OKLAHOMA COOPERATIVE EXTENSION SERVICE

PESTICIDE REPORTS

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

November, 2013 CHEM

1 UNWANTED PESTICIDE DISPOSAL COLLECTIONS 2013

1 MCALESTER TESTING MOVED TO ATOKA

2 LAST OSU PSEP TEST HELP SESSIONS FOR 2013 IN DECEMBER

2 REGULATORY ISSUES SURROUNDING BEE DECLINE

3 US GM WHEAT CASES CONSOLIDATED

3 TAWNY CRAZY ANTS MAY DISPLACE FIRE ANTS, RESEARCHERS SAY

4 FURTHER EFFORT TO ELIMINATE CWA PESTICIDE PERMIT

5 MULTI-GENERATIONAL EFFECTS OF DDT LINKED TO OBESITY

6 US EPA STARTS FUMIGANT REVIEWS

7 BEHAVIORAL AND EMOTIONAL PROBLEMS IN CHILDREN LINKED TO INSECTICIDE EXPOSURE

8 CEU Meetings

9 Online CEU Links

9 ODAFF Test Session Information

UNWANTED PESTICIDE DISPOSAL COLLECTIONS 2013

The 2013 Unwanted Pesticide Disposal Programs will occur November 19th in Wilburton and November 21st in Kingfisher. The Wilburton location will be held at the Wilburton Recycling Center and the Kingfisher location will be at the Kingfisher County Fairgrounds. The Disposals will run from 8 a.m. to 1p.m. at both locations.

There is no charge for this program. Limit is 2,500 pounds per entity. ONLY PESTICIDES will be taken at the sites (no fertilizer, paint, oil, etc)!
If you have any questions contact Charles Luper (OSU) at 405-744-5808 or Ryan Williams (ODAFF) at 405-522-5993.

Nov. 19 Wilburton Recycling Center
Nov. 21 Kingfisher County Fairgrounds

For more information please go to
http://pested.okstate.edu/html/unwanted.html

MCALESTER TESTING LOCATION MOVED TO ATOKA

Due to remodeling work being performed at the Kiamichi Technology Center in McAlester the November, and December testing dates will now be held in Atoka. The test session will occur at the Kiamichi Technology Center in Atoka at 1301 w Liberty Rd, in the seminar center.

LAST OSU PSEP TEST HELP SESSIONS FOR 2013 IN DECEMBER

The OSU Pesticide Safety Education Program will conduct the last test help sessions for 2013 in December. The Test Help will be held at the Oklahoma County Extension Center on December 17th.

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.

Cost of registration is $30 if received by December 10th. Registration will increase to $50 after December 10th.
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.

2014 Test Help Dates will be posted on the PSEP website in late December.

NO CEU's will be given for this program!

REGULATORY ISSUES SURROUNDING BEE DECLINE

In a recent cover story, Time magazine labeled the decline of bee health "the second Silent Spring." So let me back up in time a bit. Silent Spring was written by Rachel Carson and Published by Houghton Mifflin in 1962. This book is credited with catalyzing the contemporary American environmental movement. This movement helped facilitate the ban of DDT. John F. Kennedy directed his Science Advisory Committee to investigate Carson's claims, which led to an immediate response of tighter chemical pesticide regulations. Are you with me now? Bee Decline is becoming a big political issue. Bee decline policies could reshape our regulatory environment regarding pesticides and change the way pesticides are registered, re-registered, and used in our environment.

A good example is the U.S. Environmental Protection Agency's recent label revisions to some neonicotinoid pesticide products that prohibit applications where bees are present. The changes apply to all products that have outdoor foliar use directions containing the active ingredients imidacloprid, dinotefuran, clothianidin or thiamethoxam regardless of formulation, concentration, or intended user. Granular formulations will be exempt. New language will appear in the Directions for Use section on product labels: "Do not apply [insert name of product] while bees are foraging. Do not apply [insert name of product] to plants that are flowering. Only apply after all flower petals have fallen off." There may also be a list on the label of conditions in which you can make the applications (ex. after sunset, temps below 55°F, etc.). Consult label regarding bee advisory information! Registrants are responsible for submitting these label changes to EPA this year. You will see these notices on labels starting early 2014. A great article was just published by PCT regarding this subject.
http://www.pctonline.com/pct1013-bee-health-insecticides.aspx

Like the Oklahoma Pesticide Safety Education Program on Facebook for helpful info. https://www.facebook.com/pages/Oklahoma-State-University-Pesticide-Safety-Education-Program/549690528435191

Dr. Jackie Lee, Pesticide Coordinator

US GM WHEAT CASES CONSOLIDATED

The legal battle over the discovery in spring of an unauthorized strain of Monsanto's genetically modified glyphosate-tolerant wheat may have its roots in Oregon, but it is set to be fought in a Kansas court. The Judicial Panel on Multidistrict Litigation (JPML) has consolidated 16 class actions over the GM wheat incident and transferred them to the US District Court for the District of Kansas.

The lawsuits, filed by wheat farmers and environmentalist groups in eight states across the country, all allege similar complaints that Monsanto negligently allowed its GM wheat to contaminate conventional crops. That caused wheat farmers undue economic harm by depressing wheat prices and damaging the export market. News of the rogue volunteers threw the US wheat market into turmoil, prompting Japan and South Korea to temporarily suspend imports.

The suits aim to represent other wheat farmers affected by the contamination, seeking monetary relief as well as requirements that Monsanto take measures to clean up the contamination and ensure that such an unauthorized release is not repeated. Consolidation makes sense because all actions "share factual questions arising from Monsanto's conduct with respect to the development and field testing" of GM wheat and its alleged discovery in an Oregon field in April 2013, the panel's chair, John Heyburn, explained in the court order. Centralization will eliminate duplicative discovery, prevent inconsistent pre-trial rulings and conserve the resources of the courts, the parties and their counsel, Mr Heyburn wrote.

While Monsanto and the plaintiffs were all in favor of consolidation, the decision to send the case to Kansas is a victory for the company, which had suggested that Court as one of its two choices (*Agrow* No 672, p 16). Plaintiffs in several cases had asked the panel to send the issue to district courts in either Oregon or Washington. But the panel determined that consolidation in the Kansas Court would best serve the convenience of the parties and witnesses, while also promoting the "just and efficient conduct" of the litigation.

Three of the class actions are pending in the Court, the panel noted, and five related actions reside in nearby districts. The Court is also "relatively close" to Monsanto's St Louis headquarters "where the majority of the common evidence is likely to be located, including the witnesses and documents concerning Monsanto's field testing of genetically engineered wheat", the panel concluded.

The consolidated case will be presided over by US District Court Judge Kathryn Vratil.

(Pesticide & Chemical Policy/AGROW, October 21, 2013)

TAWNY CRAZY ANTS MAY DISPLACE FIRE ANTS, RESEARCHERS SAY

University of Texas researchers are concerned that tawny crazy ants are going to severely disrupt the environmental balance in the Southeastern United States by wiping out one of the region’s other pests, fire ants, UPI reports.

Tawny crazy ants, also referred to as Raspberry ants, are capable of killing other insects and also starving out entire colonies. They multiply quickly and can nest in crawl spaces, walls and even house plants.

“Perhaps the biggest deal is the displacement of the fire ant, which is the 300-pound gorilla in Texas ecosystems these days,” said Ed LeBrun, a research associate with the Texas invasive species research program.

“The whole system has changed around fire ants. Things that can’t tolerate fire ants are gone. Many that can have flourished. New things have come in. Now we are going to go through and whack the fire ants and put something in its place that has a very different biology. There are going to be a lot of changes that come from that. “Click to read more.

(PCT Online, November 1, 2013
http://www.pctonline.com/tawny-crazy-ants-displace-red-ants.aspx

FURTHER EFFORT TO ELIMINATE CWA PESTICIDE PERMIT

A dozen US senators are urging their colleagues to insert language into the farm bill to void an EPA requirement for some pesticide users to obtain Clean Water Act (CWA) permits. The issue is a pressing one for the pesticide industry, which contends that the CWA permitting requirements are duplicative, costly and unnecessary. The senators echo that view, calling for language in the final farm bill that "specifies that these duplicative permits are not required for the lawful application" of pesticides approved by EPA under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

The requested provision would amend the FIFRA to eliminate the permitting requirement for the use of pesticides already approved for use under that statute. It would effectively overturn a 2009 court ruling that found that pesticide residues and biological pesticides are pollutants subject to the CWA's National Permit Discharge Elimination System (NPDES) program (*Agrow* No 559, p 14).

In response to the court ruling, the EPA developed an NPDES general permit to cover four specific types of pesticide applications "to, over or near waters of the United States" - those aimed at controlling mosquitoes and other flying insects, aquatic weeds and algae, aquatic nuisance animals, and forest canopy pests (*Agrow* No 628, p 15).

The EPA has repeatedly said that the permit does not affect farmers and ranchers, noting that the NPDES program specifically exempts agricultural storm water runoff and irrigation return flows. But that has not assuaged critics' concerns that the permitting program is unwarranted and sympathetic lawmakers have tried repeatedly to make the issue moot.

"The compliance requirements of the permits impose resource and liability burdens on thousands of small businesses, farms, municipalities, counties, and state and federal agencies legally responsible for protecting public health, in addition to exposure to citizen lawsuits," the bipartisan group of senators write in their October 17th letter to the chair and ranking member of the Senate Agriculture Committee. "At the same time, the new permitting requirements have little to no environmental or public health benefits."

The letter cites the support of more than 160 organizations, including CropLife America, the American Farm Bureau Federation and the Agricultural Retailers Association. Past legislative attempts to tackle the issue have drawn bipartisan support in both chambers and one bill passed the House in 2011 (*Agrow* No 613, p 13).

The provision was included in the House version of the farm bill, but was not inserted into the Senate version. A handful of Senate Democrats have blocked progress on the issue in the Senate, agreeing with environmental groups who contend

that the FIFRA is inadequate for ensuring that waters are protected from pesticides.

It is far from clear if the measure will be included in the final version of the farm bill. The House and Senate have an array of more pressing issues to negotiate before the current extension to the existing measure expires in January. A conference committee comprised of members from each chamber was scheduled to have begun public meetings October 30th to try and iron out their differences.

(Pesticide & Chemical Policy/AGROW, October 31, 2013)

MULTI-GENERATIONAL EFFECTS OF DDT LINKED TO OBESITY

Scientists at Washington State University (WSU), in a laboratory study, determined that exposure to the insecticide DDT —banned in the U.S. since 1972, but still used today in developing countries for malaria abatement programs—impacts multiple generations, ultimately contributing to obesity three generations down the line. The study, published in the journal *BMC Medicine*, provides the scientific community with new information on multi-generational impacts of pesticide exposure.

Lead researcher Michael Skinner, PhD., professor of biological sciences at WSU, and colleagues exposed pregnant rats to DDT to determine the long-term impacts to health across generations. The study, Ancestral dichlorodiphenyltrichloroethane (DDT) exposure promotes epigenetic transgenerational inheritance of obesity, finds that the first generation of rats' offspring developed severe health problems, ranging from kidney disease, prostate disease, and ovary disease, to tumor development. Interestingly, by the third generation more than half of the rats have increased levels of weight gain and fat storage. In other words, the great grandchildren of the exposed rats are much more likely to be obese.

"Therefore, your ancestors' environmental exposures may influence your disease development even though you have never had a direct exposure," the study finds.

Previous studies have demonstrated that exposure to chemicals, including fungicides, dioxins, and other endocrine disruptors, can have severe health impacts on offspring. This study builds on a history of research showing that DDT can continue to impact health across generations. Evidence of multi-generational impacts from pesticide exposure is not isolated to laboratory animals. A 2007 scholarly review, entitled Pesticides, Sexual Development, Reproduction and Fertility: Current Perspective and Future Direction, written by Theo Colborn, PhD. and Lynn Carroll, PhD, pointed to studies linking the legacy chemical DDT to transgenerational health effects.

DDT is an organochlorine pesticide that was banned for most uses in the U.S. in 1972 due to its persistent and highly toxic nature. DDT was widely used to control mosquitoes for malaria abatement, as well as in agriculture. Despite the fact that DDT was banned in the U.S. more than 40 years ago, concentrations of this toxic chemical's major metabolite, DDE, have remained alarmingly high in many ecosystems, including surface waters, the Arctic, and even U.S. national parks. A recent study found concentrations of DDE river otters of the Illinois River, at levels higher than those detected in otters only 20 years ago. This is because the chemicals DDT/DDE are considered persistent organic pollutants (POPs). POPs are organic compounds that are resistant to environmental degradation through chemical, biological, and photolytic processes. Because of this, they have been observed to persist in the environment, are capable of long-range transport, bioaccumulate in human and animal tissue, and biomagnify in food chains.

Though DDT was proposed for elimination under the 2001 Stockholm Convention of the United Nations Environmental Program (UNEP), it has continued to be used worldwide due in part to backing by the World Health Organization (WHO). In 2006, WHO issued a position statement promoting the use of indoor spray for malaria

control, despite the fact that effective, least toxic mosquito control methods exist. Later, in 2009, UNEP and WHO announced a renewed international effort to combat malaria with an incremental reduction of the reliance on DDT. However, efforts to invest in real solutions are often derailed by those promoting DDT as a "silver bullet" for malaria prevention.

However, the adverse impacts to humans — including cancer, reproductive disease, neurological disease, developmental problems, and now obesity— paint a cautionary tale that long-banned pesticides continue to impact human health and the environment. While the study makes no conclusions about the risks posed to human health, Dr. Skinner commented to the *LA Times* that DDT advocates should take pause to consider the potential long-term impacts.

"Although the number of lives saved from malaria is significant, the long-term health and economic effects on survivors and subsequent generations also need to be considered," the study concludes.

(*Beyond Pesticides*, October 28, 2013)
http://www.beyondpesticides.org/dailynewsblog/?p=12133

US EPA STARTS FUMIGANT REVIEWS

The US EPA has issued preliminary work plans for a group of fumigants entering the registration review process. The reviews for metam sodium, metam potassium, methyl isocyanate (MITC), dazomet and chloropicrin are due to be completed in 2019. Reviews for 1,3-dichloropropene (1,3-D), aluminium phosphide, magnesium phosphide, phosphine, methyl bromide and propylene oxide (PPO) should be completed in 2020 and for ethylene oxide (ETO) in 2021. The Agency expects to conduct comprehensive ecological risks assessments, including endangered species assessments, for all of the fumigants and updated human health risk assessments for all except chloropicrin.

Metam sodium and metam potassium are pre-plant soil fumigants for use on a range of crops, trees, turf and ornamentals. After application, they quickly break down to the primary toxic degradate, MITC gas. MITC is also registered as an antimicrobial active ingredient and is the primary degradate of dazomet. The listed registrants of metam sodium and metam potassium are Amvac Chemical, Buckman, Taminco and Tessenderlo Kerley. The MITC registrant is MLPC International.

Chloropicrin is a pre-plant soil fumigant for use on a range of crops, greenhouses and tree replanting. It is also used in antimicrobial wood preservatives. The conventional use registrants are Ashta Chemicals, Great Lakes Chemical (Chemtura), Niklor Chemical and Trinity Manufacturing. The antimicrobial registrant is Osmose Railroad Services.

Dazomet is a pre-plant soil fumigant for use on strawberries and tomatoes in California only and nationally for non-bearing crops and turf. It is also used in a variety of antimicrobials. The only conventional use registrant is Amvac Chemical. The antimicrobial registrants are Buckman Laboratories, Kemira Chemicals and Lanxess.

Dow AgroSciences' 1, 3-D is a pre-plant soil fumigant for a range of agricultural and non-agricultural applications. It is also registered for post-plant food use through drip irrigation to established vineyards. The fumigant is often formulated with chloropicrin as a warning agent and to enhance weed and disease control.

Aluminium phosphide and magnesium phosphide are formulated as impregnated materials, pellets, tablets and granules that release phosphine gas on exposure to atmospheric moisture. Phosphine is a colourless gas registered for use against stored product insect pests and vertebrate pests such as rodents. Aluminium phosphide registrants are listed as Bernado Chemicals, D&D Holdings, Douglas Products and Packaging Company, ROC Enterprises and United Phosphorus. The magnesium

phosphide registrants are D&D Holdings and United Phosphorus. The only phosphine registrant is Cytec Industries.

Methyl bromide is registered for pre-plant soil fumigation, post-harvest treatment of commodities and structural fumigation. The technical registrants are Albemarle, Bromine Compounds, Great Lakes Chemical (Chemtura) and Mebrom. There are 47 registered products containing methyl bromide.

PPO is registered for use as an insecticidal fumigant for several foods such as processed spices, dried garlic and onion, cocoa, nuts, figs, raisins and prunes. PPO also has several non-food uses. It is applied as a gas in vacuum-sealed chambers or other structures such as shipping containers. The only technical registrant is Aberco.

ETO is a commodity fumigant/sterilant to reduce microbials on whole and ground spices or other seasoning materials. It is also used to fumigate beekeeping equipment at a state-managed facility in North Carolina. ETO is sold as a pressurized gas or liquid and must only be applied in vacuum-sealed or gas-tight chambers designed for use with ETO.

(Pesticide & Chemical Policy/AGROW, September 27, 2013)

BEHAVIORAL AND EMOTIONAL PROBLEMS IN CHILDREN LINKED TO INSECTICIDE EXPOSURE

Insecticides commonly used in homes and schools are associated with behavioral problems in children, according to a recent study by Canadian researchers. The study investigates exposure to pyrethroid pesticides, used in more than 3,500 products, including flea and tick controls, cockroach sprays, and head lice controls. The study, Urinary metabolites of organophosphates and pyrethroid pesticides and behavioral problems in Canadian children, published in the journal *Environmental Health Perspectives*, raises serious concerns about the impact of pyrethroids, which are increasingly used as a replacement for organophosphates.

This study uses data from the Canadian Health Measures Survey (2007-2009), a nationally representative survey, so researchers are able to apply these findings to the entire population of Canadian children. In a previous study among U.S. children, researchers at the National Health and Nutrition Examination Survey (NHANES) examined the metabolites of pyrethroids in children below the age of six. Similarly, they found pyrethroid insecticides in more than 70 percent of the samples, concluding that children had significantly higher metabolite concentrations than those of adolescents. Together these studies demonstrate that exposure is widespread, with real impacts to human health.

In the recent study, researchers analyzed organophosphate and pyrethroid metabolites in the urine of 770 Canadian children between the ages of 6 and 11. Each parent was also asked three questions about their use of indoor pesticides, pyrethroid pesticides, and outdoor pesticides within the last month. The study found, "significant associations of high scores on emotional symptoms with use of pesticides for pets/head lice, and for any use of pesticides (either indoor, outdoor, or pets/head lice), in the previous month (adjusted OR [odds ratio] = 3.8 [elevated by 3.8 times]; 95% CI: 1.5, 9.5 and adjusted OR = 2.7; 95% CI: 1.5, 5.1, respectively)." The study authors continue, "In addition, indoor use of pesticides in the previous month was significantly associated with elevated scores on conduct problems (adjusted OR = 3.2; 95% CI: 1.0, 10.5)."

Though only 14 percent of parents reported pesticide use in the last month, researchers Youssef Oulhote, M.Eng, PhD., and Maryse Bouchard, PhD., of Université de Montréal, found that 97 percent of children had traces of the pyrethroid metabolite *cis*-DCCA in their urine, while 91 percent of them had traces of at least one organophosphate metabolite. "This suggests that exposure events are common…[and that] although pyrethroids are assumed to degrade quickly by hydrolysis and photolysis, these processes might be

considerably slowed indoors, thus leaving pesticides residues to linger and accumulate," the study says.

The study concludes that with a tenfold increase in urinary levels of *cis*-DCCA, children are twice as likely to score high on parent-reported behavioral problems, including inattention and hyperactivity. *Cis*-DCCA and *trans*-DCCA, the breakdown products of pyrethroids are specifically traced to the pesticides permethrin, cypermethrin, and cyfluthrin.

Pesticide products containing synthetic pyrethroids are often described by pest control operators and community mosquito management bureaus as "safe as chrysanthemum flowers." While pyrethroids are a synthetic version of an extract from the chrysanthemum plant, they are chemically engineered to be more toxic, take longer to break down, and are often formulated with synergists, increasing potency, and compromising the human body's ability to detoxify the pesticide.

Pyrethroids are known irritants and can have a high acute toxicity depending on the specific formulation. Pyrethroids have also been connected to multiple symptoms of acute toxicity, asthma, incoordination, tremors, and convulsions. In addition to human health effects pyrethroids are also persistent in the environment and adversely impact non-target organisms. A recent study found that residents of New York City are more highly exposed to organophosphates and pyrethroid pesticides than the average American. Another 2008 survey found pyrethroid contamination in 100 percent of urban streams sampled in California.

Mounting research on the impacts of pesticides to human health present a clear need for least-toxic management of homes, which effectively prevents the infestation of unwanted insects without the use of synthetic chemicals. These techniques include exclusion, sanitation and maintenance practices, as well as mechanical and least-toxic controls (which include boric acid and diatomaceous earth). Based on range of successful pest prevention practices, use of these hazardous chemicals are unnecessary.

(*Beyond Pesticides*, November 1, 2013)
http://www.beyondpesticides.org/dailynewsblog/?p=12182

In-State CEU Meetings

Date: November 19, 2013
Title: Winfield Applicator Training
Location: Reed Center Midwest City OK
Contact: Adelita Tyson (254) 445-4359
Course #: OK-13-067
www.winfieldsolutionsceus.com

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

Date: November 20, 2013
Title: Winfield Applicator Training
Location: Hard Rock Hotel & Convention Center Catoosa OK
Contact: Adelita Tyson (254) 445-4359
Course #: OK-13-068
www.winfieldsolutionsceus.com

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

Date: December 3-5, 2013
Title: 2013 Oklahoma Ag Expo
Location: Reed Center Midwest City OK
Contact: Tammy Ford-Miller (580) 233-9516
Course #: OK-13-085
www.oklhomaag.com

CEU's:	Category(s):
1	Aerial
7	1A
1	7A
4	7c
10	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://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 November/December 2013 are as follows:

November			December	
4	Atoka		2	Atoka
5	Goodwell		3	Goodwell
5	Ardmore		5	Tulsa
7	Tulsa		9	OKC
7	Hobart		11	Lawton
15	OKC		12	Enid
21	Tulsa		19	Tulsa
25	OKC		30	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
Ardmore	Carter County Extension Center

Pesticide Safety Education Program