



BEYOND PESTICIDES

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**Statement of
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on

HF766

A bill for an act

requiring product stewardship for corn and soybean seed coated
or treated with neonicotinoid pesticide

**Agriculture Finance and Policy Committee
Minnesota House of Representatives**

April 6, 2021

Beyond Pesticides supports HF766 to restrict disposal of neonicotinoid-treated seed. Beyond Pesticides represents beekeepers, community-based groups and a range of people seeking to improve protections from toxic pesticides. Our membership includes residents of Minnesota and spans the 50 states and groups around the world.

In the absence of adequate federal action to safeguard the health and environment of Minnesota, the time is right for the state to take protective action. We sit at a crossroads, where inaction by the state legislature allows the escalation of pesticide contamination and poisoning problems—at time when we could be utilizing productive sustainable practices and materials that support the living ecosystems we depend on for life. **We urge the committee to include HF766 in the Agriculture Omnibus Finance Bill under consideration.**

Context of the contamination of Mead, Nebraska

The prevalence of the use of seed coatings in chemical agriculture has increased over the last several decades, as the pesticide industry works to increase product sales by exploiting a loophole in federal pesticide law. Under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), a clause known as the “treated article exemption” permits seeds to be coated with highly toxic pesticides without any requirement for the U.S. Environmental Protection Agency (EPA) to assess environmental or public health effects of their use. This allows hazardous pesticides (primarily insecticides and fungicides) to be used indiscriminately with no effective oversight. Research finds that over 150 million acres of farmland are planted with toxic seeds, including nearly four tons of bee-killing neonicotinoids each year.

The AltEn plant accepts unused treated seeds for farmers, advertising the site as a “recycling” facility, according to news reports. Apart from biofuel production, ethanol plants usually sell their spent, fermented grains to livestock farmers for feed. Processing toxic seeds has made

that product too hazardous for cattle, so AltEn has been selling it to farmers as a soil amendment.

The concentration of hazardous pesticides in the production process has resulted in widespread contamination of spent grains. After numerous complaints, the state prohibited AltEn from selling the grains. In response, the company has piled it up around the plant, allowing it to leach into groundwater and spill out of storage ponds into nearby streams. The neonicotinoid clothianidin was found in a waste mound at an astounding 427,000 parts per billion (ppb). A wastewater storage pond was found to have high levels of three neonicotinoids—imidacloprid, clothianidin, and thiamethoxam. Thiamethoxam was discovered at 24,000 ppb, over 300 times higher than its acceptable level in drinking water (70ppb), and roughly 1,300 times higher than the level considered safe for aquatic organisms by EPA (17.5ppb).

Despite the obvious dangers posed by the plant, local residents in Mead have had difficulty getting their voices heard. “I’ve emailed the EPA, water, parks and conservation people, pretty much anybody I could think of,” said Jody Weible, chairwoman of the Mead planning commission to the *The Guardian*. “They all say there is nothing they think they can do about it.” Reporting indicates that state regulators have yet to conduct testing of soil and water near the plant.

Expectedly, pollinators near the plant are dying off. Judy Wu-Smart, PhD, bee researcher at University of Nebraska documented a sustained collapse of every beehive used by the university for a research project on a farm within a mile of the AltEn plant. “There is a red flag here. The bees are just a bio-indicator of something seriously going wrong,” Dr. Wu-Smart told the *Guardian*. She further indicated an “urgent need to examine potential impacts on local communities and wildlife.”

Advocates have challenged the “treated article exemption” used by EPA to forgo regulation of treated seeds, but were rebuffed by the courts in deference to the agency. In response, the Center for Food Safety initiated a formal legal petition requesting EPA regulate the use of toxic seed coatings. The previous administration did not respond to the petition, leaving the determination up to the new administration.

Beyond frustrations over the lack of regulation and inherent hazard treated seeds pose, is the simple fact that agriculture’s dependency on these toxic materials are not yielding the expected return. Multiple studies have found toxic seeds offer “little to zero net benefit to most cases.” (See “Neonicotinoid seed treatments of soybean provide negligible benefits to U.S. farmers,” *Scientific Reports*, September 9, 2019.)

Despite the fact that many farmers do not know exactly what is on the seeds that they are planting, pressure on conventional producers to use these products is often intense, and can come from peers, neighboring farms, pesticide dealers, and insurance salesmen. The actions taken by AltEn, and the subsequent hazardous environment that the residents of Mead must now endure, would not occur with improved restrictions.

Hazards of neonicotinoids.

The hazards of neonicotinoids are well-known. The impacts these chemicals have on birds (a single kernel of neonic-coated corn is enough to kill a songbird), honey bees, wild pollinators, and other beneficial organisms are clear and has been well-researched. Large-scale use of neonicotinoids can also alter and harm aquatic communities. Aquatic invertebrates, which play an important role in ecological diversity, are especially susceptible—neonicotinoids can exert adverse effects on survival, growth, emergence, mobility, and behavior of many sensitive aquatic invertebrate taxa.

There is widespread consensus in the scientific community that pesticides are having a devastating effect on the sustainability of pollinator populations. A systematic review of insect declines worldwide finds pollinators, and insects as a whole, in dire trouble. Research findings across several studies confirm that agricultural intensification, pesticide use, and in particular, the spread of systemic insecticides, are the main drivers for ongoing mass pollinator declines. (See “Worldwide decline of the entomofauna: A review of its drivers,” *Biological Conservation*, 2019, 232:8-27).

Multiple studies have confirmed that the levels of neonicotinoid pesticides that bees encounter in the environment are toxic enough to impair foraging, navigational, and learning behaviors, as well as suppress immune responses. A contamination like that in Mead only exacerbates the situation. These individual impacts are compounded at the level of social colonies, weakening collective resistance to common parasites, pathogens other pesticides, thus leading to colony losses and mass population declines. In 2018, more than two hundred scientists co-authored a “Call to restrict neonicotinoids” on the basis of the bulk of evidence implicating neonicotinoids in mass pollinator and beneficial insect declines.

In the early 2000s, Colony Collapse Disorder (CCD) brought national attention to increased honey bee colony losses. During the same period that CCD and colony losses spiked, neonicotinoid prevalence skyrocketed, in large part due to the introduction of seed-delivered technologies. As of 2011, 34-44% of soybeans and 79-100% of maize hectares were preemptively treated with neonicotinoids. Colony loss rates (and systemic insecticide use) remain high. A 2018 national survey indicates that U.S. beekeepers currently experience an average annual colony mortality rate of 30.7%, double the pre-CCD baseline of 15% losses.

Native pollinators are similarly threatened by increased use of systemic insecticides. Recent studies of wild and managed pollinators in the field have shown significant colony and population declines as a direct result of neonicotinoid crop treatment and intensified pesticide use. A 2008-2013 study of wild bee populations across various land types in the U.S. found the greatest declines in regions of concentrated corn production, with the tripling of neonicotinoid use in maize. Wild bee populations are declining by more than 30% in the U.S. corn belt, where neonicotinoid use is by now ubiquitous. A 23% decline in California butterfly species documented over the last few decades began sharply following the introduction of neonicotinoids to the state in 1995.

Conclusion

As you may know, deer populations throughout Minnesota are contaminated with neonicotinoid insecticides, according to preliminary results published earlier this month by the Minnesota Department of Natural Resources (MDNR). While neonicotinoids are mostly known for contributing to the decline of pollinator populations, the complexity of effects, including those associated with disposal, raise serious public health and environmental concerns that are not evaluated by EPA or state regulators.

In order to reverse the harm these chemicals are doing to the natural world, restrictions such as those contained in HF766 are important. Canada and the European Union have banned the neonicotinoids completely, while a handful of U.S. states —Vermont, Maryland, Connecticut, and Massachusetts—have imposed restrictions on consumer use.

It is past time to have a broader conversation on taking action to assist farmers in moving to sustainable organic practices that eliminate hazards from production, use, and disposal. HF766 starts that process.

Thank you for consideration.