within a year, there were more than 20: "There were tons of people who flooded in—some good, some bad."

Marketing costs, meanwhile, went bonkers. The cost per click for online search terms such as "bedbug dog inspection" soared from \$3 to more than \$20.

"The shift to full-service pest control was necessary to survive," says Mr. Ecker.

In 2010, Janet Friedman's Bed Bug Busters NY extermination-prep service employed 15 part-timers. She had plans to launch a franchise business.

The franchise never materialized. And while business is steady, she's down to five helpers.

Now, the operation is tightly focused. She caters mainly to wealthy clients who have especially difficult situations—cluttered apartments that need a lot of work to prepare for the exterminator. She's also raised her rates, from \$1,080 to \$1,720 a day for a team of three.

"It's what the market will bear," she says. "People will pay for peace of mind."

That's what Midtown psychologist Steven Brodsky discovered when the 2010 panic ushered in a host of new patients, triggered by bedbug anxiety. But it's been a while since he's seen a case like that, he says. When his existing patients get bedbugs, they take it in stride—sort of.

"It's less dramatic than it was before," he says. "But it's still more dramatic than cockroaches."

Some exterminators sound almost glad the panic is over.

Bob Young, operations manager for Terminix, says that at the height of the hysteria, the company was flooded with inspection requests. More often than not, Terminix would provide a free inspection, only to find nothing more than a few harmless beetles.

"Everything with six legs was a bed bug," says Mr. Young. "Sometimes things with less than six legs."

Metro-area bedbug business for Terminix is down about 20% from the peak, says Mr. Young, but there are far fewer false alarms.

Others says the bedbug problem is as widespread as ever. Glenn Waldorf, director of Bell Environmental, says his company recently battled

the blood suckers in theaters, camps and government buildings.

"Anyone who rides the N train is subject to it," he says, referring to this summer's headlines about bedbugs riding the rails.

He almost sounded nostalgic for the good old days. Back in 2010, Bell Environmental took the spotlight in dozens of bedbug articles and TV segments. Roscoe, its bedbug sniffing Beagle, appeared on "Good Morning America."

Fame's bright light has faded, but Bell forges on. Last summer, it issued a news release: "Today's Forecast—Hot and Buggy!"

It said that thanks to the heat wave, bedbug inquiries were up. This summer, it issued a release offering advice for the continuing problem of bedbugs in the workplace.

Mr. Waldorf says Bell isn't trying to spread alarm, but educate the public to fact that we still have a serious problem.

So are bedbugs here to stay?

Gil Bloom, president of Standard Pest Management and a member of former Mayor Bloomberg's now-defunct Bed Bug Advisory Board, says unfortunately, yes.

While more infestations are detected early on, and extermination methods have improved, he says, zapping bugs is expensive. A certain percentage of the population will likely live with the pests and keep spreading them around.

And while researchers are working to eliminate bedbugs, the insects are notoriously pesticide-resistant. More inventive solutions, meanwhile, bring unintended consequences.

"It's a lot of things that come into this whole equation," says Mr. Bloom. "And the bedbugs laugh." (New York Times August 29, 2014) <http://online.wsj.com/articles/where-are-new-yorks-bedbugs-now-1409337589>

In-State and Neighboring CEU Meetings

Date: September 11, 2014

Title: Carnegie Coop Gin's Fall Cotton Tour & Harvest Meeting

Location: Hydro OK

Contact: David Nowlin (405) 247-3376

Course #: OK-14-115

CEU's:	Category(s):
3	1A
3	10

Date: September 18-19, 2014

Title: OPCA Annual Conference

Location: Reed Center Midwest City OK

Contact: Eileen Imwalle (405) 726-8774

Course #: OK-14-113

www.ok-pca.com

CEU's:	Category(s):
6	3A
4	7A
4	7B
2	7C
3	8
8	10
2	11

Date: September 23-25, 2014

Title: OKVMA Fall Conference

Location: Renaissance Hotel & Convention Center
Tulsa OK

Contact: Kathy Markham (918) 256-9302

Course #: OK-14-094

www.okvma.com

CEU's:	Category(s):
8	A
7	3A
7	5
8	6
8	10

Date: October 14, 2014

Title: Red River Rights of Way and Bareground Workshop

Location: Courtyard by Marriott Norman OK

Contact: Phillip Lawrence (580) 235-5194

Course #: OK-14-112

www.rrsi.com

CEU's:	Category(s):
6	6
6	10

Date: November 11, 2014

Title: Target Specialty Products Tulsa Pest Management Meeting 2014

Location: Hard Rock Hotel and Casino
Catoosa OK

Contact: Jennifer Gonzalez (800) 352-3870

Course #: OK-14-119

www.target-specialty.com

CEU's:	Category(s):
2	3A
4	7A
2	7B
1	7C
2	8
6	10
1	11

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>

ODAFF Test Information

Pesticide applicator test sessions dates and locations for September/October 2014 are as follows:

September		October	
3	Altus	6	OKC
8	OKC	9	Tulsa
11	Tulsa	20	OKC
22	OKC	22	Altus
25	Tulsa	23	Tulsa
		TBA	Atoka

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
 Ardmore Carter County Extension Center

**Pesticide Safety
 Education Program**