

March 22, 2019

Comments in Support of Senate Bill 853

Aimee Code, Pesticide Program Director
The Xerces Society for Invertebrate Conservation

The Xerces Society for Invertebrate Conservation (Xerces Society) is pleased to support Senate Bill 853. As an organization that works directly with conventional farmers, we are well versed in the importance of balancing pest management strategies and environmental protections.

SB 853 strikes that balance by protecting pollinators and other beneficial insects from a subset of concerning insecticides without unduly limiting pest management options for professionals. More specifically, SB 853 ensures that trained professionals oversee use of long-lived and toxic neonicotinoids. The bill also follows the recommendations of U.S. Environmental Protection Agency (EPA) scientists by removing chlorpyrifos from use.

Healthy and Diverse Insect Populations are Essential to Oregon's Agricultural Sector

Along with managed European honey bees, Oregon is home to an estimated 600 species of native bees. Honey bees and native bees jointly provide Oregon agriculture with an estimated \$600 million in pollination services annually. The value of honey bees is well documented and research has begun to document the importance of native bees. For example, researchers found that wild bees trip over 80% of alfalfa flowers visited; while the managed leafcutter and honey bees trip only 25% (Brunet and Stewart 2010).

Pollinators are in Decline

A recent global analysis found that 40% of pollinator species may be at risk of extinction in the coming years (IPBES 2016). The drivers of pollinator decline, as identified by years of research, include habitat loss, disease, climate change and pesticide use. While little is known about the health of the hundreds of solitary bee species found in Oregon, many of the native bumble bee species found here are imperiled including *Bombus fervidus*, *Bombus caliginosus*, *Bombus suckleyi*, *Bombus morrisoni*, *Bombus occidentalis* and *Bombus franklini*. Managed honey bees also suffer significant losses each year. Jointly, these pollinator declines create challenges for the many crops that depend upon insect pollination.

Neonicotinoids Pose Risks to Pollinators and other Beneficial Insects

Neonicotinoids are the most widely used group of insecticides in the world—and have been for over a decade. The impact of this class of insecticides on pollinating insects such as honey bees and native bees is a cause for concern. Because they are systemic chemicals absorbed into the

plant, neonicotinoids can be present in pollen and nectar, making the plants toxic to pollinators that feed on them. The long-lasting presence of neonicotinoids in plants, although useful from a pest management standpoint, makes it possible for these chemicals to harm pollinators even when the initial application is made outside of the bloom period. In addition, depending on the compound, rate, and method of application, neonicotinoids can persist in soil and in plants for very long periods of time. (For extensive reviews of research into neonicotinoids see: Blacquièrè et al 2012, Wood and Goulson 2017, and Simon-Delso et al, 2015).

SB 853 does not remove these insecticides from the market, it simply ensures that licensed applicators oversee their use. That means farmers and other industries that rely on insecticides will still have these chemicals available, as long as key staff are licensed. Backyard gardeners will have to use available alternative products or practices. Major home pesticide manufacturers, such as Scotts, are already removing neonicotinoids from their products.

SB 853 is complemented by the state's pollinator protection efforts as licensed applicators that use neonicotinoids should receive training to avoid causing harm. *"Oregon Department of Agriculture (ODA) awards core pesticide recertification credits for training on how to safely apply pesticides around pollinating bees. These credits are necessary for pesticide applicators seeking to maintain several types of pesticide applicator licenses. People seeking to obtain certain types of pesticide applicator licenses are additionally required to study pollinator protection information and are tested on their comprehension."* (Oregon Bee Project p 11).

The Risks of Chlorpyrifos Warrant its Removal from the Market

Guided by the findings of federal agencies, Oregon should ban the use of chlorpyrifos. The U.S. Environmental Protection Agency (EPA) was poised to ban all food uses of chlorpyrifos, but before the ban was imposed Administrator Pruitt cancelled the proposal. His action came despite years of research showing how low levels of the chemical affect childhood brain development. A 2016 assessment by EPA found no known safe level for human exposure. Fish and wildlife are also at risk from the use of this insecticide. A Biological Evaluation completed by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, in conjunction with EPA, found that chlorpyrifos is likely to adversely affect 97% of all species listed under the Endangered Species Act.

SB 853 follows the guidance from federal scientists and bans chlorpyrifos, a chemical with years of research demonstrating severe and irreversible harm to human health and the environment.

For these reasons, the Xerces Society supports SB 853.

Thank you.

Background on the Xerces Society

The Xerces Society is an international nonprofit organization that protects wildlife through the conservation of invertebrates and their habitat. We are based in Oregon and have offices throughout the United States. The Xerces Society is a global leader in pollinator conservation. With more than 30 staff working on pollinator conservation issues, Xerces has the largest pollinator conservation team worldwide. The Society's work is based on the latest science and is increasingly recognized as the standard for pollinator conservation by organizations such as the United Nations Food and Agriculture Organization, the U.S. Department of Agriculture's Natural Resources Conservation Service, the organic and natural foods industry, and farmers and farm organizations across the United States and abroad.

References

Blacquière, T., Smagghe, G., van Gestel, C. A. M., & Mommaerts. 2012. Neonicotinoids in bees: a review on concentrations, side-effects and risk assessment. *Ecotoxicology*, 21(4), 973–992.

Brunet, J., C.M. Stewart. 2010. Impact of Bee Species and Plant Density on Alfalfa Pollination and Potential for Gene Flow. *Psyche*, vol. 2010, Article ID 201858. doi:10.1155/2010/201858.

EPA. 2016. Chlorpyrifos: Revised Human Health Risk Assessment for Registration Review. Available at: <https://www.regulations.gov/document?D=EPA-HQ-OPP-2015-0653-0454> (accessed March 21, 2019).

EPA. 2016. Biological Evaluation Chapters for Chlorpyrifos. Available at: <https://www.epa.gov/endangered-species/biological-evaluation-chapters-chlorpyrifos-esa-assessment> (accessed March 22, 2019).

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). 2016. The assessment report of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services on pollinators, pollination and food production. S. G. Potts, V. L. Imperatriz-Fonseca, and H. T. Ngo, eds. *Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*, Bonn, Germany. 552 pages.

The Oregon Bee Project Strategic Plan. 2018. Available at: <https://www.oregon.gov/ODA/programs/Pesticides/Documents/OregonBeeProjectStrategicPlan.pdf> (accessed March 22, 2019).

Simon-Delso, N., Amaral-Rogers, V., Belzunces, L. P., Bonmatin, J. M., Chagnon, M., Downs, C., Wiemers, M. 2015. Systemic insecticides (neonicotinoids and fipronil): trends, uses, mode of action and metabolites. *Environmental Science and Pollution Research International*, 22(1), 5–34.

Wood, T. J., & Goulson, D. 2017. The environmental risks of neonicotinoid pesticides: a review of the evidence post 2013. *Environmental Science and Pollution Research International*, 24(21), 17285–17325.