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September 23, 2024

Mr. Brian Anderson
OCSPP-OPP-EFED-IO (7507M)
U.S. Environmental Protection Agency
USEPA William Jefferson Clinton East Building (WJC East)
1200 Pennsylvania Ave., N.W.
Washington, DC 20460

Submitted electronically via Federal eRulemaking Portal

RE: Draft Insecticide Strategy to Reduce Exposure of Federally Listed Endangered and Threatened Species and Designated Critical Habitats from the Use of Conventional Agricultural Insecticides (EPA-HQ-OPP-2024-0299)

Dear Mr. Anderson,

The Entomological Society of America (ESA) is the largest organization in the world serving the professional and scientific needs of entomologists and individuals in related disciplines. Founded in 1889, ESA has nearly 7,000 members affiliated with educational institutions, science agencies, private industry, and government. Please accept the following comments submitted on behalf of the ESA in response to Draft Insecticide Strategy released on July 25, 2024, for a 60-day public comment period by the U.S. Environmental Protection Agency (EPA).

ESA appreciates the opportunity to comment on this important proposal and respects the work proposed, seeking to support the interests of protecting endangered species while also being mindful of the needs of agricultural producers. The EPA has a federally legislated responsibility under the Federal Insecticide, Fungicide, Rodenticide Act (FIFRA) and the Endangered Species Act to ensure that pesticide registrations do not jeopardize the existence of threatened or endangered non-target species or cause the destruction or adverse modification of critical habitats.

This is a task of overwhelming volume, including reviews of potential effects for 850 U.S. listed species, including 29 moth and butterfly species, and 21 other species of insects. Each review with recommendations must include an extensive evaluation to determine potential risks and recommendations for mitigation at a landscape or ecosystem scale. Multiply this by several thousands to comprehensively cover all potential combinations of active ingredients, plus affected species and habitats, and that is a tremendous amount of data. Additionally, all reviews must include pesticide type, active ingredients, use site, application method, geographic or ecological location, and more.

With this draft insecticide strategy, the EPA has made an important first step to address this enormous undertaking, and ESA commends the agency's proposal to find a way forward that is not highly labor intensive. This insecticide strategy includes the 48 contiguous states, and ESA appreciates that Hawaii will receive a separate strategy, given the high number of listed species found uniquely on those islands. ESA also supports future consideration for Alaska and other territories end encourages EPA to consider

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approaches for non-agricultural systems including nurseries and ornamental production, urban landscapes, forests, and rangeland for grazing. ESA also recognizes that, while estuarial and littoral habitats are not addressed in the scope of this strategy, the National Marine Fisheries Service conducts a "programmatic consultation." Furthermore, it is ESA's understanding that the EPA's herbicide strategy document has additional details concerning mitigation of risk for nonagricultural plant species and their potential pest and pollinator species. ESA appreciates the complexity of these issues and EPA's efforts to consider routes of exposure such as drift, runoff, erosion, and bioaccumulation to some degree, and ESA encourages consideration of abraded seed dust-off as well.

The EPA Draft Insecticide Strategy consists of a three-step framework. Step one "establishes the potential for population-level impacts," and identification of "population level impacts that may need mitigation." Step two "identifies levels of mitigations needed to reduce spray drift/runoff/erosion." Step three "identifies where in the contiguous U.S. the mitigations identified in step two would apply." It is to the EPA's credit that this approach, with these refinements, "consider concepts such as variability in exposure across geography, usage, and differences in listed species impacts and habitats," and "minimize the need for pesticide restrictions in situations that do not benefit the species."

The two critical features of this strategy are the determination of the potential for population-level impacts and the subsequent implementation of mitigation measures. From ESA's perspective, the mitigation measures are less of a concern than the impact determinations. The draft strategy presents a mixed bag of conservation measures, some of which are reasonable and feasible but in other instances may not be. For example, the buffer areas that make sense for herbicides can create a refuge for arthropod pests such as stink bugs that will reinfest the crop. While the EPA has provided a list of mitigations to give growers options, the underlying exposure values need to be accurate. Unrealistic, inaccurate exposure values will necessarily result in unrealistic and unachievable mitigation measures. The strategy also does not seem to address the issue of multiple exposures of pesticides over time or exposures to multiple pesticides at one time, which is known to be a frequent occurrence in the field.

The strategy uses Magnitude of Difference (MoD), the ratio of exposure to toxicity, as one of the main parameters for determining environmental impact. It is not clear if MoD takes adequate account of environmental degradation of pesticide residues over time or whether this reflects daily risk differences, e.g., if a product is applied during a period of the day when pollinators are not present (at night) versus during the day. For example, the strategy states that it will use a standard farm pond as a proxy for rivers and streams and recognizes that this established model will grossly overestimate exposure. The strategy mentions numerous times that the standard models tend to significantly overestimate risk, by as much as several orders of magnitude in some cases. These evaluations must consider many species in potentially complex agroecosystems. This can potentially require many models and evaluations to describe exposure under all the potential relationships in the total system. If every evaluation is very conservative, the result may overestimate environmental impact by as much as several orders of magnitude. Indeed, it may overestimate the environmental impacts of exposure while simultaneously under-estimating the impacts of chronic exposure to multiple chemistries over time.

Mitigation recommendations based on conservative MoD determinations would be especially problematic. Unnecessarily wide spray buffer zones will reduce area-wide treatment efficacy. Reducing or restricting active ingredient application rates due to inappropriate exposure impact evaluations may

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create pest refuge areas that would be a source of constant reinfestation of pests, reducing efficacy and contributing to the selection of resistant pest populations due to exposure to sub-lethal doses. Reduced rates may necessitate repeat applications, further extending and exacerbating sublethal exposure and increasing the risk of resistance. Additionally, the spray buffers and management guides may be so confusing and onerous to farmers that the products go out of pest control rotation and instead other chemistries are used, which can discourage the new development of pesticides for specific crop usage.

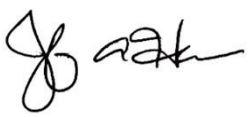
One additional consideration is that the strategy does not include post-registration monitoring, which is important in any pesticide mitigation effort. ESA encourages the EPA to consider how it will know if this work is effective at reducing pesticide load in the environment if there isn't a longer focus to track pesticide use. The EPA should develop a strategy to monitor for pesticides in the pollen and nectar of plants or other materials to determine how pesticide reduction efforts are impacting insect life. This draft strategy represents a good opportunity to incorporate this oversight into evaluations. Additionally, we encourage EPA to consider including recommendations that all states track daily pesticide applications from agriculture, not just California.

The EPA has made a promising start with this draft strategy. The agency must continue to work with key stakeholders in a transparent dialogue to better define, improve, and simplify relevant and practical modeling and mitigation methodologies. EPA should recognize the best practices already in place in agricultural systems, considering requirements for pesticide use, pesticide application licenses, the work of crop consultants, etc. All these systems already contribute to best practices in the use of insecticides. In consultation with other stakeholders from the entomological community to help inform this response, a repeated concern that arose is how the EPA will connect with the appropriate audiences to build awareness of the changes, whatever the final version entails, as well as better awareness and training around Bulletins Live Two! and support for education of extension professionals, crop consultants, and Pesticide Safety Education Programs.

ESA may be uniquely poised to help with these efforts and welcome opportunities to partner with the EPA to support the agency's efforts at education and outreach. Additionally, it is noted in the strategy that the EPA may need more species experts, and ESA can bring other subject matter experts to the table for a larger conversation with the EPA on species and alternative surrogates to honey bees for terrestrial arthropod toxicity testing. Certainly, we all want the same outcome, protecting endangered species while balancing the needs of America's growers, livestock producers, and public health.

If you have additional questions, please don't hesitate to contact Erin Cadwalader, Ph.D., ESA Director of Strategic Leadership and Policy, at ecadwalader@entsoc.org. Thank you again for the opportunity to contribute feedback on this strategy.

Best Regards,



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