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Maine Chapter

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To: Senator Jim Dill,
Representative Maggie O'Neil
Joint Legislative Committee on Agriculture, Conservation and Forestry
Re: LD 125
Date: March 2, 2021

Dear Senator Dill, Representative O'Neil and Members of the Committee,

I write as a volunteer on behalf of Sierra Club Maine and our 24,000 members and supporters, one of 64 chapters nationwide with almost 4 million members and supporters. We write to express our strong support for LD 125, *An Act To Prohibit the Aerial Spraying of Glyphosate and Other Synthetic Herbicides for the Purpose of Silviculture*. We do so for many reasons, here are four: the disastrous impact on pollinators, the negative impact on plant material and invertebrates in aquatic environments, the damage caused by monoculture forestry practice to soil carbon sequestration and soil biodiversity and finally due to the impact on mammals including humans.

- 1) Glyphosate and other synthetic herbicides have been proven to be harmful to hymenoptera, various species of bees. In particular, though these chemicals are intended as "weed" killers, the impact is often as pesticides as well. Many studies have shown that the gut bacteria of bees is damaged by Glyphosate as it serves as an antibiotic. The impact on bees is significant enough to disrupt their lifecycle in myriad ways including brood rearing, geolocation and absorption of food. While honeybees are noted as the pollinators of choice for most vegetable foods, Maine's iconic blueberries and apples as well as our cherry orchards are largely pollinated by bumblebees. As a small farmer I depend upon my local population of wild bumble and solitary bees to perform the essential function of early spring pollination. Continued aerial spraying of Glyphosate is likely to be devastating to those animals. <https://www.sierraclub.org/sierra/new-study-shows-roundup-kills-bees>



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2) Glyphosate and other synthetic herbicides reach aquatic environments by being aerial sprayed and by runoff from adjacent targets. The half life of Glyphosate with its formulation compounds is estimated to be between 4 and 91 days, not including uptake in algae and other plant materials. Habitat for essential phytoplankton at the bottom of the food chain is damaged while other bacteria are enhanced. Playing a role in the destruction of Maine's otherwise healthy sports fishery, Aerial Glyphosate spraying can have a devastating impact on our recreational fishing economy as well as essential food sources.

<https://www.intechopen.com/books/biochemical-toxicology-heavy-metals-and-nanomaterials/ecotoxicology-of-glyphosate-based-herbicides-on-aquatic-environment>

3) Aerial Spraying of Glyphosate encourages monoculture and clear cutting, very poor management of forestry, and soil health. Monoculture practices in forestry, and other forms of agriculture, accentuates harm to soil health and causes associated GHG impacts. As we move forward into increasingly challenging climatic times, our forests in Maine can serve as very important carbon sinks and sources of soil health which will carry our forests into the future. Monocultures are inherently problematic as they attract pest invasions, and clear cutting, an aspect of monoculture forestry which causes significant erosion of topsoil, a scarce commodity in much of Maine's forests. Soil erosion is implicated in acidification of our waters resources. Aerial Spraying must stop in favor of best forestry management practices, proven to be not only financially successful but also environmentally sustainable.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4705065/>

4) Human and other mammalian species are significantly impacted by Glyphosate and other aerial pesticides. Glyphosate is a thought to increase susceptibility to cancer. <https://www.sciencedaily.com/releases/2019/02/190214093359.htm>, <https://www.sciencedaily.com/releases/2020/11/201120095858.htm>

It accumulates in plant material such as animal feed, and is reportedly causing gut difficulties in ruminants. Monanto/Bayer are defending themselves in myriad legal liability battles worldwide. Do we really want to allow spraying our forests with a substance that easily can move by wind to unintended locations, putting local residents and animals at risk?



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In Conclusion:

Increasingly it is clear that human manipulation of our environment is putting the entire web of life at risk. We cannot expect to leave the legacy of a survivable planet to our grandchildren and their children if we continue to assault our environment. We must encourage **Best Forestry Management Practices**. For the health of bees, for the health of our water, our soil and mammals including humans, it is high time to ban the aerial spraying of Glyphosate and other synthetic chemicals on our forests. We strongly support LD 125 and urge the ACF Joint Committee to vote in favor.

Respectfully submitted

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