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EPA RELEASES DRAFT TRIAZINE ECOLOGICAL RISK ASSESSMENTS FOR COMMENT

EPA is releasing the draft ecological risk assessments for atrazine, propazine and simazine, which evaluate risks to animals and plants including, amphibians, birds, mammals, fish, reptiles, aquatic invertebrates, aquatic plant communities, and terrestrial plants. All three pesticides are in the triazine class of pesticides.

EPA invites stakeholders to comment on the draft ecological risk assessments. The draft assessments are currently available on the agency's website. EPA will be accepting public comments for 60 days until August 5, 2016. After receiving and reviewing public comments, the agency will amend the assessments, as appropriate. EPA will have atrazine's assessment peer reviewed by the Scientific Advisory Panel in 2017.

With regard to atrazine, the herbicide is one of the most widely used agricultural pesticides in the United States. It is used primarily on corn and sorghum in the Midwest and sugarcane in the South Central and Southeastern United States to control broadleaf and grassy weeds.

EPA's human health assessment for the three triazines is currently under review, and we expect to release it later in 2016.

[Read the triazine draft ecological risk assessments on EPA's Website](#). On this page, you will find links to the Federal Register notice. The assessments and all related materials will be available on and comments can be submitted at www.regulations.gov in dockets [EPA-HQ-OPP-2013-0266](#) (atrazine); [EPA-HQ-OPP-2013-0250](#) (propazine); and [EPA-HQ-OPP-2013-0251](#) (simazine).

(EPA June 6, 2016)

<https://www.epa.gov/pesticides/epa-releases-draft-triazine-ecological-risk-assessments-comment>

UPDATED METHOD FOR ESTABLISHING ECONOMIC MINOR USE AVAILABLE FOR COMMENT

EPA has issued a draft Pesticide Registration Notice (PRN) that proposes to clarify and update criteria by which EPA classifies crops as “minor use.” FIFRA 2(l)(2) defines a minor use as one that does not provide “sufficient economic incentive.”

In evaluating “sufficient economic incentive,” EPA is proposing to consider the following factors explicitly:

- the difference in time between incurring costs of generating data for registration and obtaining revenue from product sales;
- the multiple years over which revenue is generated; and
- the costs of producing and distributing the product.

This draft PRN also explains how qualitative information may be used to inform the quantitative analysis and interpret the results. The revised approach can be applied to conventional pesticides, biopesticides, and antimicrobial pesticides to determine whether they meet the definition of minor use.

In some cases, this could broaden the definition of minor use pesticides crops, thus providing more opportunities for incentives to registrants to support their registrations of pesticides for minor uses. Minor uses can provide insufficient economic incentive for pesticide registrants to keep these pest control tools registered for use on these crops, or to register new ones for these crops.

This approach was developed in consultation with the U.S. Department of Agriculture.

The draft PRN can be viewed in docket [EPA-HQ-OPP-2015-0814](#) at www.regulations.gov. Comments can be submitted to the docket and will be accepted until August 15, 2016.

(EPA June 15, 2016)

<https://www.epa.gov/pesticides/updated-method-establishing-economic-minor-use-available-comment>

USDA: SCIENCE DETECTIVES INVESTIGATE A 'MITEY' BIG PROBLEM

U.S. Department of Agriculture (USDA) scientists are hot on the trail of a honey bee killer, and their detective work has taken them from hives in Tucson, Arizona, to those in Bismarck, North Dakota.

Led by Agricultural Research Service (ARS) supervisory research entomologist Gloria DeGrandi-Hoffman, the team is staking out the entrances of victimized hives, eyeing the comings and goings of foraging honey bees that they suspect may be unwitting accomplices.

Instead of cordoning off the sites with crime-scene tape, the scientists are blocking access to the hives using cut lengths of PVC pipe with a slit about midway down. There, a sliding wire-mesh door separates incoming bees from outgoing ones.

None of the busy little winged bearers of pollen and nectar will get by without inspection-and for good reason: the researchers suspect the bees are physically harboring their target: an oval-shaped, pinhead-sized parasite called the Varroa mite.

The Varroa mite is public enemy number one to not only honey bees nationwide, but also the 90-plus flowering crops that depend on the insects to pollinate them, including apples, almonds, blueberries and cantaloupe.

The team's investigations in Bismarck this June are actually a follow-up study to the one they completed last year at two Arizona sites. Findings from that study suggest that bees can bolster their hives' existing mite population by carrying in Varroas from other colonies-an influx that most often occurs in the fall, especially November.

Varroa populations grow slowly because females produce only three to five offspring. If mite populations in colonies are low, then they should remain that way for at least a season before chemicals called "miticides" need to be applied, explains DeGrandi-Hoffman, who leads ARS's Carl Hayden Bee Research Center in Tucson.

Sometimes, though, Varroa numbers soar to potentially hive-wrecking levels during the fall. To the researchers, this suggested that factors other than mite reproduction were involved-namely, "mite migration" via foraging bees and wayward "drifters" from other colonies. At the Arizona hive sites, this influx of migrating mites correlated to population increases of 227 to 336 percent, starting in November. The findings appeared in the February 2016 issue of *Experimental and Applied Acarology*.

In addition to further investigation at a Bismarck apiary, the researchers will also evaluate placing hives in refrigerated storage in the fall to head off mite migration into colonies. They'll determine the strategy's effectiveness based on whether it reduces the need for miticide applications, keeps Varroa populations low and results in high winter survival rates for colony members.

ARS is USDA's principal intramural scientific research agency. (PCT Online, June 23, 2016) <http://www.pctonline.com/article/science-detectives-usda-mite-research/>

PANELISTS CHALLENGE EPA'S POSITION ON CHLORPYRIFOS

A Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) Scientific Advisory Panel (SAP) convened in April to discuss the use of a Columbia University epidemiology study entitled, "Chlorpyrifos: Analysis of Biomonitoring Data," in assessing the human health risk of chlorpyrifos, an insecticide that the study to be moderately toxic to humans.

But the panelists raised concerns with some of the criteria used in the study.

Following a petition to ban the use of chlorpyrifos in 2014, the U.S. 9th Circuit Court of Appeals denied the Environmental Protection Agency's request to extend its deadline to make a decision on whether to ban the insecticide to Apr. 15, 2016. Instead, the court set the deadline for Oct. 31, 2015, before the EPA had the chance to complete portions of its chlorpyrifos risk assessment.

During April's SAP session, speakers offered the panel several limitations of the study, including inadequate access to original data, the exposure measures used, the scope of the study, and the inability of EPA and other agencies to replicate the results of the study.

Marion Ehrich, professor of pharmacology and toxicology at the Virginia-Maryland College of Veterinary Medicine, questioned the stratification used in a growth study on the adverse effects of chlorpyrifos on child neurodevelopment.

"It seems that all the data from this was based on analytical work done right at the beginning," Ehrich said. "So on that study you're talking about where they got the 6.17, they actually had some values below the detection that they called half-values that they included in. Is that an OK thing to do?"

Ehrich said that the findings were questionable and that she would like to see the original data used to come to the conclusion that chlorpyrifos is harmful to children.

"I work in a forensic lab. You don't quantitate on a level of detection. You quantitate on a level of quantitation," she said. "And when I go back to look at those papers, have you seen their original data where they have the chromatograms and their calibration grams and so forth? The calibration curves are 1,000-fold higher than what they are giving in their papers. So I'm not quite sure."

Ehrich added that for a pesticide to be allowed into the market or be re-registered, the data "has to be very rigorous." Compelling data is also needed to pull a pesticide off of the market. The fact that there is some uncertainty regarding the study makes it difficult to make a strong case for the revocation of chlorpyrifos, she said.

"You have to defend your decisions to allow registration. You have to defend your decisions to have certain cutoffs or restricted uses. You certainly have to have enough data, enough strong data, in order to think about a cancellation," Ehrich said. "So if we're basing this on one study where it's not been reproduced, you can't get the actual hard data, there's lots and lots of points below levels of detection, one has to give that really serious thought."

Panos Georgopoulos, professor of Environmental and Occupational Health at Rutgers Biomedical and Health Sciences, raised some concerns after noting that the enormity of the task before the EPA "presents challenges that are insurmountable."

"I mean, the EPA is facing a very serious challenge here," Georgopoulos said. "And the quantitative information is currently very uncertain. They're having to decipher the signal from the noise here. It's quite a task."

Georgopoulos went on to emphasize the importance of relying on more than one source to come up with a conclusion in health risk assessment.

“I kept thinking as we were going through these days oh, EPA’s human health risk assessment strategic research action plan for 2016-19, I don’t think the word epidemiology appeared in there. But certainly there were concepts of integrating information from multiple sources -- human, animal, mechanistic,” he said. “And the concept of multicriteria decision analysis is integrating multiple sources of information, qualitative and quantitative, in order to strengthen risk assessment is fundamental in there.”

Another concern raised by the panelists about the Columbia study was that the data the study relies on is not available for the EPA to review and is, therefore, not verifiable. Additionally, the outcomes are limited in time to one biological blood sample without connection to a timeframe for exposure to the pesticide.

In a recent news release, CropLife America urged the EPA to maintain its high standard of relying on solid scientific evidence in its regulatory decisions.

“The EPA’s risk-based approach to crop protection regulation historically has centered on use of relevant, reliable and best available scientific data,” Janet E. Collins, CLA’s senior vice president of science and regulatory affairs. said “Regulatory decisions based on studies that are not yet validated and have many factors lacking adequate scientific control is not responsible.” (Crop Protection News June 18, 2016)

<http://cropprotectionnews.com/stories/510898996-panelists-challenge-epa-s-position-on-chlorpyrifos>

US NAS REPORT SAYS GM CROPS SAFE, BUT QUESTIONS BENEFITS

A report from the US National Academy of Sciences says that genetically modified crops are as safe as their conventional counterparts, but finds no evidence that GM crops have significantly boosted yields over the past two decades. The expert committee also cautions that while GM crops do not appear to have caused environmental problems, concerns have emerged with insect and herbicide resistance that may undermine some of the benefits of existing GM traits.

The 408-page report is a sweeping look at GM crops, analysing their effects on human health, the environment, agriculture and the economy. The 20-member panel was convened to help the public distill conflicting information about GM crops and provide a path beyond the polarising debate around agricultural biotechnology.

The committee found little benefit to "sweeping generalisations" about the risks and benefits of GM crops, committee chair Fred Gould said during a May 17th briefing on the report. "We took our job very seriously because we know how contentious this issue is," said Dr Gould, co-director of the Center on Genetic Engineering and Society at North Carolina State University. “The committee focused on listening carefully and responding thoughtfully to members of the public who have concerns about GE crops and foods, as well as those who feel that there are great benefits to be had from GE crops.”

The panel honed in on the two main types of GM crops currently on the market, notably those modified to tolerate herbicides or resist insects. It then focused on GM maize, cotton and soybeans, the mostly widely planted GM crops.

The committee found no persuasive evidence from available research of adverse health effects from foods derived from these GM crops. It reviewed and compared epidemiological data from the US, Canada and the EU and found no differences in the "long-term pattern of increase or decrease in

specific health problems" after GM crops were widely commercialised in the 1990s.

The committee said that farmers have benefited from GM crops, but noted that the evidence was mixed on how much. Proponents of GM crops typically boast of increased yields, yet the panel found little data to support their argument. US crop yields for the three commodities have been increasing for decades and there is "no evidence" that the rate of increase has significantly changed since the introduction of GM crops, according to the report. "We are not seeing that all of a sudden we are increasing the rate of the increase in yield," Dr Gould said. "That is an important finding."

The panel did find that GM crops have contributed to a decrease in insecticide use, but raised concern that failure to follow IPM regimes has caused resistance issues.

Although herbicide-resistant crops have given farmers far more flexibility to combat weeds, the committee noted that GM crops have caused an increase in weed resistance to popular herbicides, notably glyphosate.

The report casts some doubt on the worry that GM herbicide-tolerant crops have led to a spike in pesticide use, noting that available data are largely limited to amounts of herbicides applied to fields. "We need better transparent data on the actual herbicides that are being used," Dr Gould explained. "More pounds to an acre doesn't necessarily translate into additional harm to human health or the environment."

The report recommends that US regulators need to increase transparency of their reviews, ensure that they regulate the plant, not the process, and focus on the potential risks from novel characteristics. New technologies are "blurring the distinction" between genetic engineering and conventional plant breeding, Dr Gould said. "It makes no sense to regulate one set of crops based on the process by which they were bred and not others," added committee member Michael Rodemeyer, a professor with the University of Virginia's Science and Technology Internship Program.

The committee highlighted that many products "that are technically considered to be genetic engineering are no longer being regulated by the USDA because of the definitions that the USDA uses", professor Rodemeyer explained. "That is only likely to increase given the rate at which these technologies are being developed. That may be a good or a bad thing, but it is certainly part of the discussion of whether we have the system in place that we want."

Dr Gould said that the committee was hopeful that the report could help get stakeholders out of their entrenched positions on GM crops and provide the public with a clearer view of the issues at play. He noted that the panel directly responded to some 700 comments submitted over the past 18 months and has set up a website to help individuals navigate the committee's findings. "We are hoping our report is not just this big tome, but is something that starts a conversation," Dr Gould said. "There are a lot of talking points that go around, from both sides, and we are pretty tired of that. We want to see a real conversation." (Pesticide & Chemical Policy/AGROW, May 19, 2016)

US EPA BID TO DISMISS NEONIC SEED SUIT REJECTED

A federal judge has denied the US EPA's request to dismiss a lawsuit that alleges the Agency is illegally exempting seeds treated with neonicotinoid insecticides from federal pesticide law. The decision focused on only jurisdictional questions about the complaint, but is still a key win for the coalition of beekeepers, environmentalists and farmers who brought the suit in January in the US District Court for the Northern District of California.

The plaintiffs allege that the EPA's failure to regulate neonicotinoid-coated seeds is contributing to bee declines and harming the environment in violation of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

Some 61 million ha of neonicotinoid-treated maize, soybeans and canola are planted annually across the US. The plaintiffs contend that dust and

contamination from the treated seeds are "killing honey bees by the many millions and imposing a potentially catastrophic hazard to aquatic systems". The complaint calls on the Court to require the EPA to regulate treated seeds as pesticides and block the sale and use of new seeds coated with neonicotinoids and other systemic insecticides.

A key legal question at the heart of the dispute is whether EPA guidance on bee kill investigations issued in 2013 is "final agency action" reviewable under the Administrative Procedure Act (APA). The plaintiffs say that the 2013 guidance is final action and argue that it illegally broadened the exemption for treated seeds that the EPA had crafted a decade earlier.

The EPA's 2003 statement confirmed that while such seeds were pesticides under the FIFRA, they were exempt from the law's requirements as "treated articles" if they had been treated with an already registered pesticide and their effects did not "extend beyond the seed itself". But subsequent language within the 2013 guidance on bee kill investigations expanded the exemption to include resulting dust-off from a treated seed. The plaintiffs argue that the 2013 document illegally eliminates any environmental considerations of coated seeds and say that the guidance is effectively a formal regulation.

The EPA told the court that the guidance "merely constituted a recommendation" and said that the case should be dismissed, but US District Judge William Alsup was unconvinced. The factual dispute over the 2013 guidance is "so intertwined with the merits" of the complaint that it would be inappropriate for the Court to dismiss the case at the EPA's first request, Judge Alsup concluded in his May 13th order.

"At this stage, without the benefit of the entire administrative record, this order cannot find as a matter of law that the 2013 guidance did not constitute final agency action," he explained. "Based on the current record, without resolving factual disputes, it is plausible that defendants' decision to exempt coated seeds from FIFRA, without regard to their effects beyond the seeds themselves, constituted agency action."

Judge Alsup also granted a motion filed by a coalition of pesticide and agricultural groups to intervene and help the EPA contest the litigation. The request was made by CropLife America, the American Seed Trade Association, the Agricultural Retailers Association, the American Soybean Association, the National Cotton Council of America, the National Association of Wheat Growers and the National Corn Growers Association. "Each intervenor has demonstrated a protectable interest," Judge Alsup concluded. (Pesticide & Chemical Policy/AGROW, May 17, 2016)

SCIENTISTS TRACK MOSQUITOES THAT TRANSMIT ZIKA AND DENGUE BY COUNTY

As mosquito-borne diseases that were once rare or unseen in the United States are making their presence known in the country, a team of researchers from the Centers for Disease Control and Prevention and Colorado State University is calling for greater efforts to systematically map the presence of the vectors carrying these illnesses.

"The emerging threats of dengue, chikungunya, and Zika virus diseases have highlighted the need for accurate and up-to-date records for the geographical ranges of *Ae. aegypti* and *Ae. albopictus* to guide ongoing efforts to strengthen mosquito surveillance and control capacity and to serve as the basis for model-based predictions of future spread of these important arbovirus vectors," the researchers wrote in an article in the *Journal of Medical Entomology*.

Senior author John-Paul Mutebi of the CDC and his colleagues reviewed data on the spread to the two mosquito species — *Aedes aegypti* and *Aedes albopictus* — over the past 21 years. The data are from a variety of sources, including CDC's ArboNet, the scientific literature, and county collection records.

They show that these two species have expanded their ranges in the U.S. over the past two decades. They have gone from being found primarily in the Southwest and Southeast to the Mid-Atlantic States and as far north as New England.

But these data were not systematically collected, according to Mutebi, which led him to conclude that “we don’t know much about the distribution of *Aedes aegypti* and *Aedes albopictus* in the United States at this time.” *Aedes aegypti* transmits yellow fever, but when that disease ceased to be a problem, “surveillance programs moved away from those that are based on *Aedes aegypti* to those that are based on *Culex*, because now what we are worried about is West Nile [virus],” he said.

“The intensified surveillance for mosquitoes and mosquito-borne viruses that resulted from the 1999 introduction of West Nile virus to the United States therefore had very limited potential for generating data for the occurrence of *Ae. aegypti* and *Ae. albopictus*,” the authors wrote, because the traps that are suitable for *Culex*, don’t snare the two *Aedes* species.

That’s unfortunate because diseases like chikungunya and dengue are becoming increasingly prevalent in the United States. Chikungunya, which has no cure, can cause debilitating joint and muscle pain, fever, and rash. In 2014 a dozen locally transmitted cases were reported in Florida. The disease can cause worrisome problems not only for victims but for those who care for them.

“It is one of those viruses that can end up in explosive epidemics that can overwhelm the health system,” Mutebi said.

A 2012 study warned of a similar threat with dengue.

“Conditions that facilitate sustained dengue transmission exist in the United States, and outbreaks have occurred during the past decade in Texas, Hawaii, and Florida. More outbreaks can

also be expected in years to come,” wrote a team of researchers from Johns Hopkins University.

Options to control the spread of *Aedes aegypti* and *Aedes albopictus* include what Mutebi calls “environmental sanitation.” These mosquitoes lay their eggs in water in artificial containers — like tires, cans, and bottles — so it is important to remove these containers.

“It is labor intensive, it is inconvenient, but that is how you get rid of it,” he said.

Aedes aegypti, which has been present in the United States since the seventeenth century, is thoroughly “domesticated” and stays close to people. Making sure windows have screens is one way to keep them at bay.

Aedes albopictus, which first came to the United States in 1985, very likely in tire casings, is often found in forests, which makes it difficult to get rid of. It also breeds in artificial containers, making it imperative to get rid of such potential breeding sites. (EntomologyToday, June 9, 2016)

<https://entomologytoday.org/2016/06/09/scientists-track-mosquitoes-that-transmit-zika-and-dengue-by-county/>

SOY GROWERS WARY OF EPA REQUIREMENTS FOR PARAQUAT

The herbicide Paraquat has new label and application requirements that may become costly to growers and operators, the American Soybean Association told the Environmental Protection Agency in early May.

Soybean farmers across America use Paraquat for resistance management and as a soil-saving tool on both no-till and conservation tillage systems that are susceptible to weeds that are resistant to glyphosate, triazines, sulfonylureas, imidazolinones, diphenyl ethers and other herbicide products.

“ASA supports the Agency’s focus on stewardship and training and additional label language on toxicity,” the organization said in a news release. “We do have concerns about two of the new label requirements: the closed system requirement and the restriction to be sprayed by certified applicators only, both proposed for implementation in 2018. Most farmers have little to no experience with using closed systems, and will be required to purchase new equipment. Education and outreach will need to take place in order for farmers to follow this new requirement and in all likelihood it will not significantly change the inherent risk to growers making applications.”

The ASA worries the requirement of the paraquat certified applicators will be costly to growers and not allow all growers to use paraquat as they have in the past. (CropProtection News June 19, 2016)
<http://cropprotectionnews.com/stories/510899405-soy-growers-wary-of-epa-requirements-for-paraquat>

CEU Meetings

No meetings to report for July.

ODAFF Approved Online CEU Course Links

Technical Learning College

<http://www.abctlc.com/>

Green Applicator Training

<http://www.greenapplicator.com/training.asp>

All Star Pro Training

www.allstarce.com

Wood Destroying Organism Inspection Course

www.nachi.org/wdocourse.htm

CTN Educational Services Inc

http://ctnedu.com/oklahoma_applicator_enroll.html

Pest Network

<http://www.pestnetwork.com/>

Univar USA

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

Southwest Farm Press Spray Drift Mgmt

<http://www.pentonag.com/nationalsdm>

SW Farm Press Weed Resistance Mgmt in Cotton

<http://www.pentonag.com/CottonWRM>

Western Farm Press ABC's of MRLs

<http://www.pentonag.com/mrl>

Western Farm Press Biopesticides Effective Use in Pest Management Programs

<http://www.pentonag.com/biopesticides>

Western Farm Press Principles & Efficient Chemigation

<http://www.pentonag.com/Valmont>

For more information and an updated list of CEU meetings, click on this link:

<http://www.oda.state.ok.us/cps-ceuhome.htm>

ODAFF Test Information

Pesticide applicator test sessions dates and locations for July/August are as follows:

July		August	
8	OKC	5	OKC
14	Tulsa	11	Tulsa
22	OKC	18	Enid
28	Tulsa	19	OKC
		25	Tulsa

Altus: SW Research & Extension Center
16721 US HWY 283

Atoka: KIAMICHI TECH CENTER 1301
W Liberty Rd, Seminar Center

Enid: Garfield County Extension Office,
316 E. Oxford.

Goodwell: Okla. Panhandle Research &
Extension Center, Rt. 1 Box 86M

Hobart: Kiowa County Extension Center
Courthouse Annex, 302 N. Lincoln

Lawton: Great Plains Coliseum,
920 S. Sheridan Road.

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

OKC: Arcadia Conservation Education
Building 7201 E 33rd St. Edmond
OK (New Location)

Tulsa: NE Campus of Tulsa Community
College, (Apache & Harvard)
Large Auditorium