

March 25, 2019

Senate Environment and Natural Resources Committee  
Oregon State Legislature  
900 Court Street, NE  
Salem, Oregon 97301

**RE: SB 853, Relating to pesticides**

Dear Honorable Members of the Committee Environment and Natural Resources,

On behalf of Pesticide Action Network (PAN) North America and our 2,880 members in Oregon, I am writing to urge your support for SB853, which would prohibit the sale, purchase or use the toxic pesticide chlorpyrifos and list neonicotinoid pesticides as restricted use. This bill is a necessary step to protect public health, the environment and the food system in Oregon.

PAN is a national public interest group dedicated to promoting healthy and sustainable agriculture that is not reliant on hazardous pesticides. We are part of a global network that was established in 1982.

Chlorpyrifos is an organophosphate pesticide which was banned from residential use 18 years ago to protect children's developing nervous systems — yet agricultural uses were allowed to continue. The health harms of chlorpyrifos are very significant and the legislature must act expeditiously to protect the people of Oregon, especially children, from continued harm caused by chlorpyrifos exposure. Substantial research has shown that:

- Prenatal exposures to chlorpyrifos are associated with long-lasting effects, including poorer perceptual reasoning,<sup>1</sup> working memory<sup>2</sup> and intellectual development at seven years age.<sup>3</sup> One study linked prenatal exposure to a seven-point reduction in IQ by age seven<sup>4</sup> and another found that even very low levels of chlorpyrifos residues in cord blood resulted in lower IQ and reduced working memory.<sup>5</sup>
- A 2014 study from the University of California, Davis, found that pregnant women who lived up to a mile from fields treated with chlorpyrifos were 3.3 times more likely to have children with autism.<sup>6</sup>
- Chlorpyrifos is a suspected hormone-disrupting compound. Dietary exposure to organophosphate pesticides like chlorpyrifos, at levels common among U.S. children may also contribute to Attention Deficit Hyperactivity Disorder (ADHD).<sup>7</sup>

- Exposure also result from eating food contaminated with chlorpyrifos residues. Children eating conventionally produced foods have higher levels of chlorpyrifos in their bodies than children eating a primarily organic diet.<sup>8</sup>
- In 2016, the U.S. Environmental Protection Agency also concluded that chlorpyrifos residues put children at high risk, finding that for children 1–2 years of age, exposures from food exceed the EPA’s safety threshold by 140 times.<sup>9</sup>

In the last several years, neonicotinoid pesticides (neonics) — both alone and in combination with other pesticides — have emerged as a key catalyst behind recent dramatic declines in pollinator populations, both because of their direct toxicity to bees and their indirect and cascading effects.

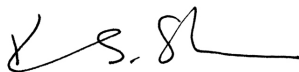
Even at low doses, neonics can cause harm to honey bee health over time. Impacts<sup>10</sup> include:

- Compromised immune response
- Shortened adult life cycles
- Impaired memory and learning
- Reduced social communication (reduces foraging efficacy)
- Disorientation, which also impairs foraging
- Delayed larval development and disrupted brood cycle
- “Gut” microbe disruption, leading to malnutrition

To help address these problems, PAN is joining public health advocates, farmworkers, environmentalists and concerned citizens across Oregon in supporting SB853, which would ban chlorpyrifos and direct the Department of Agriculture to list neonics as restricted use. This bill would help protect health, the environment and food system, and we strongly urge you to support it.

Children, farmworkers, rural communities and our fragile ecosystems can’t wait any longer for these needed protections.

Sincerely,



Kristin S. Schafer  
Executive Director

<sup>1</sup> Engel SM, Wetmur J, Chen J, Zhu C, Barr DB, Canfield RL, et al. 2011. Prenatal Exposure to Organophosphates, Paraoxonase 1, and Cognitive Development in Childhood. *Env. Health Perspect.* 119:1182- 1188. doi:10.1289/ehp.1003183

<sup>2</sup> Rauh VA, Arunajadai S, Horton M, Perera F, Hoepner L, Barr DB, Whyatt R. Seven-year neurodevelopmental scores and prenatal exposure to chlorpyrifos, a common agricultural pesticide. *Environ Health Perspect.* 2011 Aug;119(8):1196-201.

3 Bouchard MF, Chevrier J, Harley KG, Kogut K, Vedar M, Calderon N, et al. 2011. Prenatal Exposure to Organophosphate Pesticides and IQ in 7-Year-Old Children. *Env. Health Perspect.* 119:1189-1195. doi:10.1289/ehp.1003185

4 Gunier RB, Bradman A, Harley KG, Kogut K, Eskenazi B. Prenatal Residential Proximity to Agricultural Pesticide Use and IQ in 7-Year-Old Children. *Environ Health Perspect.* 2017;125(5):057002 10.1289/EHP504

5 Rauh VA, Garfinkel R, Perera FP, et al. 2006. Impact of prenatal chlorpyrifos exposure on neuro-development in the first 3 years of life among inner-city children. *Pediatrics* 118(6). Available at [www.pediatrics.org/cgi/content/full/118/6/e1845](http://www.pediatrics.org/cgi/content/full/118/6/e1845)

6 Shelton JF, Geraghty EM, Tancredi DJ, Delwiche LD, Schmidt RJ, Ritz B, Hansen RL, Hertz-Picciotto I. Neurodevelopmental disorders and prenatal residential proximity to agricultural pesticides: the CHARGE study. *Environ Health Perspect.* 2014 Oct;122(10):1103-9

7 Bouchard MF et al. 2010. Attention-deficit/hyperactivity disorder and urinary metabolites of organophosphate pesticides. *Pediatrics* 125:e1270. (<http://dx.doi.org/10.1542/peds.2009-3058>)

8 Bradman, Asa, Lesliam Quirós-Alcalá, Rosemary Castorina, Raul Aguilar Schall, Jose Camacho, Nina T. Holland, et al. Effect of Organic Diet Intervention on Pesticide Exposures in Young Children Living in Low-Income Urban and Agricultural Communities. *Env. Health Perspect.* 123, no. 10 (April 10, 2015). doi:10.1289/ehp.1408660.

9 Office of Chemical Safety and Pollution Prevention, U.S. EPA Memorandum, Chlorpyrifos: Revised Human Health Risk Assessment for Registration Review, p. 6, November 3, 2016. Available at <https://www.regulations.gov/document?D=EPA-HQ-OPP-2015-0653-0454>

10 Pesticide Action Network. Issue brief: "Bees & Pesticides: Science Update," August 2015.