

PESTICIDE REPORTS

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



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CHEM

- 1 UNWANTED PESTICIDE DISPOSAL COLLECTION 2018
- 1 PALMER AMARANTH FOUND IN NORTH DAKOTA
- 2 ORKIN STUDIES BRAIN'S REACTION TO PESTS
- 3 US COURT ORDERS EPA TO BAN CHLORPYRIFOS
- 4 US JURY ORDERS \$289 M DAMAGES IN MONSANTO GLYPHOSATE CANCER TRIAL
- 4 THE VERDICT ON DICAMBA, YEAR TWO
- 6 BALLPARK OFFERS GRAIN BEETLE GIVEAWAY
- 7 US FWS REVERSES NEONIC/GMO BAN IN WILDLIFE REFUGES
- 7 IARC TAKING HEAT FROM UNLIKELY SOURCES OVER GLYPHOSATE CLAIMS
- 8 DOW DEFENDS US EPA'S REGISTRATION OF ENLIST DUO
- 9 CHIGGER BITES MAY CAUSE ALLERGIC REACTION TO RED MEAT
- 10 NPMA RELEASES 'VECTOR SECTORS' LIST
- 11 OSU PESTICIDE EDUCATION TWITTER ACCOUNT
- 11 CEU MEETINGS
- 12 ONLINE CEU LINKS
- 13 ODAFF TEST SESSION INFORMATION
- 14 UNWANTED PESTICIDE DISPOSAL FLYER

UNWANTED PESTICIDE DISPOSAL COLLECTION 2018

The next Unwanted Pesticide Disposal Program collection date will occur September 26th, 2018 in Woodward. The location will be at the Woodward County Fairgrounds located at 105 Temple Houston Drive. The Disposal will run from 8 a.m. to 1 p.m. rain or shine.

There is no charge for this program. **Limit is 2,000 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.

September 26th Woodward County Fairgrounds

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

PALMER AMARANTH FOUND IN NORTH DAKOTA

Palmer amaranth, an aggressive pigweed species similar in appearance to waterhemp, has been positively identified for the first time in North Dakota, reports Keith Darnay on MYNDNow.com.

A farmer in McIntosh County reported the suspect plant to his county extension agent. DNA analysis confirmed the plant as Palmer amaranth.

The weed is native to the southwestern U.S. but was accidentally introduced to other areas of the country and has devastated crops in the South and Midwest. It had not been identified in North Dakota until now.

It is a prolific seed producer that can emerge throughout the growing season. It grows rapidly at 2-3 inches per day in optimum conditions and is prone to herbicide resistance and multiple modes of action. It is a highly invasive weed that can dramatically cut crop yields.

“Early detection is the key to effectively eradicate or manage this weed,” Agriculture Commissioner Doug Goehring said. “We are thankful it was found and encourage farmers and the public to learn to identify Palmer amaranth in order to react quickly to control the weed.” (CropLife, August 29, 2018) <https://www.croplife.com/crop-inputs/herbicides/palmer-amaranth-found-in-north-dakota/>

ORKIN STUDIES BRAIN’S REACTION TO PESTS

To determine how the human brain reacts to seeing insects and other pests, Atlanta, Ga.-based Orkin Pest Control partnered with the Georgia Institute of Technology (Georgia Tech) on a scientific research study.

Georgia Tech researchers discovered that pests seen in a home elicited the neurological reaction of “strong disgust,” an emotion associated with avoiding contamination and disease.

“We expected to find that the study participants were afraid of pests,” said Orkin entomologist Dr. Mark Beavers. “The reaction of disgust is actually very significant, as many of the common household pests shown in the study can contaminate food and spread disease. It’s amazing how the human brain has adapted to the potential problems posed by

many of these pests, and reinforces why we all should take precautions to keep such pests away from where we live, work and play.”

Georgia Tech researchers used a functional Magnetic Resonance Imaging (fMRI) machine to monitor participants’ brain activity and heart rate. Inside the fMRI machine, researchers showed participants a series of video clips depicting insects and animals in different environments. They were shown common household pests (including cockroaches, bed bugs, flies, spiders and rodents), as well as video clips of “frightening” animals (including sharks, lions and crocodiles).

Participants were also shown video clips of everyday occurrences, such as a waving flag, to serve as a control condition to compare neurological responses. Video clips were displayed in a random order, each clip lasting 15 seconds.

With nearly every participant, the pest videos triggered a reaction in the brain’s insula, a region deep in the cerebral cortex associated with disgust. The amygdala, a portion of the brain associated with fear, was only triggered by videos of frightening animals.

“Insects in the home produced more disgust in the brain than insects in the wild, especially cockroaches.” notes Dr. Eric Schumacher, director of Georgia Tech’s Center for Advanced Brain Imaging. “Our research suggests that we may be conditioned against pests in the home, because they may be associated with contamination or illness.”

Twenty adults participated in the study, including 12 females and eight males. Participants also ranked their own anxiety while viewing videos of pests, using a handheld rating device and through a post-scan survey. Seventy percent of the participants ranked their level of anxiety while viewing images of household pests as “mild,” “moderate” or “severe.”

The study was presented by Georgia Tech researchers at the Cognitive Neuroscience Society (CNS) meeting in 2017. After receiving interest by peers at the conference, at press time Georgia Tech is pursuing publication of the study in a medical journal. (Pest Management Professional, July 25, 2018) <http://www.mypmp.net/2018/07/25/orkin-studies-brains-reaction-to-pests/>

US COURT ORDERS EPA TO BAN CHLORPYRIFOS

The US Court of Appeals for the Ninth Circuit has ordered the US EPA to revoke all tolerances and cancel all registrations for the organophosphate insecticide, chlorpyrifos, within 60 days. By a 2-1 decision, the Court vacated former Administrator Scott Pruitt's March 2017 order that denied a petition calling for a ban on the insecticide. A coalition of environmentalists and farmworker advocates sued the EPA last year, alleging that former the order had violated federal law.

The 2007 petition said that evidence of neurological harm from the insecticide had warranted the revocation of food tolerances, a move that would have effectively prohibited agricultural uses. After years of legal wrangling, the EPA had appeared to agree and in November 2016 issued a plan to revoke tolerances, citing evidence that cumulative exposures had posed undue risks to children as defined by federal food safety law.

But the Agency faced strong pressure to reverse course from grower groups, the agrochemical industry and the USDA, who all raised concerns about the scientific integrity of the EPA's review and about the lack of affordable and effective alternatives to the nation's most widely used conventional insecticide. US farmers annually use an estimated 5-6 million pounds (2,300-2,700 tons) of chlorpyrifos on some 50 crops, including almonds, apples, citrus fruit, maize and strawberries.

The EPA argued in its case that the merits of its decision were not relevant and contended that the complaint failed on jurisdictional grounds. It argued that the Federal Food, Drug, and Cosmetic Act (FFDCA's) section 346a(g)(2)'s administrative process deprived the Court of jurisdiction until the EPA had issued a response to a petitioner's administrative objections under section 346a(g)(2)(C), which it has not done to date.

But in its latest order, the Court said that the food safety law 346a(h)(1) of the FFDCA does not "clearly state" that obtaining a section (g)(2)(C) order in response to administrative objections is a jurisdictional requirement. The panel held that section 346a(h)(1) contained no jurisdictional label, was structured as a limitation on the parties rather than the court, and only referenced an exhaustion process that was outlined in a separate section of the statute. The Court held that in light of the strong individual interests against requiring exhaustion and weak institutional interests in favor of it, petitioners did not need to exhaust their administrative objections and were not precluded from raising issues on the merits.

The Court also held that there was no justification for the EPA's decision in its 2017 order to maintain a tolerance for chlorpyrifos in the face of scientific evidence that its residue on food caused neurodevelopmental damage to children. It further held that the EPA could not refuse to act because of possible contradiction in the future by evidence. The Court said that the EPA was in direct contravention of the FFDCA and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

The 42-page decision included a dissent by Judge Ferdinand Fernandez, who argued that the court had no jurisdiction over the petition for review under the federal food safety and pesticide laws. (Pesticide & Chemical Policy/AGROW, August 13, 2018)

US JURY ORDERS \$289 M DAMAGES IN MONSANTO GLYPHOSATE CANCER TRIAL

A jury at the US Superior Court of California state in San Francisco has found Monsanto liable in a lawsuit filed by a man who alleged that the company's glyphosate-based herbicides, including Roundup, caused him cancer. The jury awarded \$39 million in compensatory and \$250 million in punitive damages.

The jury deliberated for three days before finding that Monsanto's failure to warn a substantial factor in causing harm to school groundskeeper Dewayne Johnson. This was the first lawsuit alleging that glyphosate causes cancer to go to trial. There are reportedly over 4,000 similar cases awaiting trial in various state courts.

Monsanto says that it will appeal the decision and will continue to vigorously defend this product, which it adds has a 40-year history of safe use. "Today's decision does not change the fact that more than 800 scientific studies and reviews - and conclusions by the US Environmental Protection Agency, the US National Institutes of Health and regulatory authorities around the world - support the fact that glyphosate does not cause cancer, and did not cause Mr Johnson's cancer," the company adds.

In July, US federal judge Vince Chhabria kept alive hundreds of lawsuits brought against Monsanto by cancer victims who allege that exposure to glyphosate herbicide caused their illnesses. The judge concluded that the opinions of the plaintiffs' expert witnesses were "shaky" but determined that they had presented enough evidence to allow a "reasonable jury" to conclude that glyphosate could cause Non-Hodgkin's Lymphoma (NHL) at realistic exposure levels.

That July 10th ruling to deny Monsanto's motion for summary judgement affected the array of class actions that had been consolidated before Judge Chhabria in the US District Court for the Northern District of California and could impact thousands of cases pending in state courts in California, Delaware and Missouri.

Prop 65 listing

In a separate case, the US state of California last month asked a federal court to stay a lawsuit contesting its decision to list glyphosate as a cancer-causing chemical. It argued that two pending cases before the US Court of Appeals for the Ninth Circuit would provide critical guidance on the legal dispute.

At issue is a challenge of the Proposition 65 listing brought by Monsanto, the National Association of Wheat Growers and groups representing growers and sellers of soybeans, maize and durum wheat. The plaintiffs are seeking to reverse California's decision to add glyphosate to its Proposition 65 list of cancer-causing substances and to block the state from requiring cancer warning labels on products that contain the herbicide. Attorneys general from 11 states have joined the litigation in support of the plaintiffs.

A hearing on the motion for a stay has been scheduled for September 4th. (Pesticide & Chemical Policy/AGROW, August 13, 2018)

THE VERDICT ON DICAMBA, YEAR TWO

Was year two of the new dicamba technologies a success?

It's a matter of perspective. (See our earlier story from mid-July.)

In Monsanto's view, 2018 was a clear-cut win: Nearly 50 million acres of dicamba-resistant soybeans and cotton were planted, more than double last year, which Ryan Rubischko, Monsanto's Dicamba Portfolio Lead, says speaks to growers' need for new tools to fight herbicide-resistant weeds. Even with sharply expanded acreage, the number of auxin drift injury-related cases nationwide is at 1,179, according to the latest survey data available from the Association of American Pesticide Control Officials, down from

about 2,700 cases investigated by various state departments of agriculture in 2017.

Monsanto says it received 53% fewer off-target movement inquiries from applicators and non-applicators as of July 19 compared to this same time last year – 468 in 2018 versus 1,002 in 2017.

“Based on feedback we get from growers and retailers, understanding of the dos and don’ts led to the success this year. We’re seeing that with more farmers now having the right nozzles, using the right boom heights, and understanding what approved tank mixes to use and what mixes not to use, like ammonium sulfate,” Rubischko says. For example, only eight applicators inadvertently mixed AMS in the tank in 2018 — a dramatic improvement from 2017.

“I’ve been out seeing hundreds of customers over the last number of weeks, and what I hear routinely is that if you follow label, you’ll have success – success is in direct correlation with following the label,” he adds. Issues retailers had with sprayer hygiene a year ago were also vastly improved this year, representing just 5 percent of reported incidents this season, to which he credits the company’s focused education efforts and label enhancements.

Gary Schmitz, BASF Technical Services Manager for the Midwest, tells CropLife that BASF has also received fewer complaint calls than a year ago regarding Engenia.

“We’ve got areas where Engenia has been applied and we have minimal off-target movement. Where alleged off-target movement occurred, we have fewer drift events where the wind was blowing toward a sensitive crop or area that’s neighboring or adjacent. That’s the good part,” Schmitz says. “Where we have a drift pattern, usually our field team can determine the cause or causes are. When there is not a pattern, it’s more difficult to determine what the source is. Most of that is very light cupping that would probably not impact yield.”

One potential cause of light symptomology with very little pattern: tank contamination. “We generally think of contamination as being

something that happens only in sprayer, but sometimes it can happen upstream, where pumps or hoses or even some type of shuttle or mini-bulk tank could be contaminated. In that case, you could have more acres impacted; versus if it’s in a sprayer and you could see a pattern from that first load being more severe than the second load.”

Schmitz reports growers are seeing “excellent weed control,” and he hopes that by staying true to the fundamentals, success will be sustained.

“I think it goes back to the basics: using multiple sites of action and residual herbicides – like the Group 15, very long-chain fatty acid inhibitors, such as Outlook and Zidua. Utilizing those in a program really helps complete the herbicide program, and we get better weed control by having those residuals down pre-emergently, and then coming back and adding additional residuals post. In addition, applying before a weed gets to be 4 inches and between the early (V1) to late (V6) vegetative stages in soybeans is key to limiting weed competition and preserving yield potential.”

RE-APPROVAL APPROACHING

It’s worth restating: There were still 1.1 million acres of alleged drift injury as of July 15, according to University of Missouri Professor Kevin Bradley’s closely watched dicamba report.

Rubischko points out that within 48 hours of a call coming into its hotline (1-844-RRXTEND), a company representative is lining up time to walk the field or fields in question with the farmer or applicator, and this year, it has been better able to pin down a likely cause of drift. The findings often aren’t in the applicator’s favor.

“The biggest thing we see is that still, applicators make a decision to spray when the wind is blowing toward a susceptible crop. That is something outlined as ‘do not spray’ on our label, and we’ve highlighted extensively in training, but we still have scenarios that we’re seeing first-hand when walking individual fields, where following the label would have suggested not to spray in that time,” Rubischko explains.

Other sources have also been found to have caused drift, including Group 4 herbicides used on corn in the central Corn Belt, where soybeans were frequently sprayed at the same time due to weather delays. Leaf cupping, too, was sometimes mistakenly blamed on dicamba drift, when in reality it was too much rain that stunted beans, he says.

Drawing unwanted attention during this season was a surprisingly high number of suspected drift cases in Arkansas, despite the state's April 16 in-crop use cut-off date, Arkansas Online reported on July 31. The State Plant Board and weed scientists believed illegal applications were to blame, because it takes seven to 21 days for dicamba symptoms to show.

All of this aside, Rubischko is confident the technology's label will be renewed come Nov. 9.

He drives the point home about the need for dicamba-resistant cropping systems to be used in an overall integrated management approach in order to stave off resistance and keep the tool around for years to come. Monsanto will continue making sure growers understand how important it is to incorporate residuals, apply early, and get weeds when they're small – ideally 4 inches or smaller, he stresses.

“We're approaching a 50% adoption rate of soybeans, and we are seeing even higher adoption relative to cotton, so I think that speaks to demand and need for new tools to control tough weeds.”

For 2019, Monsanto is targeting a 20% increase in dicamba-resistant soybean and cotton acreage to 60 million acres. (CropLife, August 14, 2018)

<https://www.croplife.com/crop-inputs/herbicides/the-verdict-on-dicamba-year-two/>

BALLPARK OFFERS GRAIN BEETLE GIVEAWAY

Spend a day at the ballpark and if you're lucky, you will experience memorable moments like back-to-back home runs and walk-off doubles. If you're

unlucky, you will bring home a giveaway infested with pests.

The San Diego Padres' beach hat promotion on Sept. 1 offered fans something extra: grain beetles in the packaging, The San Diego Union-Tribune reported.

Before the game was over, the San Diego Padres, which lost to the Colorado Rockies that night, asked fans to swap their hats for vouchers for new, pest-free beach hats. Fans who left the game hat-in-hand were advised to discard them and contact the team for a replacement, according to the San Diego Padre's official Twitter feed.

The pests were discovered during the game, and the San Diego Padres immediately issued an official statement that read, in part: “During the distribution of tonight's beach hat giveaway, it was discovered that some packaging contained what independent expert believe to be grain beetles. We have been advised that grain beetles pose no health risks to humans, but we decided to act out of an abundance of caution.”

The San Diego Padres' statement is correct; grain beetles do not pose a health risk. Left unchecked, however, fans could have found an infestation in their pantries.

Grain beetles feast on foods made with grain, such as flour, pasta and cereal. They also like meat, nuts, candy, dried fruit and dog food. Often these pests enter packaging at the factories, warehouses and stores where foods are made, stored and sold. This may have been the case with the beach hat giveaway, as the pests were found in the packaging. (Pest Management Professional, September 4, 2018) www.mypmp.net/2018/09/04/ballpark-offers-grain-beetle-giveaway/

US FWS REVERSES NEONIC/GMO BAN IN WILDLIFE REFUGES

The US Fish and Wildlife Service (FWS) has reversed its 2014 decision to phase out neonicotinoid insecticides and genetically modified crops from US national wildlife refuges. The 2014 decision taken under the administration of President Obama phased out uses across the National Wildlife Refuge System (NWRS) by January 2016.

In the August 2nd memo, FWS deputy director Gregory Sheehan says that GM seeds have been developed and proven effective in contributing to the maximization of crop production. He points out that there may be situations where the use of GM seeds is essential to best fulfil the purposes of the refuge and the needs of birds and other wildlife. “A blanket denial of GMOs does not provide on-the-ground latitude for refuge managers to work adaptively and make field level decisions about the best manner to fulfil the purposes of the refuge,” Mr Sheehan says.

Henceforth, the NWRS will determine the appropriateness of the use of those crops on a case-by-case basis, in compliance with all relevant and controlling legal authorities.

The restrictions on neonicotinoid insecticides that “are often used in conjunction with GM seed” has also been withdrawn. Consideration of their use will also be decided on a case-by-case basis. (Pesticide & Chemical Policy/AGROW, August 7, 2018)

IARC TAKING HEAT FROM UNLIKELY SOURCES OVER GLYPHOSATE CLAIMS

A little more than a year ago, Crop Protection News reported that the U.S. Environmental Protection Agency (EPA) contradicted claims by the International Agency for Research of Cancer

(IARC) on whether or not the herbicide glyphosate is a carcinogen.

Now, IARC is being called on the carpet by an unusual source: Mother Jones magazine.

Glyphosate is a widely used herbicide manufactured by Monsanto — and commonly sold under the brand, “RoundUp.”

As Crop Protection News reported last May, the EPA's Cancer Assessment Review Committee (CARC) came to the conclusion following an in-depth analysis of several dozen published and unpublished scientific studies of the weed killer. The report completed in October 2015 was inadvertently released to the public in April 2016.

According to the report, “the epidemiological studies in humans showed no association between glyphosate exposure and cancer of the following: oral cavity, esophagus, stomach, colon, rectum, colorectal, lung, pancreas, kidney, bladder, prostate, brain (gliomas), soft-tissue sarcoma, leukemia, or multiple myelomas.”

Last week, Mother Jones published a scathing article claiming IARC didn't “have all the facts” before it published its report naming glyphosate a “probably carcinogen.”

“According to a new Reuters investigation, Aaron Blair, the scientist who led the IARC's review panel on glyphosate, had access to data from a large study that strongly suggested that Roundup did not cause cancer after all—but he withheld that data from the RoundUp review panel,” writes Mother Jones' Kiera Butler. “Weirder still: Blair himself was a senior researcher on that study.”

The Reuters investigation mentioned by Butler found that “Blair knew the unpublished research found no evidence of a link between glyphosate and cancer” and Blair “also said the data would have altered IARC's analysis.

“He said it would have made it less likely that glyphosate would meet the agency's criteria for being classed as ‘probably carcinogenic,’” writes Reuters' Kate Kelland. “But IARC, a semi-

autonomous part of the World Health Organization, never got to consider the data.”

“The agency’s rules on assessing substances for carcinogenicity say it can consider only published research – and this new data, which came from a large American study on which Blair was a senior researcher, had not been published,” continued Kelland.

Reuters’ investigation centered on documents from a pending court case in which 184 California plaintiffs filed suit against Monsanto over the company’s alleged failure to warn them about the carcinogenic risks of glyphosate.

That lawsuit, as well as a host of other similar suits, hinged on the IARC claims that glyphosate caused cancer.

Mother Jones reports that “there are no signs of IARC backing off its conclusion that RoundUp causes cancer,” but it wouldn’t be the first time that the agency has had to reverse course.

In 2016, IARC reversed its 1991 claim that classified coffee as a carcinogen. As is the case with glyphosate, IARC’s coffee claims have contributed to litigation against Starbucks and other companies.

As far as the long-term implications of IARC’s reversals, Hank Campbell writes for the American Council on Science and Health that it’s “bad for people who want to trust IARC’s recommendations.”

“Its reasons to reverse course on coffee are no more valid than its reason to have declared it possibly carcinogenic to humans in the first place,” continues Campbell. “And the coffee claims are no more valid than any other claims the agency has made about the hazards of common things.”

Among those “other claims” include glyphosate.

Even though IARC tells Reuters that it has no plans to reverse its carcinogenic claims on glyphosate, the findings in Reuters investigation could have the same impact as the coffee reversal — calling into question the validity of any one of IARC’s claims.

(Crop Protection News, June 17, 2018)

<https://cropprotectionnews.com/stories/511129168-iarc-taking-heat-from-unlikely-sources-over-glyphosate-claims>

DOW DEFENDS US EPA'S REGISTRATION OF ENLIST DUO

DowDuPont legacy company Dow AgroSciences is urging a federal court to reject a lawsuit that aims to derail the registration of the company's Enlist Duo herbicide (2,4-D choline + glyphosate). Dow argues that the complaint fails on jurisdictional grounds and says that there is no merit to environmentalists' claims that the EPA failed to comply with federal law when it approved use of the pesticide on the company's genetically modified maize, cotton and soybeans in 34 states.

The EPA first registered Enlist Duo in November 2014 but environmentalists quickly filed suit, alleging that the Agency violated federal pesticide law and the Endangered Species Act (ESA). At the EPA's request, the US Court of Appeals for the Ninth Circuit remanded the registration in January 2015, but allowed the product to remain on the market while the Agency reviewed new evidence of potential synergistic effects.

The EPA subsequently concluded that existing buffers and mitigation measures were sufficient and issued its new conditional registration in January 2017. The Agency highlighted the "low volatility" of the herbicide and noted that it had retained restrictions on aerial applications as well as requirements for updated application technologies and buffer zones to protect sensitive areas.

But environmentalists, including the Center for Food Safety and the Natural Resources Defense Council, were not convinced by the Agency's assessment and filed new lawsuits last year. The complaints, consolidated before the Ninth Circuit, allege that the EPA failed to fully assess the human health effects of the two active ingredients, particularly human exposure to the mixture in

drinking water. The plaintiffs also contend that the EPA ignored its obligations under the ESA to consult with federal wildlife agencies about the potential harm to listed species from the approved uses of the herbicide.

The EPA has rebuffed the allegations, arguing that it followed the law and calling on the Court to reject the complaint. Dow, which has been granted the right to intervene in the case, argues that the petitioners are in reality targeting "glyphosate and ordinary 2,4-D" not Enlist Duo.

"This case, however, is not about glyphosate or ordinary 2,4-D, and will not affect the legal status of either ingredient," Dow says in its August 27th filing with the Ninth Circuit. "The simple point that Enlist Duo represents a significant improvement over glyphosate and ordinary 2,4-D — both of which will remain registered for use regardless of the outcome of this litigation — dooms petitioners' challenges to the Enlist Duo registration."

Dow contends that the complaint fails on jurisdictional grounds because the environmentalists lack standing and also missed the statutory deadline to file their complaint within 60 days of the Agency's registration decision.

As for the merits in dispute, Dow says that the EPA acted "lawfully and reasonably" and did not violate either the ESA nor federal pesticide law. "The irony here is palpable," the company concludes. "Enlist Duo, a product that presents significant benefits over the status quo, is being challenged on environmental grounds notwithstanding its environmental benefits. If, as a practical matter, the regulatory and judicial process stymie the approval of such improved products, American agriculture will be forced to continue relying on existing products with a less favorable efficacy and environmental profile, and industry will lose the incentive to innovate. Accordingly, this Court should deny the petitions for review."

Farm groups representing some 6 million US farmers have also rallied to Dow's defense, telling the Court that Enlist Duo is an "irreplaceable tool" needed to help growers fend off glyphosate-resistant weeds.

Oral arguments in the dispute have been tentatively scheduled for December. (Pesticide & Chemical Policy/AGROW, August 29, 2018)

CHIGGER BITES MAY CAUSE ALLERGIC REACTION TO RED MEAT

Chiggers, redbugs, harvest mites – whatever you call them, they are pesky little bugs whose bites cause really itchy rashes, usually around the ankles and waistline.

In addition to being uncomfortable and annoying, these bites may also cause a relatively rare allergic reaction to red meat known as alpha-gal, according to doctors at Wake Forest Baptist Medical Center.

Although the medical community has known for the past five to ten years that ticks can cause this allergy, case studies from Wake Forest Baptist and the University of Virginia (U.Va.) suggest that chigger bites also may be responsible. The paper is published in the current issue of *The Journal of Allergy and Clinical Immunology: In Practice*.

"If a patient comes in telling me they ate red meat for dinner and then hours later woke up with anaphylaxis, I suspect an alpha-gal allergy," said lead author Russell Scott Traister, M.D., Ph.D., assistant professor of pulmonary, critical care, allergy and immunologic diseases at Wake Forest Baptist.

"With those symptoms, doctors usually ask if the person has had a tick bite recently. But we started seeing patients with the same symptoms who said they hadn't had a tick bite, only chigger bites."

This allergy is a reaction to a carbohydrate molecule on mammalian meat – beef, pork, venison, etc. – called alpha-gal. However, unlike most allergic reactions that happen within minutes, a reaction to alpha-gal occurs after three to six hours. The only cure is to avoid all mammalian meat, Traister said.

In addition to case studies seen at Wake Forest Baptist, Traister cited results reported by U.Va. from 311 patients who had answered a questionnaire about exposure to tick or chigger bites before developing an alpha-gal allergy. Of the 301 who reported either tick or chigger bites in the past 10 years, 5.5 percent reported a history of chigger bites, but no tick exposure.

Further studies are needed to determine if the alpha-gal molecule is in the gastrointestinal tracts of chiggers to confirm that they, as well as ticks, can cause mammalian meat allergy.

“In the meantime, we want allergists to be aware that patients may report chigger bites, and based on that fact alone should not dismiss alpha-gal sensitization as a possible diagnosis,” Traister said. (AgWeb, September 4, 2018)

<https://www.agweb.com/article/chigger-bites-may-cause-allergic-reaction-to-red-meat/>

NPMA RELEASES ‘VECTOR SECTORS’ LIST

The [National Pest Management Association \(NPMA\)](#) has released a new Vector Sectors list of the Top 10 U.S. cities with the greatest risk for increased pest pressure from vector pests, including ticks and mosquitoes. As vectors of disease, these pests are able to transmit pathogens such as Lyme disease and West Nile virus to humans through their bites, making awareness and prevention paramount to protecting public health.

“We’ve identified 10 cities with established pest populations that also experienced record-setting rainfall and heat this spring and summer, as these favorable conditions will put them at an increased risk for vector pest pressure for the remainder of the season,” says Cindy Mannes, vice president of public affairs for NPMA. “Both ticks and mosquitoes thrive in areas with warmer temperatures and excessive rainfall, as standing water allows for more opportunities to breed and increase population numbers.”

The Top 10 U.S. cities — listed alphabetically, not ranked — are as follows:

- **Birmingham, Ala.:** After having its third-warmest May on record, above-average temperatures coupled with excessive precipitation for the rest of summer could contribute to an increase in mosquito pressure.
- **Charlotte, N.C.:** Already a hospitable environment for ticks, Charlotte’s warm spring and rainy summer will significantly contribute to an increase in both mosquito and tick pressure.
- **Chicago, Ill.:** After experiencing its wettest spring on record, and warmest in over 40 years, Chicagoans are at risk for an increase in mosquito populations this summer.
- **Detroit, Mich.:** With record-setting rainfall and the highest temperatures on record for May in almost three decades, Detroit could feel an increase in mosquito pressure throughout the remainder of the season.
- **Houston, Texas:** Houston’s heat wave throughout the spring and summer, coupled with residual standing water left in the wake of Hurricane Harvey, will likely contribute to increased mosquito activity this summer.
- **Jacksonville, Fla.:** Excessive amounts of rain left over from the spring followed by above-average temperatures predicted for the rest of summer will allow mosquito populations to thrive in parts of Jacksonville.
- **Miami, Fla.:** Although accustomed to rainfall, Miami still experienced its wettest spring in more than two decades. With above-average temperatures and precipitation this summer, Miamians can expect mosquitoes to be out in full force.
- **Philadelphia, Pa.:** With the highest number of Lyme disease cases reported in Pennsylvania than any other state in the U.S., Philadelphia is at risk for an increase in both mosquito and tick pressure this summer following an unseasonably warm and wet spring.
- **Washington, D.C.:** After having its warmest and wettest May in over a decade thanks to Subtropical Storm Alberto, Washington, D.C. is expected to experience an increase in pest pressure from both ticks and mosquitoes this summer.

- **West Palm Beach, Fla.:** Excessive rain in both spring and summer coupled with increasing temperatures leaves West Palm Beach susceptible to increased mosquito populations for the remainder of the season.

(Pest Management Professional, August 17, 2018)
<http://www.mypmp.net/2018/08/17/npma-releases-vector-sectors-list/>

OSU PESTICIDE EDUCATION TWITTER ACCOUNT

The OSU Pesticide Safety Education Program now has a twitter account as another option in providing you pesticide and applicator information plus regulatory updates.

This will be a platform to communicate information that occurs between the releases of the monthly newsletter.

Find us on Twitter at [@OkstatePestEd](https://twitter.com/OkstatePestEd)

CEU Meetings

Date: September 18, 2018

Title: 2018 Ensystem CEU Workshop

Location: Hampton Inn & Suites 85th Ave Tulsa OK

Contact: Donald Stetler Jr. (281) 217-2965

www.ceuworkshop.com

CEU's:	Category(s):
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2	3A
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2	7A
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1	7B
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1	8
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6	10
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Date: September 19, 2018

Title: 2018 Ensystem CEU Workshop

Location: Holiday Inn Express Durant OK

Contact: Donald Stetler Jr. (281) 217-2965

www.ceuworkshop.com

CEU's:	Category(s):
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2	3A
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2	7A
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1	7B
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1	8
---	---

6	10
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Date: September 20-21, 2018

Title: 2018 OPMA Fall Conference

Location: Reed Conference Center Midwest City OK

Contact: Eileen Imwalle (405) 726-8773

www.ok-pma.com

CEU's:	Category(s):
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2	3A
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1	6
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4	7A
---	----

3	7B
---	----

1	7C
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2	8
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8	10
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1	11a
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ODAFF Approved Online CEU Course Links

Date: October 2-4, 2018

Title: OKVMA Fall Conference and Training

Location: Hard Rock Hotel & Convention Center

Catoosa OK

Contact: Kathy Markham (918) 256-9302

www.okvma.com

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

Date: November 5-7, 2018

Title: Oklahoma Ag Expo 2018

Location: Embassy Suites Norman

Contact: Tammy Ford-Miller (580) 233-9516

www.oklahomaag.com

CEU's:	Category(s):
8	1A
3	4
11	10

PestED.com

<https://www.pested.com/>

CEU School

<http://www.ceuschool.org/>

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.oda.state.ok.us/cps-ceu.htm>

ODAFF Test Information

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

September		October	
4	OKC	1	OKC
6	Tulsa	11	Tulsa
17	OKC	15	OKC
20	Tulsa	25	Tulsa

- Altus: SW Research & Extension Center
16721 US HWY 283
- Ardmore: Carter County Extension Office
107 1st Ave Ardmore OK
- 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., Prairie Bldg
- McAlester: Kiamichi Tech Center on
Highway 270 W of HWY 69
- OKC: ODAFF Building 2800 N Lincoln
BLVD Oklahoma City OK (**New Location**)
- Tulsa: NE Campus of Tulsa Community
College, (Apache & Harvard)
Large Auditorium



Oklahoma Unwanted Pesticide Disposal Program

<http://pested.okstate.edu/html/unwanted.html>



September 2018

When & Where?

8:00 am to 1:00 pm

DATE	September 26, 2018
COUNTY	Woodward County
CITY	Woodward
LOCATION	Woodward County Fairgrounds 105 Temple Houston Drive

What is the Oklahoma Unwanted Pesticide Disposal program?

The Oklahoma Department of Agriculture, Food and Forestry is funding a program to help collect and properly dispose of unwanted pesticides that homeowners, farmers, ranchers, commercial applicators, or dealers may have. For future locations and dates check the website listed above.

What are unwanted pesticides?

Unwanted pesticides are pesticides that are unusable as originally intended for various reasons. Unwanted pesticides are leftover pesticides, pesticides that are no longer registered in the state of Oklahoma, pesticides that no longer have labels and pesticides that are no longer identifiable.

Who is eligible to participate and what does it cost?

Oklahoma commercial and non-commercial applicators and pesticide dealers may participate. Oklahoma farmers and ranchers and homeowners can use the program as well. There is no cost for the first 2,000 pounds of pesticides brought in by a participant.

- Liquid pesticide weighs about 10 pounds per gallon.

Will someone pick up my pesticides for me?

No it is the owner's responsibility to transport the pesticides to the site. Some transportation tips can be found at <http://pested.okstate.edu/pdf/transport.pdf>

What are the steps to participate in the collection program?

Applicators, homeowners, farmers, and ranchers are not required to pre-register. Dealers are asked to voluntarily pre-register through the OSU Pesticide Safety Education Program. After completing pre-registration requirements, if required, bring unwanted pesticides safely to one of the collection sites. Visit the OSU Pesticide Safety Education Program for information and how to register at <http://pested.okstate.edu/html/unwanted.html>.

Why are dealers asked to pre-register?

Dealers are asked to pre-register due to the potential of large quantities coming from multiple dealers and/or multiple locations. This allows the contractor to plan the appropriate resources to handle the quantity of pesticides that comes into the collections.

Will the department use my participation in the program as a means to prosecute for illegal management of pesticides?

No, the disposal program is a service program designed to remove unusable pesticides from storage and reduce the potential threat to public health and the environment. Those disposing of pesticides will not be required to provide their names or details on their chemicals. The disposal service is free up to 2,000 pounds.

Contact Information:



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