

PESTICIDE REPORTS

Division of Agricultural Sciences and Natural Resources • Oklahoma State University

<http://pested.okstate.edu>



March, 2024

CHEM

- 1 UNWANTED PESTICIDE DISPOSAL DATES SET FOR APRIL
- 2 APRIL TEST HELP WORKSHOPS
- 2 EPA PROVIDES UPDATE ON OVER-THE-TOP USES OF DICAMBA
- 3 EPA OUTLINES IMPLEMENTATION APPROACHES FOR ENDANGERED SPECIES ACT PESTICIDE POLICIES
- 5 EPA HERBICIDE STRATEGY DEADLINE PUSHED
- 6 GROUPS ADD FOUR PESTICIDES TO ESA SUIT
- 7 UNIVERSITY OF KENTUCKY RESEARCH: HUMAN SKIN LIPIDS REPEL BED BUGS
- 8 SURVEY: ISSUES WITH EPA HERBICIDE PROPOSAL
- 9 HERBICIDE VS. PESTICIDE: HOW THESE TERMS ARE USED
- 11 CEU MEETINGS
- 13 ONLINE CEU LINKS
- 14 ODAFF TEST INFORMATION

UNWANTED PESTICIDE DISPOSAL DATES SET FOR APRIL

ODAFF has scheduled the next Unwanted Pesticide Disposal Program collection dates for April 2024. They will occur April 22 in Altus and April 24 in Shawnee. The locations are the Jackson County Expo Center and the Heart of Oklahoma Expo Center. The Disposals will run from 8 a.m. to 1 p.m. rain or shine at both locations.

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.

April 22 Jackson County Expo Center,
412 Todd Ln, Altus, OK

April 24 Heart of Oklahoma Expo Center
1700 W Independence St, Shawnee, OK

For more information, please go to
<https://extension.okstate.edu/programs/pesticide-safety-education/unwanted-pesticide-disposal-program/index.html>(OSU PSEP)

APRIL TEST HELP WORKSHOPS

The Oklahoma State University Pesticide Safety Education Program (PSEP) has scheduled a test help workshops for April 17 in Oklahoma City and April 18 in Tulsa.

The Oklahoma City workshop will be at the Oklahoma County Extension Center at 2500 N.E. 63rd St. in Oklahoma City. The Tulsa workshop will be at the Tulsa County Extension Office at 4116 E 15th in Tulsa.

Registration cost is \$50 before April 15 for Oklahoma City and \$65 after April 15. Registration cost is \$50 before April 16 for Tulsa and \$65 after April 16. Registration will include a copy of *Applying Pesticides Correctly*. This is the study manual for the core and service technician exams.

To register for this class please go to the Pesticide Safety Education Program (PSEP) website at <http://pested.okstate.edu/html/practical.htm> and click on the register online link. Class information and an agenda is also at that website. Future 2024 workshop dates can be found on the website as well.
(OSU PSEP)

EPA PROVIDES UPDATE ON OVER-THE-TOP USES OF DICAMBA

In light of the February 6, 2024, ruling by the U.S. District Court of Arizona vacating the 2020 registrations for over-the-top (OTT) dicamba products, the U.S. Environmental Protection Agency (EPA) is providing the following update. On February 14, 2024, EPA issued an Existing Stocks Order for Dicamba Products Previously Registered for Over-the-Top Use on

Dicamba-Tolerant Cotton and Soybean. This Order addresses use of the formerly-registered dicamba products and authorizes limited sale and distribution of dicamba products that are already in the possession of growers or in the channels of trade and outside the control of the pesticide companies.

Background

Dicamba is an herbicide used to target broadleaf weeds in agricultural and non-agricultural settings. The herbicide is registered for use at specified stages in agricultural crop fields of corn, cotton, sorghum, soybeans, sugarcane, and other crops. The dicamba products subject to the February 2024 vacatur were registered to be sprayed OTT of genetically engineered dicamba-tolerant soybeans and cotton after the crops have emerged from the ground. There are also dicamba products that are only registered for non-OTT applications. These products are applied earlier in the growing season before crop emergence while OTT products can be applied later in the growing season after crop emergence.

Dicamba was first registered for OTT uses on dicamba-tolerant cotton and soybeans in 2016. In 2017 and again in 2018, EPA amended the registrations of all OTT dicamba products following reports that growers had experienced crop damage and economic losses resulting from the off-site movement of dicamba. The U.S. Court of Appeals for the Ninth Circuit vacated the 2018 registrations in June 2020 on the basis that “EPA substantially understated risks that it acknowledged and failed entirely to acknowledge other risks.” Days after the court’s decision, EPA issued an order for the affected products that addressed existing stocks.

In October 2020, EPA issued new registrations for two dicamba products and extended the registration of an additional dicamba product until 2025. All three registrations included new measures that the Agency expected to prevent off-target movement and damage to non-target crops and other plants. Further state-specific amendments to the registrations occurred in 2022 and 2023.

In response to a lawsuit against EPA concerning these registrations, on February 6, 2024, a ruling by the U.S.

District Court of Arizona vacated the 2020 registrations for OTT dicamba products XtendiMax, Engenia, and Tavium. As of February 6, 2024, these products are unregistered, and sale or distribution of these products is unlawful except as provided in EPA's February 2024 existing stocks order.

Existing Stocks Order

EPA has issued an Existing Stocks Order to allow for limited sale and distribution of dicamba OTT products that were already in the possession of growers or in the channels of trade and outside the control of pesticide companies as of February 6, 2024. The order also prohibits the use of these dicamba products except where the use is consistent with the previously approved labeling, which included measures intended to reduce environmental damage caused by offsite movement of the pesticide.

This Existing Stocks Order is limited in time and scope, allowing for certain sale, distribution, and use of existing stocks of these formerly-registered dicamba products for the 2024 growing season. EPA has received ample evidence that millions of gallons of OTT dicamba had already entered the channels of trade prior to February 6, 2024. Additionally, most growers have already placed orders for dicamba-tolerant seed for the 2024 growing season and, given the timing of these registrations being vacated, are not able to pivot to another herbicide-tolerant seed and herbicide system.

The issuance of this Existing Stocks Order will help ensure that growers who already possess OTT dicamba and/or have already purchased dicamba-tolerant seeds and thus are reliant on the availability of specific products solely for the 2024 growing season: (1) apply only dicamba formulations designed for use over the top of dicamba-tolerant soybean and cotton, rather than violating FIFRA by misusing more volatile dicamba formulations which could lead to greater offsite movement (and thus potential damage to non-dicamba tolerant crops and other plants); and (2) apply these OTT dicamba products consistent with restrictions intended to reduce offsite movement and protect human health and the environment. Thus, it is necessary for EPA to issue an Existing Stocks Order to ensure that growers follow

these directions for use, which were designed to reduce environmental damage caused by offsite movement.

Under this order, end users of existing stocks may only use the formerly-registered products consistent with the previously approved labeling for the products and must stop use of these products by the relevant dates laid out in the Order. Additional details regarding restrictions on the sale, distribution, and use of these formerly-registered products can be found in [EPA's Existing Stocks Order for Dicamba Products Previously Registered for Over-the-Top Use on Dicamba-Tolerant Cotton and Soybean](#).

Next Steps EPA will continue to update the public and the states as it evaluates and takes any actions related to dicamba use. For more information, visit [EPA's website](#).

[Read the Existing Stocks Order for Dicamba](#)

(EPA, February 14, 2024)

<https://www.epa.gov/pesticides/epa-provides-update-over-top-uses-dicamba>

EPA OUTLINES IMPLEMENTATION APPROACHES FOR ENDANGERED SPECIES ACT PESTICIDE POLICIES

Today, the U.S. Environmental Protection Agency (EPA) announced the latest steps to incorporate stakeholder feedback and collaboration with federal partners, ensuring the Agency's work to protect endangered species from pesticides is practical, flexible, and supports the agricultural community. Assistant Administrator Michal Freedhoff described these steps in a speech to the National Association of State Departments of Agriculture.

"Protecting endangered species and ensuring we have a safe and abundant food supply can go hand in hand," said **Assistant Administrator for the Office of Chemical Safety and Pollution Prevention Michal Freedhoff**. "The steps we're announcing today are designed to meet this dual obligation of providing the

agricultural community with the tools and flexibility they need while ensuring pesticides aren't harming endangered species.”

When registering pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), EPA must also comply with the Endangered Species Act (ESA) to ensure pesticides do not harm endangered species or their critical habitats. For most of EPA's history, the Agency has almost never met these duties for its FIFRA decisions. This has resulted in considerable litigation against the Agency, creating uncertainty for farmers and other pesticide users, unnecessary expenses and inefficiencies for EPA, and delays in the protection of endangered species.

In April 2022, EPA released its [ESA Workplan](#), which establishes strategies and actions to adopt those protections while ensuring farmers, public health authorities, and others have access to pesticides. In addition to other actions, EPA proposed a vulnerable species pilot and draft herbicide strategy in 2023. Stakeholders have expressed concerns related to the implementability of these strategies and urged EPA to make needed adjustments before finalizing the approaches.

Today, EPA announced its plans to address key concerns, expand its partnership with the U.S. Department of Agriculture (USDA) and seek additional stakeholder engagement in the coming months as it continues to address this decades-old challenge of protecting endangered species from pesticide exposure.

Improved Species Maps

In June 2023, EPA announced draft mitigations for 27 species that are part of the Agency's [Vulnerable Species Pilot project](#), an effort to protect species that are particularly vulnerable to pesticides. EPA received feedback that some of the maps included areas that endangered species do not live in, and that the areas in which pesticide mitigations would be required under the Pilot were thus overly broad.

Today, EPA announced that it will not implement the Vulnerable Species Pilot protections for a species until a more refined map of its habitat is developed. EPA is also

announcing that it is working with the U.S. Fish and Wildlife Service (FWS), USDA, the University of Georgia, and other stakeholders to develop maps that better reflect where these species actually live and where protections from pesticides are needed. In April, EPA plans to hold a workshop to facilitate and prioritize the development of these maps, and EPA will also develop guidelines that the public can use to develop and submit refined maps for hundreds of other endangered species.

Credit for using Voluntary USDA Conservation Practices

USDA's Natural Resources Conservation Service (NRCS) helps farmers carry out voluntary practices that improve environmental health and quality, many of which also reduce pesticide drift and runoff, which could benefit endangered species. Yesterday, EPA signed an MOU with USDA describing how EPA can include NRCS conservation practices on pesticide labels as one way growers who voluntarily perform those practices can use them to help fulfill pesticide label requirements. EPA and USDA are planning meetings and workshops in the coming months to further discuss the MOU and gain input from producers about mitigation options that may count toward fulfilling pesticide label requirements.

Regarding the MOU, **Robert Bonnie, USDA Under Secretary for Farm Production and Conservation**, said, “Farmers who use strong conservation practices developed by NRCS should be given credit for all of the benefits these practices provide, including reducing the off-site movement of pesticides. NRCS's programs remain entirely voluntary and producers will not need NRCS approval. Collaboration between USDA and EPA through efforts such as this MOU and additional stakeholder conversations will help to keep safe, effective pest management tools in farmers' hands.”

This effort responds to suggestions received on EPA's July 2023 draft herbicide strategy and would also apply to other ESA initiatives. This would provide more flexibility for growers on the type of practices they can use to protect endangered species and ensure EPA's proposed mitigations can practically be implemented. For example, EPA is already considering which

mitigations, if any, are needed on land that is dry or flat or both.

Online Mitigation Menu

Currently, if EPA needs to add new mitigations to pesticide labels, the Agency must update hundreds or thousands of paper labels every time the menu of mitigation options is expanded – a process that can take years. EPA will launch its first online mitigation menu that will allow the Agency to quickly add new mitigation measures options, thus ensuring that growers can use those new options promptly. This year, the Agency plans to release a draft online menu for public comment, and then update that menu based on feedback later this year.

Offsets for Endangered Species Protections

EPA is working with stakeholders to determine how to use “offsets” when avoiding or minimizing pesticide exposure to an endangered species is impossible or impractical. In those situations, it may be possible to offset the impact to the species through activities like funding habitat restoration for the species, contributing to a captive rearing project at a zoo for the species, or other steps to conserve the species. EPA, other federal agencies, and stakeholders are participating in a workshop later this month to discuss how to bring offsets into EPA’s ESA-FIFRA work. This initiative should give pesticide registrants and users more flexibility to meet label requirements to protect endangered species, while directly contributing to recovering those species.

[Learn more about EPA’s ESA work.](#)

(EPA, February 14, 2024)

<https://www.epa.gov/newsreleases/epa-outlines-implementation-approaches-endangered-species-act-pesticide-policies>

EPA HERBICIDE STRATEGY DEADLINE PUSHED

Like a college professor giving a student extra time to finish an important term paper, this week a federal district court granted EPA an extension to complete the agency's forthcoming Herbicide Strategy.

On Wednesday, Feb. 14, in the U.S. District Court for the Northern District of California, San Francisco Division, Judge Joseph C. Spero approved a three-month extension to EPA's plan attempting to bring herbicide registration in compliance with the Endangered Species Act (ESA). The court modified a settlement reached last September when the agency had agreed to produce the document by May 30, 2024. The new deadline is Aug. 30, 2024.

In an effort to protect endangered species and their critical habitats from herbicide exposure through spray drift and/or runoff or soil erosion, the EPA plan would require agricultural herbicide users, namely farmers, to implement mitigation measures such as vegetative filter strips, grassed waterways and field borders. Herbicide users would need to achieve a minimum number of "efficacy points," with EPA assigning one to three points to each option in its menu of mitigation measures. The number of points required would vary based on the herbicide and the field location.

In an email that was sent to industry stakeholders and obtained by DTN, Jake Li, EPA deputy assistant administrator for pesticide programs, wrote the agency had requested the extension so it would have more time to "consider public comments on the draft Herbicide Strategy and the input the agency continues to receive about implementing ESA mitigation measures, particularly on ensuring that measures are practical and effective.

"In light of the extension, EPA will release an update in the coming months about the status of its work on the Herbicide Strategy," Li wrote in the email. "EPA still plans to release its draft Insecticide Strategy no later than the settlement deadline of July 30, 2024."

EPA released its draft Herbicide Strategy in July 2023 and received more than 20,000 public comments on the plan.

In an email to DTN, Brigit Rollins, staff attorney with the National Agricultural Law Center based at the University of Arkansas in Fayetteville, said she's seen courts be willing to extend deadlines for settlement agreements, particularly when the agreement requires a federal agency to take a specific action.

"Something interesting about this particular case is the overall scope of the settlement agreement," Rollins said. "This is a fairly substantial policy change that EPA has agreed to make, so to me, it isn't terribly surprising that the parties and the court are all willing to grant a bit of extra time to let EPA take the steps it needs to take."

News of the extension was welcomed by the American Soybean Association (ASA).

"The three-month extension on the Herbicide Strategy deadline will be a big help in getting this proposal to a much better place," said Josh Gackle, ASA president and soybean grower from Kulm, North Dakota. "As proposed, we are very concerned with the financial burden it will impose on farmers, many of whom have few reasonable means to implement it. For some growers, it could entirely prevent them from using herbicides essential to their farming operations, resulting in great economic damage and harm to conservation practices. We look forward to using this additional time to work with EPA and other stakeholders and make this proposal workable for agriculture."

The extension for the Herbicide Strategy is the latest development surrounding litigation that began more than a decade ago. In 2011, the Center for Biological Diversity and Pesticide Action Network filed suit against EPA alleging that it violated the ESA when it registered or reevaluated the registration of 382 pesticide active ingredients. Ultimately, the list of active ingredients was reduced to 35 covering more than 1,000 pesticide products containing one or more of these active ingredients. This became known as the "megasuit" because of the number of pesticides it covered.

In addition to the Herbicide Strategy, the settlement agreement reached last September also set deadlines for other pesticides. As Li referenced in his email to stakeholders, a draft Insecticide Strategy is expected in July 2024 with a final version issued by March 2025. No deadlines have been set for the completion of a final Fungicide Strategy, but the determination of such a deadline is expected to take place no later than August 2024.

Rollins noted that while it is hard to predict, another extension to the settlement agreement is a possibility.

"Settlement agreements can be modified in a variety of different ways," she said. "I don't think that future extensions are precluded, but that also doesn't mean they're guaranteed either."

(Progressive Farmer, February 16, 2024)

<https://www.dtnpf.com/agriculture/web/ag/crops/article/2024/02/16/court-grants-three-month-extension>

GROUPS ADD FOUR PESTICIDES TO ESA SUIT

An environmental group added four additional chemicals to a pending lawsuit originally filed in 2022, alleging the U.S. Fish and Wildlife Service (USFWS) did not comply with the Endangered Species Act (ESA) in approving now six pesticide registrations, according to an amended lawsuit filed in federal court on Thursday.

In 2022, the Center for Biological Diversity sued the USFWS, alleging the agency was not following the ESA regarding pesticides chlorpyrifos and diazinon. That lawsuit in the U.S. District Court for the District of Arizona was launched after the USFWS failed to meet a December 2017 deadline to finalize ESA consultations with EPA.

On Thursday, the group filed an amended complaint in the same court to add atrazine, simazine, methomyl and carbaryl to the lawsuit.

Since the original lawsuit was filed, biological evaluations of the four chemicals were completed by other federal agencies, according to the amended complaint.

The National Marine Fisheries Service completed evaluations on chlorpyrifos, diazinon and malathion in June 2022.

The evaluations said continued chlorpyrifos use would result in jeopardy for 37 species and modification to critical habitats for 36 species. On diazinon, NMFS said there would be jeopardy to 26 species and adverse modifications to habitats for 18 species.

In 2021, an EPA evaluation determined carbaryl and methomyl were likely to adversely affect 91% of species analyzed and 93% of critical habitats.

The lawsuit said EPA came to similar conclusions about atrazine and simazine, but the USFWS has yet to act.

"Yet over two years have passed and FWS has not moved expeditiously to ensure the registered uses of atrazine and simazine will not drive any species to extinction or adversely modify critical habitat by completing final biological opinions for each pesticide," according to the amended lawsuit.

In 2017, the EPA determined that 97% of more than 1,800 animals and plants protected by the Endangered Species Act are likely to be harmed by chlorpyrifos and 78% are likely to be hurt by diazinon.

The ESA requires the Fish and Wildlife Service to expeditiously review the EPA's findings of pesticides' harms and put measures in place to prevent harm to species.

In 2022, EPA announced it was implementing label changes for insecticides malathion, chlorpyrifos and diazinon. Most of those changes applied to users on the East and West coasts and north Atlantic states.

In 2023, EPA announced national restrictions on malathion, which is used to control mosquitoes.

At the end of last year, a federal appeals court threw out the EPA's banning of chlorpyrifos.

(Progressive Farmer, February 1, 2024)

<https://www.dtnpf.com/agriculture/web/ag/crops/article/2024/02/01/environmental-group-amends-esa-4>

UNIVERSITY OF KENTUCKY RESEARCH: HUMAN SKIN LIPIDS REPEL BED BUGS

University of Kentucky entomology researchers have found that skin triglycerides, or lipids, prevent bed bugs from staying very long on human hosts. Their finding could lead to new management strategies for this important human pest.

"We already knew that human body odors, carbon dioxide and warmth attract bed bugs to feed on people. Our latest research shows the reason they do not stay on humans like other pests, such as lice, is due to lipids or triglycerides in our skin that cause them to leave their hosts and hide in nearby locations, such as beds and mattresses," said Zach DeVries, assistant professor of urban entomology with the UK College of Agriculture, Food and Environment.

DeVries and Sudip Gaire, UK post-doctoral scholar, tested this latest finding by rubbing a strip of filter paper on participants' skin to collect samples. Research participants represented numerous ages and ethnicities. They also tested the theory on multiple populations of bed bugs raised in the lab and collected in the field.

"Our findings were consistent across all triglyceride types, all participant groups and all bed bug populations," DeVries said. "Bed bugs nearly always preferred the control filter strip to the one containing skin triglycerides."

"The bed bugs do not like to sit on skin triglycerides and refuse to stay on surfaces that contain triglycerides," Gaire said. "We got tremendous results by using only a small amount of triglycerides."

While further research is needed to explore why bed bugs do not like the triglycerides and if there are other potential bed bug repellents in human skin, DeVries and Gaire think this could be an important beginning to more effective bed bug control.

“There may be several potential management opportunities from our finding,” DeVries said. “It’s possible that our findings could be used to deter bed bugs from hitchhiking on people’s belongings, thus reducing their spread.”

The findings were first reported in Scientific Reports. The full research paper is available online at <https://www.nature.com/articles/s41598-021-01981-1>.

Additional researchers in the study include Russell Mick, Richard Santangelo and Coby Schal from North Carolina State University and Grazia Bottillo and Emanuela Camera from the San Gallicano Dermatological Institute in Rome, Italy.

The researchers were funded by grants UK received from the U.S. Department of Housing and Urban Development and National Institutes of Health and grants North Carolina State University received from the National Science Foundation, U.S. Department of the Army, U.S. Department of Housing and Urban Development and the Blanton J. Whitmore Endowment.

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(PCT, February 21, 2024)

<https://www.pctonline.com/news/university-kentucky-bed-bug-human-skin-lipid-research/>

SURVEY: ISSUES WITH EPA HERBICIDE PROPOSAL

Roughly 80% of the nation's soybean farmers could face moderate to extreme additional costs to comply with a proposed EPA plan for future herbicide use, according to a survey conducted by a national commodity organization.

On Wednesday, Feb. 21, the American Soybean Association (ASA) released the results of a survey it conducted with 75 of its farmer board members and a sample of soy growers from affiliate state soybean organizations. Overall, it found 99% of soybean growers would be subject to new requirements under the EPA's draft Herbicide Strategy, the agency's current effort to make herbicide registrations comply with the Endangered Species Act (ESA).

In an effort to protect endangered species and their critical habitats from herbicide exposure, the EPA's draft strategy proposes growers adopt early mitigation measures such as vegetative filter strips, grassed waterways and field borders to reduce herbicide movement through runoff and/or soil erosion. Herbicide users would need to achieve a minimum number of "efficacy points," with EPA assigning one to three points to each option in its menu of mitigation measures. The number of points required would vary based on the herbicide and the field location.

"Given herbicide resistance issues and a lack of comparable options reported by survey respondents, farmers would be forced to adopt pricey mitigations, accept lower yields due to weed pressure, or need to stop growing crops requiring herbicides with high efficacy point requirements," ASA said when releasing its survey. "The survey indicates significant, harmful impact on U.S. agriculture if the proposal is adopted in its current form."

More than half of growers who responded to the ASA survey, which was conducted in December 2023, reported they did not use 11 of the 18 mitigation measures EPA included in its draft strategy. Based upon current practices, only 21% could meet the efficacy point requirements for their farm with the practices they currently had in place.

"In short, if the Herbicide Strategy were implemented today, most producers would be unable to use herbicides they deem necessary for crop production," ASA said.

The survey followed up by asking respondents how costly they would expect adoption of new mitigation practices to be. Nearly half (46%) expected their adoption to be moderately costly, with another 38% saying it would be extremely costly. Only 13% expected adoption to be slightly costly, with 3% expecting it not to be costly at all.

Along with its draft proposal, EPA provided case studies for a dozen herbicides commonly used in agriculture, including active ingredients such as dicamba, 2,4-D, metolachlor and paraquat. Nearly all producers in the ASA survey indicated they use these products and 93% percent stated they could not easily remove these products from their current herbicide program.

"Herbicide-resistant weeds are becoming a big challenge for growers, with 41% rating it as a major issue," ASA reported. "Only 11% do not have at least moderate problems with herbicide resistance. Largely, as a result of herbicide resistance, growers have limited flexibility to change their herbicide mix."

Last week, a federal district court in California granted EPA a three-month extension to complete the Herbicide Strategy. The court modified a settlement reached last September when the agency had agreed to produce the document by May 30, 2024. The new deadline is Aug. 30, 2024. Read more here: [https://www.dtnpf.com/...](https://www.dtnpf.com/)

Given the non-random selection of participants and sample size, ASA acknowledged that its survey results should not be treated as statistically significant, definitive evidence. However, the commodity group said given the geographic dispersion of producers (24 states), range of farm size (320 to 9,000 acres) and number of

commodities grown (15), coupled with a lack of alternative attempts to quantify the ability of growers to comply with the EPA's proposed strategy, results from these 75 persons provide the best snapshot of potential ramifications to date.

To read more about the ASA's survey, go here: <https://soygrowers.com/...>

(Progressive Farmer, February 22, 2024)
<https://www.dtnpf.com/agriculture/web/ag/crops/article/2024/02/22/soybean-farmers-say-epa-herbicide>

HERBICIDE VS. PESTICIDE: HOW THESE TERMS ARE USED

Social media can be an amazing tool and a lot of fun, but as usual there can also be a lot of misinformation — and common misperceptions can spread easily. One of the most common ones I hear related to the terms “herbicide” and “pesticide” — usually separating them into two separate categories. It seems that too many people don't realize that herbicides are considered a type of pesticide. All herbicides are pesticides, but not all pesticides are herbicides.

It's likely that some folks only consider “pesticide” when referring to insect management, but that would be an incorrect interpretation of that term, particularly in the U.S. and Canada.

The word “pesticide” comes from the Latin words *pestis* (#scourge) and *carder*, which means “to kill,” and “pesticide” is an umbrella term that covers all different types of synthetic and organic chemicals used to control problems for farmers and homeowners alike. Herbicides are designed to kill weeds, and there are multiple other types of “cides.” For example:

- Herbicides kill weeds
- Insecticides kill insects
- Parasiticides kill parasites
- Fungicides kill fungus
- Rodenticides are for rodents
- Bactericides are for bacteria
- Larvicides are for larvae

These are all considered pesticides, including herbicides. But often times people get this fact incorrect, so now you know!

When farmers apply chemicals, they often times must hold licenses, certifications, and go through ongoing training in order to apply. [This video](#) from the Peterson Farm Brothers does a great job explaining how it's done. And [this video](#) shows just how little is often used. The amount, frequency of application, and mode of action all contribute to impact and effectiveness, and the appropriate thresholds are determined by the U.S. Environmental Protection Agency.

Farmers' crops are often tested for safety, and pesticides (also known as crop protection products) go through decades' worth of research to ensure effectiveness and safety. Farmers want to use as little as possible since it can be so expensive and time-consuming to apply them. Sometimes even, organic and conventional farmers alike apply no crop protection at all to fields.

The types of products used on a farm can determine whether a farm is conventional or organic (as organic [has certain restrictions](#) in place), but they don't necessarily indicate whether a farm would be called "regenerative," a more modern buzzword for which there is no commonly accepted definition.

So when you think about ag chemicals, realize that farmers have many, many challenges that must be taken care of or else yields can sometimes quickly go to zero. This can apply to the larger commodities such as corn and soybeans, or to specialty crops such as apples, tomatoes, or lettuce. Also, cosmetically speaking, people don't want to buy diseased or bug ridden nasty produce. How do we get perfect produce? Oftentimes, chemicals are used, something that has been done for thousands of years — some sources put their use [as far back as 4,500 years ago](#).

Whether natural, synthetic, or built in to the seed, we should be grateful for the tools in the toolbox (when used responsibly) to ensure the world is well fed. They are also used in organic production! Sometimes, in instances like with [rat lugworm disease](#) in Hawaii, chemical pesticides can save lives.

One of my favorite analogies when it comes to agrochemical use is that plants are living and so are we. We need chemicals to survive — and everything is made of chemicals! Sunscreen is made of chemical compounds to protect us from the sun. We need bug spray to protect us from insect bites. We need medicine, food, and nutrients to survive. So do plants! Living things need protection, and it's up to farmers to do what they do best and protect their crops just like we would protect ourselves as living beings, too.

(AGDAILY, October 27, 2020)

<https://www.agdaily.com/crops/herbicides-vs-pesticides-how-terms-are-used/>

CEU Meetings

Please note that some of these meetings are virtual using Zoom or Microsoft Teams. Please contact the meeting host directly if you have any questions.

Date: March 5, 2024

Title: EPA Managing Boxwood Blight and Box Tree Moth

Location: Virtual

Contact: Dr. Marcia L. Anderson (908) 577-2982

<https://www.epa.gov/ipm/upcoming-integrated-pest-management-webinars>

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

Date: March 6, 2024

Title: OKVMA SPRING 2024 Conference

Location: Champion Convention Center OKC

Contact: Kiersten Riggs (918) 314-9032

<https://okvma.com/conferences/>

CEU's:	Category(s):
1	A
2	1A
2	2
3	3A
1	4
2	5
6	6
1	7A
1	7B
1	7C
1	8
6	10
1	13

Date: March 7, 2024

Title: Vesperis 2024 Annual CEU Workshop

Location: Stoney Creek Hotel Broken Arrow

200 W Albany St, Broken Arrow, OK 74012

Contact: Deb Chambers (918) 622-2048 or email

chris.marinelli@veseris.com

CEU's:	Category(s):
2	3A
2	7A
1	7B
4	10

Date: March 8, 2024

Title: Wichita Falls Ranch & Farm Expo

Location: 111 N. Burnett , Wichita Falls, TX 76301

Contact: David Graf (940) 716-8610

<https://wichitafallsranchandfarmexpo.net/schedule.php>

CEU's:	Category(s):
2	Private
1	1A
1	5
2	11B

Date: March 13, 2024

Title: Kansas Pest Control Spring Conference

Location: Century II Convention Center, 225 W Douglas Ave, Wichita KS

Contact: Jared Harris (785) 633-0912

<https://www.kansaspest.com/spring-conference-2024>

CEU's:	Category(s):
2	3A
2	7A
1	7B
4	10

Date: March 14, 2024

Title: Payne County Spring Beef Management Program
Location: Contact for Location
Contact: Nathan Anderson (405) 747-8320

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

Date: March 19, 2024

Title: Washington County Broomsedge Management Meeting
Location: Contact for Location
Contact: Kennedy McCall (918) 534-2216

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

Date: March 21, 2024

Title: 2024 Peanut EXPO
Location: Stafford Air & Space Museum 3000 Logan Road Weatherford OK
Contact: David Nowlin (405) 933-0641
<http://www.okpeanutcomm.org/2024-peanut-expo-flyer.html>

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

Date: March 26, 2024

Title: BWI pest & lawn Seminar Spring 2024
Location: Edmond Conference Center
2833 Conference Drive Edmond OK
Contact: Tim Ruminer (405) 227-2985

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

Date: March 27, 2024

Title: ENSYSTEEX 2024 Workshop
Location: Holiday Inn 613 University Place Durant OK
Contact: Don Stetler (281) 217-2965
<https://ceuworkshop.com/>

CEU's: Category(s):
3 3A
3 7A

Date: April 2, 2024

Title: Okfuskee County Spring Pesticide Applicator Event
Location: Contact for Location
Contact: Brice Callahan (918) 623-0641

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

Date: April 2, 2024

Title: Cimarron Ag Conference
Location: Contact for Location
Contact: Rick Clovis (918) 762-2735

CEU's:	Category(s):
4	Private
4	1A
2	6
5	10

Date: May 10, 2024

Title: Oklahoma State University Southeast Oklahoma Forest Health Workshop
Location: Contact for Location
Contact: Ryan DeSantis (405) 744-5463

CEU's:	Category(s):
3	2
3	10

Date: June 4, 2024

Title: Oklahoma State University 2024 Cross Timbers Forest & Range Management Field Day
Location: Contact for Location
Contact: Ryan DeSantis (405) 744-5463

CEU's:	Category(s):
3	2
3	10

Date: October 1, 2024

Title: ENSYSTEX 2024 Workshop
Location: TBA Tulsa OK
Contact: Don Stetler (281) 217-2965
<https://ceuworkshop.com/>

CEU's:	Category(s):
1	7A

ODAFF Approved Online CEU Course Links

Online Pest Control Courses
<https://www.onlinepestcontrolcourses.com/>

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

Certified Training Institute
<https://www.certifiedtraininginstitute.com/>

WSU URBAN IPM AND PESTICIDE SAFETY EDUCATION PROGRAM
<https://pep.wsu.edu/rct/recertonline/>

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

Technical Learning College
<http://www.abctlc.com/>

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/>

Veseris
<http://www.pestweb.com/>

AG CEU Online
<https://agceuonline.com/courses/state/37>

Target Specialty Products Online Training
<https://www.target-specialty.com/training/online-training>

MarKev Training <https://www.markevtraining.com/>

For more information and an updated list of CEU meetings, click on this link:
<http://www.kellysolutions.com/OK/applicators/courses/searchCourseTitle.asp>

ODAFF Test Information

Testing will be done at testing centers in multiple locations around the state by PSI Services LLC.

For more information and instructions, please go to <https://bit.ly/3sF4y0x>.

Reservation must be made in advance at www.psiexams.com/ or call **855-579-4643**

PSI locations.

Oklahoma City 3800 N Classen Blvd, Ste C-20,
Oklahoma City, OK 73118

Tulsa 2816 East 51st Street, Suite 101, Tulsa, OK
74105

McAlester 21 East Carl Albert Parkway (US Hwy 270),
McAlester, Oklahoma 74501

Woodward 1915 Oklahoma Ave, Suite 3, Woodward,
OK 73801

Lawton Great Plains Technology Center, 4500 West
Lee Blvd Building 300- RM 308, Lawton, OK 73505

Enid Autry Technology Center, 1201 W. Willow Rd,
Enid, OK 73703

Ponca City Pioneer Technology Center, 2101 N Ash,
Ponca City, OK 74601

If you have questions on pesticide certification. Please
email or call:

Kevin Shelton
405-744-1060 kevin.shelton@okstate.edu or

Charles Luper
405-744-5808 charles.luper@okstate.edu

Pesticide Safety
Education Program