



*Pollinator Stewardship Council*

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Office of Pesticide Programs  
Environmental Protection Agency  
1200 Pennsylvania Ave. NW  
Washington, DC 20460-0001.

RE: EPA-HQ-OPP-2022-0908-0001 ESA Work Plan Update: Nontarget Species Mitigation for Registration Review and other FIFRA Actions

To Whom It May Concern:

The Environmental Protection Agency (EPA) is charged with protecting the health and welfare of both humans and the environment, including pollinators. These comments are submitted relative to the recent draft of the ESA Work Plan Update: Nontarget Species Mitigation for Registration Review and other FIFRA Actions posted November 2022. We are highly concerned about the level of pollinator protection and feel that the ESA Work Plan does not provide adequate protection to pollinators.

We believe that the EPA has a legal obligation to provide a higher level of pollinator protection than described in the ESA Work Plan Update based on the outcome of Case No. 3:13-cv-01266-LB, in which a Federal Court ruled that the Environmental Protection Agency (EPA) had systematically violated the Endangered Species Act (ESA). In this ruling, the plaintiffs understood the court mediated and mandated agreement would require the EPA to implement immediate fundamental changes to their neonicotinoid pesticide registration policies. EPA has determined that these systemic insecticides do pose risk to endangered species and pollinators, but the Work Plan fails to implement actual change such as the appropriate next step of immediate cancellation of these systemic insecticides.

Instead, the EPA provides pollinator protection language which creates the illusion of action but does not actually address any of the legal requirements for change according to the outcome of Case No. 3:13-cv-01266-LB. The EPA acknowledges they are not meeting their own

legal requirements and in the “Introduction and Document Overview” section, the EPA rationalizes their suggestions by stating “...Without those measures, EPA anticipates new litigation against the Agency and similar adverse court decisions on other pesticides. That outcome could result in the abrupt removal of the pesticide tools growers need. And it would overwhelm EPA’s workload, considering that existing court-enforceable deadlines will require EPA to complete ESA reviews for 18 pesticides over the next six years---the most the Agency estimates it can handle during this period based on its current capacity and processes. Further, ongoing litigation and settlement discussions for other lawsuits cover dozens of additional pesticides and will likely fill the Agency’s ESA workload well beyond 2030. The steps discussed in this update are thus needed for EPA to effectively manage its ESA-FIFRA workload and reduce legal uncertainty about the registration review status of pesticides without a final decision.”

Thus, the stated purpose of the Work Plan is not to provide the legally required protection, the prevention of poisoning, and loss of endangered species, but to protect the Agency from legal liability due to the EPA’s acknowledged ineffective and inadequate pesticide registration and use policies. Mitigation, which is defined as “so as to make something, especially a crime, appear less serious and thus be punished more leniently” seems an appropriate term for the proposed strategies. (Hanks et al., 2010)

In Section 7, the protection of pollinators and endangered species is afforded only two pages of advisory changes. This is grossly inadequate. They deserve actual tangible protection from damage. Instead, the protection of these critical groups relies on application method recommendations printed on the labels of those pesticides proven to be destructive to pollinators and endangered species. There is no consequence if a grower chooses to ignore the recommended application methods. There is no oversight or tracking of application methods in any way. This is unacceptable and does not provide adequate protection.

By ignoring the growing issues surrounding systemic pesticides and the persistent detection of neonicotinoid insecticides and fungicides in our environment (water systems, foods, livers of deer, and even blood and urine of humans) the EPA's inaction and unwillingness to acknowledge impacts and the advice of their own researchers has caused widespread systemic pesticide pollution in the US. This type of pollution often ends up in non-target plants and is not monitored, mitigated, or regulated under FIFRA. Therefore, new actions under FIFRA will NOT address the growing persistence and detection of these chemicals in places, animals, and food systems where they shouldn't be. The persistence of chemicals and chronic exposure drives chemical resistance to develop in pest populations which is then addressed by using special registrations to allow unvetted and potentially more harmful compounds to be used. This loophole can't be allowed to continue especially when products have been approved under the

special regulations then take decades or more to remove from the market. Further, we have outlined a variety of distressing issues within the ESA Work Plan:

1. Executive Summary. “On 15 year intervals, EPA must assess each existing pesticide active ingredient to ensure it continues to meet the FIFRA standard of causing no unreasonable adverse effects.” We are concerned that this is too long between reviews, especially considering that most pesticides were registered without a formal ESA review and that delays are typical for the review process.
2. Introduction and Document Overview. When EPA only acts under FIFRA it neglects its duties and responsibilities to protect non-target organisms from pesticide exposures that do not originate from a pesticide application. Systemic pesticides, like neonicotinoid insecticides and several fungicides, readily move off target and into plants. This means when investigators cannot identify the source of pesticide contaminants or trace exposure to an application source or misuse of a product, then nothing can be done for the organisms impacted. This loophole needs to be addressed and can be met by expanding pollinator protection policies beyond FIFRA.
3. Introduction and Document Overview. “...By including FIFRA mitigation to protect nontarget species as part of any IDs it issues for conventional and biological pesticides that present ecological risks, while the Agency works toward final registration review decisions.” The EPA should recognize that pesticides absorbed by vegetation may persist in soil where many organisms dwell and/or be expressed in the plant parts (roots, leaves, pollen, and nectar) which are fed upon by a wide array of wildlife. Therefore, this method of mitigation doesn't always reduce exposure risk. Rather systemic pesticides increase the risk of exposure to wildlife through absorption by plants.
4. Section III. A. “EPA’s goal in developing Interim Ecological Mitigation measures is to consistently apply ecological mitigation options to reduce exposure to non-target species, including listed species, based on the fate and transport characteristics of the chemical and the toxicological effects, risk, and benefits of the pesticide.” Based on this statement, and to comply with EPA's own stated goal, the federal exemption on pesticide treated seeds or "treated articles" should be removed. Pesticides used as seed coatings are designed to move into plants, therefore their fate and transport (or movement) should remain under FIFRA review to reduce likelihood of non-target exposures and impacts. We believe that *risks from off-target movement of neonicotinoids cannot be mitigated*. Woodcock et al. (2017) found that neonicotinoid exposure from non-target sources, when bees were near canola, reduced overwintering and colony reproduction in both wild bees and honey bees. A similar result was found in the UK (Budge et al. 2017). These field trials, with field-realistic exposure across countries with differing habitat, all show that neonics are leaching into the soils and then being picked up by non-target plants that bees visit near the agricultural fields. This idea was first demonstrated by the work of Krupke et al. (2017) and Botis et al. (2015) and, coupled with recent ground water contamination

data on neonics (Hladik et al. 2014, Main et al. 2014, Raby et al. 2018), paint a picture of contamination and impact from the planting of treated seeds that cannot be ignored.

5. Section III. C. “The measures are intended to be broad and focus on risk to non-target species identified in the ecological risk assessment rather than to a particular listed species.” The broad approach proposed may be easier to conduct, but unfortunately the focus does not protect highly sensitive species which are often the listed species of conservation concern. A more conservative approach should be applied utilizing the standard of the most sensitive representatives within a group of organisms– not treating this critical group as the exception. To further explain, EPA takes great care with regards to impacts on children and places extra precautionary measures to protect highly vulnerable children. EPA does not and would not take a broad approach to look at the human population without considering sensitive sub-populations (youth and elders) *nor should EPA neglect the more vulnerable wildlife species within any given community.*
6. Section III. C. “Further, the measures are specific to the exposure route leading to the risks identified in an ecological risk assessment. In addition to this interim mitigation, EPA has determined that a web link to its BLT system is necessary for most pesticide labels.” This statement suggests that the ecological risk assessments will primarily deal with one route of exposure at a time rather than assessing multiple routes of exposure (via air inhalation, oral food/water consumption, and contact with contaminated surfaces) occurring simultaneously, which is often the case. This is insufficient to provide adequate protection.
7. Section III. C. “Additionally, EPA has determined that incident reporting guidance is necessary for all pesticide products, and insect pollinator advisory language is necessary for pesticide products with agricultural crop uses.” The use of “advisory language” and statements are not seriously taken into consideration by growers and applicators and are not enforceable. This is one of our key concerns and we believe this statement does not meet the legal obligation based on the ruling of Case No. 3:13-cv-01266-LB. Without enforceable requirements, there is no incentive for users to take additional and optional steps that will likely increase cost, time, and labor. Environmental protection guidelines should be mandatory and enforceable. or all efforts to outline protection/mitigation measures will result in little to no benefit.
8. Section III. C. “EPA has regularly included mitigation measures in registration review to address spray drift such as droplet size, windspeed, release height, and buffers from aquatic habitat.” EPA neglects the “planting” of pesticide treated seeds as a pesticide application and therefore has not implemented adequate and proper protections against drift, run-off, and leaching from those products. Planting pesticide treated seeds has been shown to blanket a landscape with pesticide residues as the seed coating breaks down. To correct this issue, EPA needs to remove the federal exemption that protects treated seeds from mitigation measures that prevent non-target movement.

9. Section III. D. “EPA particularly welcomes comments on the feasibility of implementing these measures and how the Agency should adjust measures to account for the risks and benefits of a pesticide. Because EPA intends to adapt these measures to other FIFRA actions, EPA welcomes comments from stakeholders interested in FIFRA actions not only for conventional registration review cases but also for new use actions, biopesticides, and antimicrobials.” EPA's plans are limited in scope which may allow them more flexibility in implementing mitigation measures, but until the issues and concerns over pesticide-treated seeds and the movement of residues via air, water, soil, and plants from systemic pesticides are addressed, these measures will ultimately result in little to no positive outcomes.
10. Section IV. A. “Although the BLT system has been in place for many years, there may be applicators who are unfamiliar with this system.” How does this system work with Driftwatch? How will EPA maintain staff to ensure BLTs are updated regularly, monitored, and enforced? How does this work at the state level? If BLTs have been around for some time but few are familiar then how does EPA plan to increase awareness and improve use?
11. Section V. “Besides the actions described earlier, EPA has identified several additional approaches to further advance these strategies...” EPA often focuses on toxicity and safety of a chemical but there are other approaches including:
  - Add chemical function to the review process, in addition to toxicity and safety. Identify which chemicals/products have proven sufficient evidence for positive effects, and which chemicals do not have evidence of positive outcomes. The EPA should adopt Adverse Outcome Pathways (AOPs). These are used in the EU and other countries to standardize or create a way to measure the "weight of evidence" on compounds that cause significant lethal, sub-lethal, direct, and indirect impacts. [Weight of evidence evaluation of a network of adverse outcome pathways linking activation of the nicotinic acetylcholine receptor in honey bees to colony death - PubMed \(nih.gov\)](#)
  - Initiate a stringent review that is able to cull/remove pesticides more readily from the market.
  - Implement a more balanced approach to registering new products. There are many strategies to slow the pesticide treadmill, including a plan to remove just as many or similar numbers of old (ineffective) products as new products are introduced so that EPA does not continually have a backlog of reviews to conduct.
  - Limit special registrations and provide more guidance to users. Applicators are spraying multiple chemicals multiple times per season due to "special registrations" to deal with resistant pest populations. But unfortunately, chemical overloading drives more resistance so this issue needs to be addressed in order to protect the effectiveness of products for long-term use and prevent the development of more chemically resistant pests.

12. Appendix 4. Vegetative Filter strips. “Nutrients, pesticides, and soils in the runoff water are filtered through the grass, potentially adsorbed by the soil, and potentially taken up by the plants.” Insects and wildlife consume these plants after the chemicals have been taken up by the plants. How does this protect non-targets from exposure to systemic pesticides? How will EPA monitor contamination in plants and ensure pesticide loads are not accumulating in vegetative strips and backloading exposure events?
13. Appendix 4. Cover Crop. Several listed cover crops are attractive to pollinators and would thus provide a good source of nectar/pollen, but how will EPA ensure that cover crops are not absorbing chemical residues from treated seeds and field applications? How will the EPA ensure that this effort to reduce runoff does not ultimately increase low level exposure to pollinators?

Endangered species as well as pollinators, that receive 2 short pages at the end of this report, deserve real protections from real injury not more meaningless and unenforceable “advisories.” We are at a critical juncture as mounting evidence shows that many registered pesticides are highly detrimental to pollinators, which are essential for our food supply. At the same time, scientific evidence shows an increase in pesticide resistance (Kumar et al, 2021) as well as little to no net benefit to crops such as soybeans (Mourtzinis et al, 2019). Given this combination in which we incur massive damage to insects, wildlife, and humans paired with an increase in resistance and lack of benefit to crops, it is essential that the the Office of Pesticide Programs act now to take a different approach.

Last year, beekeepers in the United States were faced with an average loss of 42% of their hives. For many who work close to pesticide intensive farming practices, the losses have often been much higher—often 70-95%. This devastatingly high rate is in stark contrast to the normal seasonal losses of 10-15% that are still enjoyed by those who forage on pesticide-free wild lands or open range. Between 1992 and 2014 (the last year USGS tabulated seed treatment uses of neonicotinoids), U.S. agricultural landscapes became 48 times more toxic to pollinators, with neonicotinoids accounting for 99% of that increase in oral toxicity. In fact, the industry of supplying replacement bees to U.S. beekeepers has become a vital element in American apiculture. Beekeeping in the U.S. is on life support.

Science solidly links our current “Insect Apocalypse” to the widespread adoption of systemic pesticides categorized as neonicotinoids. This great body of evidence has sparked many regulatory agencies to greatly curtail use of or completely ban neonicotinoids, as in the European Union. In the United States, the regulatory authority within the The Environmental Protection Agency (EPA), continues to sit on its hands. The beekeeping industry’s experience with EPA is one of dysfunction, conflict of interest and inappropriate testing practices. The EPA has made conscious policy choices to approve the use of neonicotinoid-based pesticides despite the known

fatal effects on pollinators. These policy choices have been economically devastating to us as beekeepers.

The famous naturalist John Muir wrote in 1869, “when we try to pick out anything by itself we find that it is bound fast by a thousand invisible cords that cannot be broken, to everything in the universe.” We like to use the analogy that pollinators such as honeybees are the modern day “canary in the coal mine” of pesticide intensive agriculture.

The mission of EPA is to protect human health and the environment. We currently we face a veritable avalanche of scientific evidence which include studies conducted by the EPA, showing a clear pattern of negative and dangerous impacts by pesticides on organisms throughout the entire food web. This is especially egregious considering that that many of these dangerous pesticides offer negligible benefits to farmers. The EPA has been well aware of this for years, as clearly evidenced by the Agency’s own study published almost a decade ago which “...concludes that these seed treatments provide negligible overall benefits to soybean production in most situations.” <https://www.federalregister.gov/d/2014-30089>. EPA cannot be true to its mission by only addressing lawsuits and action driven by court order. The EPA cannot expect to make progress without significant changes to their own procedures. It is critical that the EPA utilize Adverse Outcome Pathways and risk-benefit analysis in order to make accurate assessments of registered pesticides (LaLone et al, 2019). The current approach to decision making which balances profit of industry with conservation/protection policies is a dereliction of the EPA’s duty and responsibility to protect the environment and wildlife. Beekeepers are a crucial component of our food system and they must be protected now.

Sincerely,

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