Testimony in Support of LD 316: An Act To Prohibit the Use of Chlorpyrifos

Anya Fetcher, Environment Maine State Director, March 2, 2021

Senator Dill, Representative O'Neil, and members of the Joint Committee on Agriculture, Conservation and Forestry, thank you for allowing me to testify in support of LD 316: An Act To Prohibit the Use of Chlorpyrifos. My name is Anya Fetcher, I'm the state director of Environment Maine, a citizen-based environmental advocacy organization that works to protect clean air, clean water, and open space.

It is time to ban chlorpyrifos in Maine. Chlorpyrifos is an insecticide that is widely used in agriculture throughout the United States, including spraying 5,000 pounds every year in Maine.

In 2016, the EPA found that infants, children, young girls and women are exposed to dangerous levels of chlorpyrifos through the food they eat, and that children eat up to 140 times the safety limit throughout their lifetimes.[1] More than half of all apples and broccoli in the US are sprayed with chlorpyrifos,[2] two of the top crops grown in Maine, and go-to healthy snacks for children.

Even low-level exposure can cause developmental delays, brain damage and behavioral problems in children. This insecticide belongs to a class of chemicals called organophosphates, which includes now outlawed chemicals like sarin gas that were used in WWI as neurotoxins. While chlorpyrifos is most harmful to developing humans, people of all ages can suffer from nausea, dizziness, and convulsions from acute exposure.[3] Evidence of these harmful effects were witnessed in California in 2017, when several workers were hospitalized from exposure and dozens more sought medical attention.[4]

Not only is chlorpyrifos threatening public health, it's also damaging our environment and wildlife, putting more than 1,700 species of plants and animals at risk.[5] In January 2017, the EPA released its first rigorous nationwide analysis of the effects of pesticides on endangered species, finding that 97 percent of the more than 1,800 animals and plants protected under the Endangered Species Act are likely to be harmed by malathion and chlorpyrifos, including more than 100 listed bird species, fish, aquatic invertebrates, insects, and crustaceans.

Independent research underscores chlorpyrifos is especially harmful to pollinators. According to a 2014 study, chlorpyrifos is second only to neonicotinoids[6] as a risk to bees (third highest total, after two different types of neonics). Another 2014 study found that chlorpyrifos at hive-residue levels more than

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[1] CCCEH Team, "April 30, 2012: Prenatal Exposure to the Insecticide Chlorpyrifos Linked to Alterations in Brain Structure and Cognition," Columbia Center for Children's Environmental Health, April 30, 2012.
[2] https://theintercept.com/2017/01/14/dow-chemical-wants-farmers-to-keep-using-a-pesticide-linked-to-autism-and-adhd/
[3] Virginia A. Rauh, et al., "Brain anomalies in children exposed prenatally to a common organophosphate pesticide," PNAS, April 30, 2012.
[4] Xindi Hu, "The Most Widely Used Pesticide, One Year Later," Harvard University Science in the News, April 17, 2018.
[5] Emily WIllingham, "What We Know About Chlorpyrifos, The Pesticide The EPA Thinks Is Bad But Won't Ban," Forbes, March 31, 2017.
[6] Wanyi Zhu, et al., "Four Common Pesticides, Their Mixtures and a Formulation Solvent in the Hive Environment Have High Oral Toxicity to Honey Bee Larvae" PLoS One, January 8, 2014.

doubled larval mortality compared to untreated larvae [Zhu et al., 2014]. A ground-breaking peer-reviewed field study showed that not only does chlorpyrifos cause colony threatening brain damage to honeybees, but it does so at the sub-lethal concentrations found in the majority of fields sprayed as directed by the manufacturer.[7] Chlorpyrifos can damage the learning and memory of bees that are exposed.[8] We rely on both honeybees and Maine's 270 species of native bees to pollinate our food and help keep our ecosystems rich and thriving. We need them, and need to stop poisoning them with toxic pesticides.

Despite evidence of detrimental effects on our health and environment, agricultural use of chlorpyrifos is still commonly practiced. According to the USDA, chlorpyrifos is used on common crops that families consume daily, such as wheat, apples, broccoli, corn, citrus fruits, strawberries, and more. USDA's Pesticide Data Program reports chlorpyrifos residues on produce even after being washed and peeled.[9]

A 2012 study at the University of California at Berkeley found that the chemical's widespread agricultural use has caused it to leach into our water sources, and reported that 87 percent of umbilical-cord blood samples from newborn babies studied contained detectable levels of chlorpyrifos.[10] Chlorpyrifos does not just stay on the farm or on produce—it gets into our water and into our bodies.

In November 2016, EPA scientists reported that residues of chlorpyrifos on food crops exceed the federal safety standards for pesticides and that there are no safe uses for the pesticide.[11] Despite the report from EPA scientists, the EPA has since refused to act. Maine must step in to protect its citizens.

It's 2020 -- we have better methods to grow the food we need. Toxic pesticides that can end up in our bodies and threaten our health and our environment should be banned.

Environment Maine and our members urge the committee to vote in favor of LD 316. Thank you.

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[7] Elodie Urlacher, et al., "Measurements of Chlorpyrifos Levels in Forager Bees and Comparison with Levels that Disrupt Honey Bee Odor-Mediated Learning Under Laboratory Conditions" J Chem Ecol, February 12, 2016

[8] https://pubmed.ncbi.nlm.nih.gov/26872472/

[9] Environmental Working Group, "Pesticides in Produce," https://www.ewg.org/foodnews/summary.php

[10] Karen Huen, et al., "Organophosphate pesticide levels in blood and urine of women and newborns living in an agricultural community," *Environmental Research*, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4309544/

[11] "Updated Human Health Risk Analyses for Chlorpyrifos," Environmental Protection Agency, November 10, 2016.