Pollinator News

Outcome of the consultation with Member States, the applicant and EFSA on the pesticide risk assessment for sulfoxaflor in light of confirmatory data

The European Food Safety Authority (EFSA) was asked by the European Commission to provide scientific assistance with respect to the risk assessment for an active substance in light of confirmatory data requested following approval in accordance with Article 6(1) of Directive 91/414/EEC and Article 6(f) of Regulation (EC) No 1107/2009. In this context EFSA’s scientific views on the specific points raised during the commenting phase conducted with Member States, the applicant and EFSA on the confirmatory data and their use in the risk assessment for sulfoxaflor are presented. The current report summarises the outcome of the consultation process organised by the co-rapporteur Member State Czech Republic and presents EFSA’s scientific views and conclusions on the individual comments received.

Summary
Sulfoxaflor was approved in accordance with Regulation (EU) No 1107/2009 on 29 July 2015 by Commission Implementing Regulation (EU) No 2015/1295, amending the Annex to Commission Implementing Regulation (EU) No 540/2011. It was a specific provision of the approval that the applicant was required to submit to the European Commission further studies on:
(a) the risk to honey bees via the different routes of exposure, in particular nectar, pollen, guttation fluid and dust;
(b) risk to honey bees foraging in nectar or pollen in succeeding crops and flowering weeds;
(c) the risk to pollinators other than honey bees;
(d) the risk to bee brood.
by 18 August 2017.

In accordance with the specific provision, the applicant, Dow AgroSciences, submitted an updated dossier to the rapporteur Member State (RMS) Ireland, in August 2017. The updated dossier was evaluated by the designated co-rapporteur Member State (co-RMS), Czech Republic, on behalf of Ireland, in the form of an
addendum to the draft assessment report. In compliance with guidance document SANCO 5634/2009-rev.6.1, the co-RMS distributed the addendum to Member States, the applicant and EFSA for comments on 12 March 2018. The co-RMS collated all comments in the format of a reporting table, which was submitted to EFSA on 2 July 2018. EFSA added its scientific views on the specific points raised during the commenting phase in column 4 of the reporting table.

The current report summarises the outcome of the consultation process organised by the co-RMS, Czech Republic, and presents EFSA’s scientific views and conclusions on the individual comments received. The risk assessment for bees has been amended considering the newly available laboratory and higher tier studies. Following the recommendations of the Pesticide Peer Review Meeting 133 (EFSA 2015), the co-RMS evaluated the higher tier studies in light of the issues raised in EFSA PPR Panel (2012) and EFSA (2013). It is noted that the tier 1 risk assessment according to the SANCO guidance remains unchanged compared to the previous conclusions reached during the peer review of the risk assessment of sulfoxaflor in 2014. The assessment of the higher tier studies made use of the latest state of the knowledge on the topic, without diverging from the SANCO guidance recommendations. The risk assessment included some novel refinement steps on which divergent views were expressed by Member States during the commenting phase. Different opinions were also expressed in relation to the interpretation and the use of the available higher tier studies and as regards the consideration of risk mitigation measures for the use of sulfoxaflor. Based on the data assessed, a low risk could not be demonstrated for honeybees and non-Aphis bees as a result of the current assessments (points a – d).

Several issues were identified which would need further consideration and Member States experts’ consultation. READ MORE https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/sp.efsa.2018.EN-1474.
A Reasonable Discussion in Support of the Chinese Tallow tree, Pollinator Forage, and Local Economies

Dr. William Kern, UF/IFAS Associate Professor posed his claim to support the release of a non-native flea beetle to address the opportunistic/invasive Chinese tallow tree in Florida and twelve other, mostly southern U.S. states. Beekeepers can agree with the designation of the Chinese Tallow tree, Triadica sebifera (Family Euphorbiaceae) as an “invasive weed” per many states’ Invasive/Exotic Plant lists. Beekeepers can agree the Chinese Tallow tree, like many non-native plants grows quickly, therefore shading out native slow-growing species.

The introduction of this non-native beetle to control the Chinese tallow will result in the loss of a major forage source for honey bees and other pollinator species. This would directly affect these important pollinators, exacerbate the pollinator health crisis impacting native pollinators and honey bees, and lead to very serious economic impacts for beekeepers and farmers on a national scale. Honey bees pollinated $12.4 billion worth of directly dependent crops and $6.8 billion worth of indirectly dependent crops in 2010. Native pollinators are also responsible directly and indirectly pollinating nearly $10 billion worth of crops annually.

Beekeepers rely on the American landscape for their honey bees to produce a honey crop. The 2014 National Pollinator Protection Act, and the subsequent 2015 National Strategy to Protect Honey bees and Other Pollinators recognized the dwindling pollinator forage, and encouraged an increase of pollinator forage across the US. Pollinator forage is desperately needed for honey bees and native pollinators, whether it comes from native or non-native plants. While honey bees are non-native pollinators to North America, they have adapted to the variety of invasive species that they discovered on the landscape, and to those plants humans brought in from even the bees’ original non-European honey bee range. Nature found a way for the honey bees to thrive in North America, with or without beekeepers.

Beekeepers seek a reasoned approach to control this non-native, invasive plant species, which for over four hundred years contributed to the beekeepers’ crop called honey. Historians note that Ben Franklin gave Chinese Tallow seeds to a Georgia farmer in 1772 as a future cash crop for the farmer and beekeeper.

As beekeepers in the affected states expressed in a letter to USDA-ARS:

[Chinese Tallow] “provides a major (honey) market value in at least four of these states. Tallow can be found in all 64 parishes in Louisiana and also in 55 counties of Texas. Honey sales in Louisiana contribute over eight million dollars to the state agriculture sector (NASS). In 2016, Texas produced eight million pounds of honey, with a wholesale value of $11.5 million, seven million pounds of which are attributed in part to the Chinese tallow nectar flow. Nationally, honey sales contribute roughly 336 million dollars to the value of US agriculture commodities in 2016
To remove a crop in the landscape will severely impact the beekeeper’s income. When an agricultural stakeholder is not permitted to grow a specific crop, deeply impacting their livelihood, alternatives are presented. For instance, Illinois is now allowing farmers to grow hemp, again, as it can be used in a variety of products, and requires less chemical inputs to grow in a monoculture setting. Beekeepers make a living off of the Chinese Tallow tree nectar. The honey produced from this crop is made as the honey bees come out of winter, and aids the early summer growth of the population within the hive organism. To remove the Chinese Tallow tree and its spring bloom from the landscape in wetlands and bottomland forests will impact the health of honey bees, and the livelihoods of beekeepers.

The College of Agriculture of Louisiana State University examined a different benefit of the Chinese Tallow tree, "... the tallow tree promises to become the second or third most productive source of vegetable oil for biodiesel, after oil palm and possibly algae. This tree can be grown on marginal land and therefore would not compete with food production for limited cropland. Currently, naturalized stands of the tallow tree occupy tens of thousands of acres throughout Louisiana. Converting these lands to commercial production of the tallow tree as a feedstock for biodiesel production offers many potential benefits."  

Beekeepers have continually partnered with other agricultural stakeholders to support agricultural commodities. With the Chinese Tallow tree beekeepers can help pollinate a tree that would be the crop for biodiesel. “In many respects, the tallow tree offers the ideal energy crop for biodiesel production along the gulf coast. It thrives in wet areas that cannot be farmed profitably with conventional crops. It has few insect pests and diseases and is tolerant of salt, prolonged flooding and occasional freezing temperatures. It has low nutrient and other management requirements. These characteristics as well as the tallow tree’s exceptional ability to produce high-quality vegetable oil underscore its commercial potential as a low-input, high-return biodiesel crop for Louisiana."  

"Per acre, these oil yields are 15 times more than soybeans, 10 times more than sunflower or safflower, seven times more than peanuts and five times more than rape seed. Annual commercial production averages about 645 gallons – the equivalent of 15.4 barrels of oil per acre. Some experts cite figures as high as 970 gallons or 23.1 barrels of oil per acre."

Beekeepers and environmental advocates present the concern that releasing another non-native biological control will create other problems. Will the non-native flea beetle introduce diseases to native flea beetles, or a disease that infects another species? Will the non-native flea beetle begin to seek alternate food sources and begin to attack the very native species USDA-ARS is trying to support? While USDA-ARS research shows lab experiments that the flea beetle prefers the Chinese Tallow tree, a lab test is not the rich, diverse ecosystem in which the non-native flea beetle will be released. Nature finds a way to enjoy diverse food sources, or to protect its eggs from predators by adapting to plants predators do not favor. With the many failed examples of the release of non-native species into just the North American landscape, why does USDA still believe it can control nature? Research presented at an International Symposium on Biological Control of Weeds, researchers postulated
agents may be released on the wrong species of plant as occurred in the early stages of the leafy spurge program (Harris 1984), at the wrong time of day or year, or they may develop disease while being reared for release. Another technical problem that has occurred is the mixing of two species of agents prior to release. This occurred with the two Urophora species on knapweed (Harris 1980a) and the two Galerucella species on purple loosestrife, Lythrum salicaria L., (Blossey et al. 1996).8

From that same 2000 research analysis the author states, “To make judgements on whether non-target attacks are acceptable requires an analysis of the cost of the weed and the benefit of controlling it as compared to the environmental cost associated with the potential impact of agents on native species of plants (Harris 1990). This is not a simple process and different interest groups will have different values to apply to the cost-benefit analysis.” 9

What is the cost to beekeepers who lose a vital honey crop plant? What is the cost to the pollinators, native and managed, to this reduction of spring blooming forage, with no replacement forage planned/implemented? What is the cost of the replacement forage? Cost benefit analysis is compiled for pesticide use against crop pests. The value of the crop to the farmer is a very high USDA concern. Beekeepers continue to argue, the honey crops for their livestock should receive the same cost benefit analysis, for planting and protecting it, as any other agricultural stakeholder.

At this time beekeepers and their honey bees need the Chinese Tallow tree to make a honey crop and support their bees during the critical spring bee population increase. Beekeepers understand the value of a diverse landscape, more than any other farmer, but they cannot support the removal of a honey crop, invasive or not, until a restoration plan for a replacement honey crop with a spring bloom accompanies the invasive control actions.

Beekeepers cannot support the use of herbicides to control invasive plant species as that increases the loss of other pollinator forage through pesticide drift. With studies showing glyphosate residues appearing in honey, (a pesticide not used for control of any bee pests) glyphosate applications must be reduced and better controlled to prevent drift onto pollinator forage and water.

However, in the proposal by USDA-ARS to reduce the growth rate of the Chinese Tallow tree there is no restoration plan. “Without question, the tallow tree can rapidly colonize poorly managed pastures, fence rows, clear-cut forests and other areas that offer adequate sunlight.”10 Therefore, what is the restoration plan for “poorly managed pastures, fence rows, and clear-cut forest areas?”

The LSU College of Agriculture further postulates, and beekeepers agree, “The invasive potential of the tallow tree merits serious consideration. So does the opportunity to restore economic prosperity to many of the most impoverished areas of Louisiana by converting many thousands of acres of marginal land currently colonized by the tallow tree to a highly profitable, low-input bioenergy crop. Because of the ability of the tallow tree to flourish on marginal land, it can be produced without adversely affecting our ability to produce food. This perennial oilseed crop does not require routine cultivation of the soil and therefore also can serve to prevent soil erosion and reduce pollution of surface waters while sequestering atmospheric carbon dioxide in its biomass. Harvesting the fruit before it is fully mature can serve to reduce rather than enhance its spread by birds and other means from areas heavily colonized with the tallow tree.”11
If we are to support the growth of native plant species, therefore the sustainability of native pollinators, land managers must be involved to restore the land for and with native species in order to reduce the opportunity of a different invasive overtaking the Chinese Tallow tree range. However, we cannot ignore the contributions of the Chinese Tallow tree to the local economy, and other stakeholders like managed pollinators and beekeepers.


pictures from selecttree.calpoly.edu and dailymail.co.uk

U.S. EPA requires ag companies to better manage pesticides in California and Arizona

SAN FRANCISCO – Today, (September 24, 2018) the U.S. Environmental Protection Agency (EPA) announced settlements with two companies for the improper storage and labeling of agricultural pesticides. Nutrien Ag Solutions, Inc., formerly doing business as Crop Production Services, Inc., and Colusa County Farm Supply, Inc., a distributor of chemicals and fertilizers in Northern California, have agreed to pay a total of $345,148 in civil penalties. The firms have corrected all identified compliance issues.

“Companies that produce or refill pesticide products are required to carefully follow FIFRA requirements to ensure the public and the environment are protected,” said EPA Pacific Southwest Enforcement Division Director Kathleen Johnson. “Improper storage of pesticides can lead to spills or leaks that may adversely affect human health and the environment.”

EPA asserted both companies had multiple violations under the Federal Insecticide, Fungicide, and Rodenticide Act, which regulates the distribution, sale and use of pesticides in the United States. Nutrien Ag Solutions agreed to pay $331,353; Colusa County Farm Supply will pay $13,795.
Nutrien Ag Solutions, one of the largest providers of crop nutrients in the world, operates one facility in Coolidge, Ariz., and seven facilities in California subject to EPA’s enforcement action, including six in the Central Valley communities of Hanford, Delano, Cutler, Bakersfield, Huron and Stockton, and one in Santa Maria, Calif. Inspections between 2013 and 2017 by EPA, and the California Department of Pesticide Regulation and the Arizona Department of Agriculture on behalf of EPA, found 52 violations.

Examples of the violations at the Nutrien Ag Solutions facilities included:

- Failure to protect pesticide containers and pesticide-dispensing equipment from damage by moving equipment;
- Failure to meet capacity requirements for secondary containment units and pads, which contain pesticides that may spill or leak from bulk containers and trucks;
- Distribution and sale of misbranded pesticides;
- Failure to collect and recover pesticide spills and leaks as required; and
- Failure to keep records related to the distribution and storage of pesticides.

Colusa County Farm Supply operates a facility in Williams, Calif., which was inspected by the California Department of Pesticide Regulation in May 2017. The violations found included:

- Failure to keep proper inspection and maintenance records;
- Failure to keep records of the repackaging of pesticides into refillable containers; and
- Improperly using an external sight gauge to monitor levels of liquid pesticide in a storage tank.

Federal Insecticide, Fungicide, and Rodenticide Act regulations help safeguard the public, the environment, and facility workers by ensuring that pesticides are used, stored, and disposed of safely, and that pesticide containers are adequately cleaned. Pesticide registrants, refills (i.e., those that repackage pesticides into refillable containers), and others in the business of selling, distributing, or applying pesticides must comply with applicable regulations, while consumers are required to follow the label instructions for proper use and disposal.

For more information on pesticides, please visit: [https://www.epa.gov/pesticides](https://www.epa.gov/pesticides)


For more information on EPA’s regulations concerning pesticide containers and storage of pesticides, that include many of the requirements at issue in these cases, visit: [https://www.epa.gov/pesticide-worker-safety/pesticide-containers](https://www.epa.gov/pesticide-worker-safety/pesticide-containers)

**Research**

**Sulfoxaflor exposure reduces bumblebee reproductive success**
Harry Siviter, Mark J. F. Brown & Ellouise Leadbeater

Intensive agriculture currently relies on pesticides to maximize crop yield. Neonicotinoids are the most widely used insecticides globally, but increasing evidence of negative impacts on important pollinators and other non-target organisms has led to legislative reassessment and created demand for the development of alternative products. Sulfoximine-based insecticides are the most likely successor, and are either licensed for use or under consideration for licensing in several worldwide markets.3, including...
within the European Union, where certain neonicotinoids (imidaclorpid, clothianidin and thiamethoxam) are now banned from agricultural use outside of permanent greenhouse structures. There is an urgent need to pre-emptively evaluate the potential sub-lethal effects of sulfoximine-based pesticides on pollinators, because such effects are rarely detected by standard ecotoxicological assessments, but can have major impacts at larger ecological scales. Here we show that chronic exposure to the sulfoximine-based insecticide sulfoxaflor, at dosages consistent with potential post-spray field exposure, has severe sub-lethal effects on bumblebee (Bombus terrestris) colonies. Field-based colonies that were exposed to sulfoxaflor during the early growth phase produced significantly fewer workers than unexposed controls, and ultimately produced fewer reproductive offspring. Differences between the life-history trajectories of treated and control colonies first became apparent when individuals exposed as larvae began to emerge, suggesting that direct or indirect effects on a small cohort may have cumulative long-term consequences for colony fitness. Our results caution against the use of sulfoximines as a direct replacement for neonicotinoids. To avoid continuing cycles of novel pesticide release and removal, with concomitant impacts on the environment, a broad evidence base needs to be assessed prior to the development of policy and regulation.


A systemic problem with pesticides

Exposure to a sulfoximine-based pesticide has substantial adverse effects on bumblebee colonies. This finding suggests that concerns over the risks of exposing bees to insecticides should not be limited to neonicotinoids. By Nigel E. Raine

“...commercially reared pollinators (particularly honeybees) feature prominently in global agriculture, but cannot provide all of the crop-pollination services needed. Wild pollinators, including bumblebees and solitary bees, have a crucial, undervalued role that is likely to become increasingly important as our crop-pollination demands rise. Our understanding of the risks to pollinators, and the choices we make about pest control, must evolve to reflect and balance these realities. There are no risk-free choices, but with more information such as that provided by Siviter and colleagues, we can make the most appropriate decisions about how to produce the food we need without inflicting irreparable damage on the global environment and the essential ecosystem services (such as pollination) on which we depend.”


Weed Killer in $289 Million Cancer Verdict Found in Oat Cereal and Granola Bars, By Alexis Temkin, Ph.D., Toxicologist

Popular oat cereals, oatmeal, granola and snack bars come with a hefty dose of the weed-killing poison in Roundup, according to independent laboratory tests commissioned by EWG. Glyphosate, an herbicide linked to cancer by California state scientists and the World Health Organization, was found in all but two of 45 samples of products made with conventionally grown oats. Almost three-fourths of those samples had glyphosate levels higher than what EWG scientists consider protective of children’s health with an adequate margin of safety. About one-third of 16 samples made with organically grown oats also had glyphosate, all at levels
well below EWG’s health benchmark. READ MORE

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Beekeepers Working for Beekeepers

The Board and Program Director are all beekeepers.
We work to:

- Raise awareness about the adverse impact of pesticides on pollinators critical to the supply of food and the ecosystem.
- Provide advocacy, guidance, and tools to document the detrimental effect of pesticides on pollinators.
- Affect regulatory processes of pesticide risk assessment, label, and enforcement.