OKLAHOMA COOPERATIVE EXTENSION SERVICE

PESTICIDE REPORTS

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

October, 2015 **CHEM**

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EPA UPDATES STANDARDS TO INCREASE SAFETY AND PROTECT THE HEALTH OF AMERICA'S FARMWORKERS

The U.S. Environmental Protection Agency (EPA) announced today increased protections for the nation's two million agricultural workers and their families. Each year, thousands of potentially preventable pesticide exposure incidents are reported that lead to sick days, lost wages and medical bills but with changes to the Agricultural Worker Protection Standard the risk of injury or illness resulting from contact with pesticides on farms and in forests, nurseries and greenhouses can be reduced.

"President Obama has called closing gaps of opportunity a defining challenge of our time. Meeting that challenge means ensuring healthy work environments for all Americans, especially those in our nation's vulnerable communities," said EPA Administrator Gina McCarthy. "We depend on farmworkers every day to help put the food we eat on America's dinner tables—and they deserve fair, equitable working standards with strong health and safety protections. With these updates we can protect workers, while at the same time preserve the strong traditions of our family farms and ensure the continued the growth of our agricultural economy."

"No one should ever have to risk their lives for their livelihoods, but far too many workers, especially

those who work in agriculture, face conditions that challenge their health and safety every day," said U.S. Secretary of Labor Thomas E. Perez. "Workplace illness and injury contribute greatly to economic inequality, and can have a devastating impact on workers and their families. By promoting workplace safety, these provisions will enhance economic security for people struggling to make ends meet and keep more Americans on the job raising the crops that feed the world, and we are proud to support the EPA in this effort."

Here are thoughts from a former farmworker on EPA's revised worker protection standards:

https://www.youtube.com/watch?v=TAYGb1-LUH4

EPA's updates reflect extensive stakeholder involvement from federal and state partners and the agricultural community including farmworkers, farmers and industry. These provisions will help ensure farmworkers nationwide receive annual safety training; that children under the age of 18 are prohibited from handling pesticides; and that workers are aware of the protections they are afforded under today's action and have the tools needed to protect themselves and their families from pesticide exposure.

View the video to learn more about EPA's revised worker protection standards:

https://www.youtube.com/watch?v=p0PMYSirxlY

Listen to the radio actualities for the farmworker protection standards:

http://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceeac8525735900400c27/b18112371b9d3f8985257ece0057f07a!OpenDocument

Additionally, EPA is making significant improvements to the training programs including limiting pesticide exposure to farmworker families. By better protecting our agricultural workers, the agency anticipates fewer pesticide exposure incidents among farmworkers and their family members. Fewer incidents means a healthier workforce and avoiding lost wages, medical bills, and absences from work and school.

These revisions will publish in the Federal Register within the next 60 days. For more information on the EPA's Worker Protection Standard: http://www2.epa.gov/pesticide-worker-safety/revisions-worker-protection-standard (EPA, September 28, 2015) http://yosemite.epa.gov/opa/admpress.nsf/bd4379a92ceceeac8525735900400c27/b18112371b9d3f8985257ece0057f07a!OpenDocument

TULSA TEST HELP SESSION

The OSU Pesticide Safety Education Program will conduct the next test help sessions for Tulsa on October 27th.

The Tulsa test help session will be held at Tulsa County Extension Center 4116 E 15th St.

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 is scheduled to begin at 1:30 pm.

NO CEU's will be given for this program!

Please go to the website below for more 2015 dates.
http://pested.okstate.edu/html/practical.htm

EPA PRELIMINARY RISK ASSESSMENTS FOR SEVEN ORGANOPHOSPHATES

The U.S. EPA has released preliminary human health and ecological risk assessments for seven organophosphate pesticides (OPs). The preliminary risk assessments show risks of concern to agricultural workers and bystanders as well as dietary (food and water) risks of concern, and we expect to see similar risk concerns in the assessments for the other OPs, which will be issued for public comment over the next couple of years.

These seven pesticides - dimethoate, dicrotophos,* chlorpyrifos-methyl, tribufos, terbufos, profenofos, and ethoprop - are among the first organophosphate insecticides for which preliminary risk assessments have been completed under EPA's registration review program. Used widely in agriculture, OPs act by inhibiting the action of an important enzyme in nerve cells. They can cause both short- and long-term effects.

Agency scientists retained the FQPA 10X safety factor because of uncertainty in the human dose-response relationship for neurodevelopmental effects. EPA is soliciting comments from the public on both its position paper in support of the use of the FQPA 10X safety factor for each individual organophosphate human health risk assessment and the risk assessments themselves. That position paper is included in the docket for each OP. See Table 2 of the Federal Register Notice for the docket number for each organophosphate.

This week EPA Administrator Gina McCarthy, with Labor Secretary Tom Perez, announced updates to the Worker Protection Standard to protect the nation's two million farm workers and their families from pesticide exposures. At the same time, evaluating the safety of individual pesticides for workers continues to be an EPA priority. These risk assessments are an important step toward improving protection of our farmworkers as well as ensuring the safety of our food supply.

EPA has phased out many of the OP residential and some agricultural uses over the past 15 years, thereby reducing the potential for exposure. The preliminary risk assessments for these seven OPs show that, although many uses have been eliminated, further mitigation measures or other restrictions may be necessary. If EPA determines that there are risks to workers from the use of these OPs, the agency will take action to reduce or eliminate those risks as part of our registration review.

Comments will be accepted until November 24, 2015.

*EPA previously solicited public comment on draft human health and ecological risk assessments for dicrotophos. Based on comments received, additional data and new science policies, we have revised the dicrotophos risk assessments and are releasing them again for public comment. (EPA, September 30, 2015)
http://www.epa.gov/oppfead1/cb/csb_page/updates/2015/pre-risk-assessments-seven-orphos.html

EPA RELEASES DRAFT RISK ASSESSMENTS FOR 22 SULFONYLUREA HERBICIDES

The U.S. Environmental Protection Agency has released for public comment several draft risk assessments - one combined ecological risk assessment covering 22 sulfonylurea (SU) chemicals, and individual human health risk assessments for each of them, with the exception of bensulfuron-methyl, which has not yet been completed.

Risks appear to be limited to other plants that are not the intended target of the pesticide. Using a new approach to assessing risks from related chemicals, we have combined the 22 separate ecological risk assessment into one document, focusing on risks to plants. This single document approach is intended to increase efficiency and consistency by assessing risks from a group of similar compounds at the same time. This approach makes for a level playing field for each product as we consider possible approaches to reduce risk.

We generated separate human health risk assessment documents for each of the SUs because of differences in toxicity endpoints and points of departure.

The SUs are an established and widely used class of agricultural pesticides used in the United States to control broadleaf and grassy weeds and registered for many agricultural and non-agricultural uses.

This Federal Register Notice also announces the availability of draft registration review human health and ecological risk assessments for an additional 13 pesticide chemicals that are not sulfonylureas.

To access the draft human health and ecological risk assessments, go to Docket No. EPA-HQ-OPP-2015-0386 at regulations.gov.

EPA will accept comments until November 24, 2015. (EPA, September 30, 2015) http://www.epa.gov/oppfead1/cb/csb_page/updates/2015/risk-assessments-22-sulf-herb.html

YIKES: OAK TREE MITES BRING CHIGGER-LIKE BITE OUTBREAK FROM ABOVE

Millions of microscopic mites are trying to go about their business this fall and our gigantic lumbering bodies are in the way.

The bad news is that these mites bite and some Oklahomans are itching like never before.

The good news is they don't like us any more than we like them.

"Basically they take a bite and it's, 'This isn't what I want,' and they drop off," said entomologist Justin Talley at Oklahoma State University. "We're an accidental host."

It's no happy accident if you happen to be one of the many people who have suffered the bites, however. The bites resemble a type of bite from another mite with which Oklahomans are all too familiar — chiggers.

Typically the bite creates an itchy, red mark and surrounding rash that may expand a few inches. Sometimes the bite location develops a small pustule, which leads people to believe it may be a spider bite. On sensitive people the bite can sometimes swell to the size of a golf ball, according to Dr. George Monks, a dermatologist at Tulsa Dermatology Clinic.

Chigger bites usually show up around the legs, sock line or belt line. Bites from these mites show up around the neck, face, chest and arms.

The culprit is the oak leaf itch mite and, like its cousin the chigger, it is a microscopic arachnid.

One tiny female mite carries 250 young to adulthood inside her distended abdomen at one time. Depending on the number of mites per leaf and how many infested leaves are on a tree, it's possible a tree could shed more than 370,000 mites in one day, Talley said.

If you walk under an oak tree during a hatch, you will probably be bitten. If you're a football player rolling on the grass where the wind has carried the mites, you might be bitten. If you are downwind of that oak tree driving by with open windows, jogging, or just sitting in your reading chair behind a screened, open window in your home you could be bitten.

Think of them as chiggers from the sky.

"The wind can carry them and they're small enough they can be blown through a window screen," Talley said. "They're barely visible to the naked eye, just .2 millimeters long."

The unusual location of these chigger-like bites, the swelling, itching and relatively common misdiagnosis as spider bites has many people seeking medical help.

"In my 13 years of practice here, I've never seen anything like this before," Monks said. After he saw a few patients and diagnosed the ailment Monks shared the information on his Facebook page and was surprised at the volume of responses that arrived almost immediately from patients, friends and family, and emergency room, urgent care doctors and pediatricians from Poteau to Bartlesville.

"It was, 'this explains why I'm seeing these rashes,'" Monks said. "This is affecting thousands of Oklahomans."

The bites are annoying but are not dangerous. Monks emphasized that point. "This shouldn't scare people. I don't want to alarm anyone," he said.

The only threat from the bites is secondary infection. In other words, apply calamine lotion or a topical anti-itch cream to the bite area or take some over-the-counter antihistamine like Zyrtec or Benadryl and leave it alone. Do not scratch.

"The more you scratch the more chance there is to get a secondary bacterial infection," Monks said. "If you see red streaks extending away from it or develop a fever, then at that point you should see a doctor."

The first, best measure is to avoid being bitten. That means avoiding stands of oak trees — particularly pin oak and others in the red oak family — until after the first hard frost, using a DEET insect repellent when outdoors, and wearing long socks, long pants and long-sleeved shirts.

The effectiveness of DEET is unproven against the mites, with mixed reports, but it's always a good idea this time of year to use the repellent, Talley said.

Covering up while outdoors and laundering clothes and showering immediately after going inside is another way to avoid bites. The mites might remain on your body or in your clothes for hours before they bite, he said.

"When (OSU entomologists) get reports of these, it's usually in the fall when people are raking leaves," Talley said. "It's usually warm here even after the leaves fall so you have people out raking leaves wearing shorts and T-shirts."

Trying to treat trees and lawns is a waste of money.

"They are protected inside the leaf gall so nothing gets to them," Talley said.

Alarm and confusion about the bites is understandable.

Rest assured that if you've never heard of the oak-leaf itch mite, even though you've lived in oak-laden Oklahoma all your life, you are not alone. Even in the scientific world they are a relatively new discovery.

Talley was pursuing his doctorate at Kansas State University when, in 2004, his advising professors were called to investigate a rash of unidentified insect bites.

The Pittsburg State Gorillas football program made the first call. The visiting Western Colorado State College players had developed a rash of bites. The Gorillas were relatively unscathed, Talley recalled.

Ultimately, the Kansas State entomology report on the incident estimated 19,000 people in Crawford County were affected and states, "Most puzzling was the lack of any insect being seen or felt during the act of biting," Talley said.

The report describes how entomologists were at first stumped — and bitten — as well. The similarity of the bites to chiggers, as well as the researchers being bitten around their necks and upper torsos after working in the woods, led them to look to the leaves.

That's when Pyemotes herfsi, the oak-leaf gall mite, or itch mite, was first officially recorded. Other species of Pyemotes include straw itch mites, long known since the days people brought straw into their homes for mattresses and other various uses.

Since the Pittsburg report, the oak-leaf itch mite has been documented in outbreaks in Illinois, Nebraska, Ohio, Oklahoma, Missouri, Tennessee, Texas and Pennsylvania.

Humans and pets end up as accidental targets when the thousands of mites miss their intended targets: the larvae of a small fly — a midge — that lives on the margins of oak leaves. The larvae are small, but oak leaves with brown, rolled margins indicate their presence.

Talley chuckled at the question of what it is these mites are good for — as if that somehow makes the bites more tolerable.

"Mosquitoes, ticks, people always ask that question, 'What are they good for?' "

Apparently the oak-leaf itch mite exists to help control the number of midge larvae that cause the oak-leaf galls.

"It's interesting, isn't it, that things like this are around but we don't learn anything about them until there is an outbreak or something unexplained?" Talley said. (Tulsa World, September 28, 2015) http://www.tulsaworld.com/homepagelatest/yikes-oak-tree-mites-bring-chigger-like-bite-outbreak-from/article_23003330-d5bf-5399-9e60-8ceeed670b5b.html

U.S. COURT FINDS EPA WAS WRONG TO APPROVE DOW PESTICIDE HARMFUL TO BEES

A U.S. appeals court ruled on Thursday that federal regulators erred in allowing an insecticide developed by Dow AgroSciences onto the market, canceling its approval and giving environmentalists a major victory.

The ruling by the U.S. Court of Appeals for the Ninth Circuit, in San Francisco, is significant for commercial beekeepers and others who say a dramatic decline in bee colonies needed to pollinate key food crops is tied to widespread use of a class of insecticides known as neonicotinoids. Critics say the Environmental Protection Agency is failing to evaluate the risks thoroughly.

The lawsuit was filed in 2013 against the EPA by organizations representing the honey and honey beekeeping industry. The groups specifically challenged EPA approval of insecticides containing sulfoxaflor, saying studies have shown they are highly toxic to honey bees.

The court said in its ruling that sulfoxaflor is a neonicotinoid subclass.

Dow AgroSciences, a unit of Dow Chemical Co, first sought EPA approval for sulfoxaflor in 2010 for use in three products. Brand names include Transform and Closer.

"It's a complete victory for the beekeepers we represent," said Greg Loarie, an attorney who represents the American Honey Producers Association, the American Beekeeping Federation and other plaintiffs in the case. "The EPA has not been very vigilant."

Dow said in a statement that it "respectfully disagrees" with ruling and will "work with EPA to implement the order and to promptly complete additional regulatory work to support the registration of the products."

The EPA said it was reviewing the court's decision and would have no further comment.

California's Department of Pesticide Regulation issued a statement Thursday noting that it has long had concerns about sulfoxaflor's impact on bees and has never allowed unconditional registration in that key farming state.

Honeybees pollinate plants that produce roughly a quarter of the food consumed by Americans. The demise of the bees has become a hotly debated topic between agrichemical companies, which say the insecticides they sell are not to blame, and those who say research shows a direct connection between neonicotinoids and large bee die-offs.

The White House has formed a task force to study the issue and the EPA has said it is trying to address concerns.

In its ruling, the court found that the EPA relied on "flawed and limited data" to approve the unconditional registration of sulfoxaflor, and that approval was not supported by "substantial evidence."

Dow had asked the EPA to approve sulfoxaflor for use on a variety of crops, including citrus, cotton, canola, strawberries, soybeans and wheat.

The EPA analyzed studies and data provided by Dow about the effects of sulfoxaflor on various species, including bees, and initially proposed several conditions on approval due to insufficient data provided by Dow, the court found.

However, in May 2013 the EPA decided to go ahead with unconditional registration even though the record revealed Dow never completed additional requested studies, the ruling stated.

In vacating the EPA approval, the court said that "given the precariousness of bee populations, leaving the EPA's registration of sulfoxaflor in place risks more potential environmental harm than vacating it."

The EPA must obtain further data regarding the effects of sulfoxaflor on bees as required by EPA regulations before it grants approval, the court said.

The U.S. Department of Agriculture said earlier this year that losses of managed honeybee colonies hit 42.1 percent from April 2014 through April 2015, up from 34.2 percent for 2013-14, and the second-highest annual loss to date.

Agrichemical companies that sell neonicotinoid products say mite infestations and other factors are the cause of bee demise. (Yahoo News, September 10, 2015) http://news.yahoo.com/u-court-finds-epa-wrong-approve-dow-pesticide-184509403--finance.html

US EPA MULLS NEW DATA REQUIREMENTS TO PROTECT BEES

The US EPA is working on new pesticide data requirements intended to better assess the potential risk to bees and other pollinators. The Agency says that the data requirements under consideration are intended to provide the information needed to "evaluate whether a proposed or existing use of a pesticide may have an unreasonable adverse effect" on insect pollinators.

"This action may include updates to existing data requirements, the addition of new data requirements, or both, and is intended to support both the registration and registration review of pesticides," according to the EPA.

The Agency does not have a set timetable for the proposal. Notice of work on the plan was included in the EPA's July 2015 Action Initiation List, which was released by the Agency last week. The initiation of a new rulemaking comes as the EPA continues to face criticism from all sides for its current efforts to protect bees and other pollinators from pesticides.

The EPA has imposed new bee-protective labels for neonicotinoid insecticides and proposed restrictions on pesticides that are highly toxic to bees, but neither effort has impressed stakeholders. Commercial beekeepers say that the neonicotinoid label restrictions undermine existing protections for bees. They are similarly skeptical of the EPA's proposed plan for highly toxic pesticides, suggesting the new rule is ineffective and unenforceable.

Farmers and the pesticide industry are also unconvinced by the proposed rulemaking and are pressing the EPA to change course.

The proposal aims to prohibit foliar applications of 76 pesticides that the EPA says are "highly toxic to bees". Such applications would be banned when crops are in bloom and commercial bees have been brought in for pollination services. The EPA says that the rules could impact nearly 1,000 products and aims to complete the new labels in 2016.

The American Farm Bureau Federation is concerned that the proposal does not balance the benefits and risks of pesticide use. "To issue a blanket prohibition on a lengthy list of active ingredients irrespective of the actual exposure risk is inconsistent with the Agency's authorities" under federal pesticide law, the agricultural group says. "We strongly encourage the Agency not to move forward with the proposal."

CropLife America (CLA) agrees that the EPA should abandon the rulemaking. The pesticide industry trade group says that it "strongly objects" to the EPA's rationale for the proposal and wants the Agency instead to promote private contracts between growers and beekeepers. "Due to a lack of justification and scientific basis … [the] EPA should retract this proposal," the CLA says in its August 28th comments to the Agency. (Pesticide & Chemical Policy/AGROW, September 9, 2015)

US EPA ACCUSES FMC OF PESTICIDE LAW VIOLATIONS

The US EPA alleges that FMC has committed 12,379 violations of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) over the advertising of its insecticide, Stallion Brand Insecticide (chlorpyrifos 330 g/litre + zeta-cypermethrin 33 g/litre). The Agency alleges that FMC has failed to identify the restricted use classification of the product on its website, other online marketing, advertisements in print publications and in direct mailers to retailers and farmers. The EPA further alleges that FMC has unlawfully distributed the product using the disapproved brand name, "Stallion Insecticide", which the Agency deems to be "false and misleading". It will propose a specific penalty after the company has had an opportunity to respond to the complaint and discuss the alleged FIFRA violations. The product is registered for use on crops such as alfalfa, cotton, maize, sorghum, soybeans, wheat and sunflowers. (Pesticide & Chemical Policy/AGROW, September 28, 2015)

AFRICANIZED BEES SPREADING THROUGHOUT CALIFORNIA, NEW STUDY SHOWS

Scientists from the University of California, San Diego found that Africanized bees — which possess genes from both European and African honeybees — now live as far north as California's delta region (about 25 miles south of Sacramento).

Scientists from the University of California, San Diego recently collected hundreds of bees around the Golden State to determine how far north hybrid honeybees, or Africanized bees, have spread since they first arrived in the state in 1994. They found that Africanized bees — which possess genes from both European and African honeybees — now live as far north as California's delta region (about 25 miles, or 40 kilometers, south of Sacramento). And in the southern part of the state, so-called "killer" bees run the show, Live Science reports. About 65 percent of the honey bees that buzz around San Diego County have a mix of European and African genes, the researchers found.

"The pattern of Africanization we documented in San Diego County and elsewhere in California appears consistent with patterns previously documented in Texas, where Africanized honey bees first appeared in the United States," Joshua Kohn, a professor of biology at UC San Diego and co-author of the new study, said in a statement.

While Africanized bees have taken up residence throughout the American South, Southwest, Southeast and Western coastal regions, their ability to set up permanent colonies in the northern parts of the country seems to be limited by cold temperatures during the winter months, Kohn said. However, higher temperatures caused by global warming could mean that killer bees may continue to push north in the coming years, he added. (PCT Online, September 24, 2015)

BUMBLEBEES MAY BE ADAPTING TO INCREASE DECLINING POPULATIONS, RESEARCHERS SAY

Rising temperatures in alpine habitats worldwide have resulted in declines of flowering among indigenous plants and contributed to dramatic declines in populations of several bumblebee species prevalent in those regions. Now, researchers at the University of Missouri in a study published in Science, have found that two alpine bumblebee species have responded to this decline in flowering due to warming temperatures by evolving shorter tongues. The results suggest that some bumblebee species may be able to adapt to environmental challenges caused by climate change.

“We are not saying climate change isn’t a problem for bumblebees—it is a major problem,” said Candace Galen, a professor of biological sciences in the MU College of Arts and Science. “However, these findings indicate that some bumblebees may be able to adapt if provided adequate habitat, and are largely shielded from environmental pollutants, such as pesticides.”

Since bumblebees have co-evolved with the floral resources needed for nutrition, Galen and her colleagues were curious how resident bumblebees were faring in the alpine regions of the Rocky Mountains. They looked specifically at changes in tongue length among resident bumblebees because this trait is intimately tied to the bee-flower relationship. In general, bumblebees with longer tongues are considered “specialists” which feed on flowers with deep, long tubes, while short-tongued bumblebees, in contrast, are “generalists” and tend to move pollen from a variety of flowers.

Galen and her colleagues measured the tongue lengths of alpine bumblebee species collected between 1966 and 1980 at three alpine sites of the central Rocky Mountains and archived at the University of Colorado and other museums.

They resurveyed bumblebee species in the same alpine locations between 2012 and 2014 and measured their tongue lengths.

The scientists found that for populations of two species on three mountains, tongue length had decreased by nearly 25 percent over the 40-year period.

"A change of 25 percent over this amount of time is dramatic, especially when we take into account that this change has occurred over just 40 generations," Galen said. "Most evolutionary change occurs on a timescale of a few hundreds, thousands or millions of years. Forty years is a timescale that happens in a human lifetime."

When they looked at the flowers visited by the alpine bumblebee species, they found that the bees' favorite flowers had not shifted to a shallower form, but were less prolific. Overall, they found that the total food resources available to alpine bumblebees had fallen by 60 percent since the 1970s.

The scientists then examined the relative advantage of the specialists versus the generalist bumblebees in a simple environment. They found that when deep flowers are in the minority and the total flower density drops, the advantage of being a generalist increases sharply.

"Basically, it shows you can afford to be a specialist if there is enough of the plant you are specializing on," said Ricardo Holdo, an assistant professor of biological sciences at MU. "As you start losing resources, then that's going to have a disproportionate impact on that specialist whose flowers are not really common to begin with; this is one of the real strengths of the study: it shows that the change in the flower population is actually exerting a selective pressure on the pollinator."

The finding of rapid adaptation is "a glimmer of hope" for bumblebees, whose populations worldwide are declining, Galen said.

"It suggests that the findings we can manage locally, like pesticides, habitat destruction and planting companion plants, can actually make a difference because these factors can buy pollinators time for natural selection and evolution, thus allowing the species to keep pace with the things that we can't manage locally," said Galen. "They seem to be giving bumblebees 'running shoes' in this race against climate change."

The study, "Functional mismatch in a bumblebee pollination mutualism under climate change," was supported by a grant from the National Science Foundation (Grant No. DEB-79-10786 and 1045322). The content is solely the responsibility of the authors and does not necessarily represent the official views of the funding agencies.

(PCT Online, September 29, 2015)
http://www.pctonline.com/article/bumblebees-adapt-declining-populations

CEU Meetings

Date: October 7-8, 2015
Title: OKVMA Fall Conference
Location: Hard Rock Hotel Catoosa OK
Contact: Kathy Markham (918) 256-9380
www.okvma.com
Course #: OK-15-084

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

Date: October 13, 2015
Title: Winfield Academy
Location: Reed Center Midwest City OK
Contact: Dana Ellis (612) 240-5535
www.winfieldacademy.com
Course #: OK-15-102

CEU's:	Category(s):
3	1A
7	3A
2	3B
4	3C
4	5
3	6
3	7A
2	7B
12	10

Date: October 15, 2015
Title: Winfield Academy
Location: Wyndham Tulsa OK
Contact: Dana Ellis (612) 240-5535
www.winfieldacademy.com
Course #: OK-15-103

CEU's:	Category(s):
3	1A
7	3A
2	3B
4	3C
4	5
3	6
3	7A
2	7B
12	10

Date: October 22, 2015
Title: APWA OK Education Day
Location: Edmond OK
Contact: Richard Kindberg (405) 216-7828

Course #: OK-15-099

CEU's:	Category(s):
5	3A
1	5
7	6
7	10

Date: October 29, 2015
Title: Winfield CEU Meeting
Location: MPEC Center Wichita Falls, TX
Contact: Martyn Hafley (817) 313 -4416
www.winfieldacademy.com
Course #: OK-15-

CEU's:	Category(s):
3	3A
1	3C
2	7A
1	7B
5	10

Date: November 10-12, 2015
Title: Oklahoma AG Expo
Location: Embassy Suites Norman OK
Contact: Tammy Ford Miller (580) 233-9516

Course #: OK-15-098

CEU's:	Category(s):
6	1A
1	4
1	7C
8	10

Date: November 10, 2015
Title: Red River Specialty Rights of Way and Bareground Work Shop
Location: Courtyard by Marriott Norman OK
Contact: Phillip Lawrence (580) 436-0883

Course #: OK-15-

CEU's:	Category(s):
6	1A
1	4
1	7C
8	10

Date: November 19-20, 2015
Title: Winfield Emerald Regional Conference
Location: Yukon OK
Contact: Dennis Christie (405) 203-1751

Course #: OK-15-113

CEU's:	Category(s):
2	A
5	1A
5	10

Date: January 20-21, 2016
Title: Red River Crops Conference
Location: Southwest Technology Center Altus, OK
Contact: Gary Strickland (580) 482-0823
Course #: OK-15-

CEU's:	Category(s):
4	1A
4	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

ODAFF Test Information

Pesticide applicator test sessions dates and locations for October/November 2015 are as follows:

October			November	
5	Atoka		2	McAlester
8	Tulsa		3	Goodwell
9	OKC		5	Tulsa
22	Tulsa		6	OKC
23	OKC		10	Hobart
28	Altus		13	OKC
30	OKC		19	Tulsa
			20	OKC

Altus: SW Research & Extension Center 16721 US HWY 283

Atoka KIAMICHI TECH CENTER 1301 W Liberty Rd, Seminar Center

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, 920 S. Sheridan Road.

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

OKC: OSU OKC Room ARC 196, 400 N. Portland. (New Location)

Tulsa: NE Campus of Tulsa Community

Pesticide Safety Education Program