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Statement in Support with Amendments of HB 2679
Oregon House Committee on Climate, Energy, and Environment
March 4, 2025

Honorable Committee Chair Lively and Vice Chairs Gamba and Levy.

We appreciate the opportunity to submit this statement in support, with amendments, of HB 2679. Beyond Pesticides is a national, grassroots, membership organization that represents community-based organizations and a range of people seeking to improve protections from pesticides and promote alternative pest management strategies that reduce or eliminate a reliance on toxic pesticides. Our membership spans the 50 states, the District of Columbia, and groups around the world. We are providing this testimony on behalf of our members and supporters in Oregon.

Beyond Pesticides urges the Climate, Energy, and Environment Committee to not only consider HB 2679, but also further amendments that eliminate all uses of neonicotinoids, including in treated seeds and agricultural applications. The European Union (EU), after suspending use of neonicotinoids on outdoor flowering plants for several years, made the decision to eliminate all outdoor neonicotinoid uses except those in contained greenhouses.[1] The EU's decision is an acknowledgement that there is no safe level of neonicotinoid exposure for foraging bees, butterflies, and other pollinators. Unfortunately, we cannot rely on the U.S. Environmental Protection Agency (EPA) to take reasonable action light of the hazards, so it falls to state legislatures and local governments, where possible, to take action. To that end, we appreciate you taking up this important contamination issue and only ask that you consider broadening the scope of the bill to ensure protection of biodiversity and human health.

The basis for legislative action on neonicotinoid insecticides is supported by a large body of peer-reviewed scientific findings[2] and similar protections have been passed in states such as Nevada, Maine, New Jersey, New York, and Vermont.[3,4] We appreciate the committee's work in identifying the need to improve state safeguards concerning neonicotinoids, hazardous insecticides that harm pollinators, birds, wildlife, and human health, as well as contaminate surface and drinking water. HB 2679 represents a framework for addressing the gaps in protection left by the EPA that begins to tackle resident safety and ecological stability in the state.

The science on the dangers that neonicotinoids pose to pollinators and other wildlife is clear, yet federal agencies have not acted substantively. (Please see sections below on human and

ecological adverse effects.) Because neonicotinoids are systemic pesticides, the chemical moves through the vascular system of the plant and is expressed through the plant's pollen, nectar, and guttation droplets, causing indiscriminate poisoning to foraging pollinators and insects generally. The chemical effectively turns the plant into a delivery vehicle for poison. Therefore, to the extent that this chemical is left on the market in Oregon, whether restricted use or not, it is being indiscriminately spread in the environment.

Proposed Amendments to HB 2679

We appreciate that the proposed legislation stops the application of neonicotinoids on residential properties. However, there are several loopholes that subject nontarget insects to poisoning. **These limitations in the legislation should be corrected with amendments that prohibit:**

1. **Production and/or sale of plants treated with neonicotinoids, either applied to the plant or through a treated seed.** The bill allows poisoned plants to be sold in the state, permitting unsuspecting consumers to purchase and plant ornamental plants, trees, or vegetation containing neonicotinoids in their vascular system and then expressing them through pollen, nectar, and guttation droplets.

2. **Use, sale, and production of neonicotinoid treated seeds.** The bill allows seeds treated with neonicotinoids to be sold to consumers, resulting in the contamination of soil and poisoning of nontarget insects.

3. **Use of neonicotinoids around the foundation of homes and buildings.** The bill allows the application of neonicotinoids around the foundations of houses and buildings, which indiscriminately expose any insects, including pollinators, foraging or pollinating any of ornamental plants, trees, or vegetation around those buildings.

4. **All uses, including "restricted uses," of neonicotinoid insecticides.** The continued use of neonicotinoids, whether general or restricted use, will continue the apocalyptic threat to pollinators and insects that is now ongoing.[5,6] Therefore, all references to "restricted use" should be deleted from the bill and the section should read: '(3) Except as provided in subsections (4) and (5) of this SECTION 2.(3), a person may not apply a neonicotinoid pesticide, sell a neonicotinoid treated plant, or produce a neonicotinoid treated seed in the state.' This replaces the current language in this section which refers only to "residential landscape."

Alternatives to Neonicotinoids

Eliminating neonicotinoids will not cause major disruptions to the pest management or pest service industry. Pest problems in landscaped areas and in agriculture can be prevented through practices that improve soil health and promote biodiversity and habitat for pest predators. If pest problems do become an issue, a wide range of products, classified either as certified organic or minimum risk under federal law, are available and represent cost-effective alternatives. These chemicals still pose some level of risk to pollinators, and should not be sprayed while they are foraging, but while any pest management substance must be carefully used to eliminate exposure, the neonicotinoids and related compounds and their treatment of

seeds and application in land management present a chronic, systemic hazard that continuously poison pollinators and the surrounding landscape.[7]

In residential and public landscapes and in agriculture, these chemical hazards are not necessary. In terms of the residential environment, one study, published in *Environmental Entomology*, finds that spraying of urban trees disrupts the ability of beneficial species in the landscape to naturally manage pest populations. The authors determined that moderate pest levels both attract and maintain predators that provide critical biological control services in a landscape. "Treating a tree with pesticides could kill off natural enemies that would otherwise help manage nearby pests. In other words, treating a tree with pesticides could alleviate pest problems within the tree but could result in pest outbreaks in shrubs beneath the tree as natural enemies are killed off," said Caleb Wilson, PhD, of Michigan State University.[8]

In agriculture, there are management practices and ecologically compatible substances that result in both productive and profitable outcomes. The Rodale Institute has conducted the longest-running North American field study[9] comparing organic to chemical-intensive grain-cropping and reported in 2022 impressive productivity and profitability benefits, based on four decades of data collection: 1. Organic systems achieve 3–6 times the profit of conventional production; 2. Yields for the organic approach are competitive with those of conventional systems (after a five-year transition period); 3. Organic yields during stressful drought periods are 40% higher than conventional yields; 4. Organic systems leach no toxic compounds into nearby waterways (unlike pesticide-intensive conventional farming; 5. Organic systems use 45% less energy than conventional; and, 6. Organic systems emit 40% less carbon into the atmosphere.

The current crisis requires bold action. We cannot rely on the federal government during these times to offer the protection necessary to meet the health, biodiversity, and climate crises of the day. Debate on HB 2679 requires a commitment to a systems approach on the part of land managers, recognizing the critical importance of soil organisms in the cycling of nutrients and support for resilient crops in agricultural systems and landscapes in the residential context. The introduction of toxic neonicotinoids and related compounds into the seed, soil, and plants is destructive of beneficial insect life and biodiversity, resulting in a cycle of dependency on other pesticides.

Neonicotinoids and Human Health

Neonicotinoids, intended for targeting insects, have been found to affect mammalian nicotinic acetylcholine receptors (nAChRs). These receptors are of critical importance to human brain function, especially during development and for memory, cognition, and behavior.[10] Scientific evidence shows associations between chronic neonicotinoid exposures and adverse developmental outcomes, including neurological effects.[11] Additional studies report that neonicotinoid pesticides impair mammalian reproduction and have developmental effects in mammals including reduced sperm production and function; reduced pregnancy rates; higher rates of embryo death, stillbirth, and premature birth; and reduced weight of offspring.[12,13,14,15]

Neonicotinoid residues are detected in food and water, as well as in breast milk and baby food—jeopardizing the health of growing infants and children.[16,17,18] Children are at a disproportionate risk for adverse health effects, as their small size and developing organ

systems, propensity to crawl and play near the ground, tendency for frequent hand to mouth motion, and greater intake of air and food relative to body weight make them particularly susceptible. Both children and adults are threatened with neonicotinoid exposure, as a wide body of science finds neonicotinoid pesticides suppress natural hormone function, interfere with thyroid functions, disrupt hormone synthesis and metabolism, and adversely affect reproduction and the nervous system.[19,20,21,22]

Independent research has also highlighted a human health hazard that has been ignored: liver damage. A study in the *Journal of Hazardous Materials* found that the widely used neonicotinoid dinotefuran barely metabolizes at all in the body yet is absorbed by the liver and shows up in liver bile, posing a risk to liver health.[23] These health effects demonstrate that the risks to the public are too high for both direct and indirect harm from neonicotinoids. It is paramount that the public's health is safeguarded from unnecessary exposure to these harmful chemicals.

Ecological and Environmental Effects

Pollinators are faring poorly in Oregon, throughout the United States, and around the world. As DDT was the primary factor behind declines in birds of prey, neonicotinoid insecticides are the key component to address in the ongoing decline of pollinator populations, especially in light of habitat loss. Peer-reviewed research shows that neonics are taken up by flowering plants at levels that can harm pollinators on both an acute and chronic, long-term basis.[24] These chemicals have been shown, even at low levels, to impair foraging, navigation, and learning behavior in bees, as well as suppress their immune system, increasing susceptibility to pathogens and disease.[25]

Research finds neonics can alter feeding behaviors and reduce egg development in bumblebee queens, inhibit pollination skills among bumblebee workers, and reduce overall colony size.[26,27,28] This crisis is not limited to pollinators. Beneficial soil-dwelling insects, benthic aquatic insects, grain-eating vertebrates like songbirds, and even mammals, such as deer, are also at risk from neonicotinoids. Data shows neonicotinoids negatively affect amphibians, algae, and farmland birds that threaten biodiversity.[29,30,31] Further, additional studies note that neonics can lead to a decrease in crop yields by killing insects such as pollinators and natural predators of pests.[32] The questionable effectiveness of neonicotinoids, while they also present a threat to nontarget organisms, highlights the need for safer practices that protect all organisms and the environment. Continued use of neonicotinoids presents more risk than benefits. There is no place for neonicotinoids in the environment.

Nondisclosed Ingredients in Imidacloprid Products Are Unacceptable

It should be noted that in allowing the continued use of imidacloprid, the legislature is allowing a formulation of chemicals, which includes a majority of ingredients NOT LISTED on the product label. The Imidacloprid 4F Insecticide label (attached) shows that the "active" ingredient, imidacloprid, makes up 42.3% of the product's ingredients and 57.7% of the product's ingredients are "other ingredients" that are not disclosed to you or the user, but can be biologically and chemically active. In the case of other imidacloprid pesticide products, including those used in landscaping, the percentage of nondisclosed ingredients is even higher. In our view, it is not good public policy, given the inadequacies of the pesticide registration process at

the federal level, to allow the use of products for which full ingredient statements are not disclosed.

Conclusion

While we support the elimination of all uses of neonicotinoids, it must be noted that these chemicals are merely the 'poster children' for broader problems associated with pesticide registration and usage. At a time of cascading and intersecting public health, biodiversity, and climate crises, we must ban chemical classes causing immense harm while also moving toward an approach that incentivizes sustainable practices that do not necessitate the use of these chemicals. We would be happy to work with the committee to achieve these broader health and sustainability goals.

Oregon has the opportunity to reverse pollinator declines caused by neonicotinoid insecticides, while concurrently increasing protections for public health and the wider environment. We urge passage of HB 2679 with our suggested amendments.

Thank you for your consideration of our comments.

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Beyond Pesticides

Endnotes

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Imidacloprid 4F

INSECTICIDE

ACTIVE INGREDIENT	% BY WT.
Imidacloprid; 1-[(6-Chloro-3-pyridinyl)methyl]-*N*-nitro-2-imidazolidinimine	42.3%
OTHER INGREDIENTS:	57.7%
TOTAL	100.0%

Contains 4 lbs. of active ingredient per gallon

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CAUTION

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HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed, absorbed through skin, or inhaled. Avoid contact with skin, eyes, or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

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