## 13. State Maintains Loophole Allowing Enormous Pesticide Use to Go Unregulated



Photo: Neonic coated seed, USDA-NRCS/Lance Cheung

## **Issues:**

Neonicotinoids, or "neonics", are a class of neurotoxic insecticide used all over Minnesota, from lawns to corn fields. Neonics are best known as a leading cause of pollinator declines, with their expanding use primarily responsible for making U.S. industrial agriculture nearly 48-times more toxic to insects than 25 years ago. But that's not all:

- Birds commonly eat neonic-coated seeds, and a review of 200 studies concluded that eating a single seed treated with neonics can kill a songbird's entire clutch.1
- Neonics widely contaminate Minnesota's surface waters and, elsewhere, have been linked with the collapse of fisheries. 2
- Research links neonics to a host of neurological harms like muscle tremors and other health effects including lower testosterone levels, altered insulin regulation, and changes to fat metabolism. 3
- Peer-reviewed research linked exposure to neonics while in the womb to birth defects, such as deformation of the heart and brain and other developmental harms.

In Minnesota, neonics are commonly used as coatings on crop seeds, especially in corn and soybean. Neonics are spread across at least 15 million acres of Minnesota farmland each year through the planting of coated seed – an area the size of West Virginia. **95% or more of the neonics applied to these seeds do not enter the crop as intended;** they remain in the environment where they contaminate soils, surface waters, groundwater and wild plant life (wildlife forage). 4

As a result, this widespread, wasteful use, neonics broadly contaminate Minnesota's environment. Data from the Minnesota Department of Agriculture (MDA) links neonic-treated seed use with water contamination at levels harmful to aquatic life that forms the basis for entire ecosystems, including Minnesota's billion-dollar recreational fishing industry. Testing by the Minnesota Department of Natural Resources (DNR) detects neonics in 94% of the state's white-tailed deer. 5

The harms of neonics were on full display in 2021, when it was discovered that neonic-treated seeds from Minnesota and the Midwest were being improperly processed and stored at a facility in Mead, Nebraska. The surrounding environment was heavily contaminated with neonics, resulting in strange illnesses reported in people, pets and wildlife. 6

**Neonic-treated seeds are not only harmful, but unnecessary.** Independent research – meaning studies *not* funded by the pesticide industry – consistently show that neonic seed treatments in corn and soybeans do not provide economic benefits to farmers. 7

## Minnesota's failure to act:

The Minnesota Department of Agriculture (MDA) is the agency charged with protecting Minnesota's people and environment from the harms of pesticides. Nevertheless, **MDA allows treated seeds to go completely unregulated**, claiming that MDA lacks authority to regulate the number one use of neonics and other harmful pesticides statewide.

MDA has long had authority to regulate treated seeds. If there was any doubt, the legislature in 2023 passed statutory language that granted MDA the clear responsibility to regulate neonicotinoid treated seed to prevent harm to the environment. But to this day, MDA claims it lacks authority to protect Minnesotans from this serious threat and instead continues to parrot pesticide industry talking points on the importance of treated seed.

The MDA, alongside the pesticide industry, claims that neonics are minimally harmful to beneficial insects, birds and mammals while ignoring the FACT that these and other insecticides were formulated to kill living things. The problem is that neonicotinoids kill indiscriminately. 8

In sum, despite decades of research showing the harm of neonic-treated seeds and their lack of benefits for farmers, Governor Walz and the MDA have done nothing to regulate the overuse of these dangerous products. The majority of the population wants a clean environment and healthy food. Minnesotans should be able to rely on government to protect us from pesticide pollution. Instead, state government views agrichemical giants as their "customer" whom they feel obligated to appease.

## References

**1** American Bird Conservancy, *Neonics and Birds* <u>https://abcbirds.org/news/birds-bees-and-aquatic-life-threatened-by-gross-underestimate-of-toxicity-of-worlds-most-widely-used-pesticide-2/</u>

Science: A neonicotinoid insecticide reduces fueling and delays migration in songbirds. Margaret L. Eng, LeBridget, J. M. Stutchbury, Christy A. Morrissey. Issue 13 Sep 2019: Vol. 365, Issue 6458, pp. 1177-1180. <u>https://science.sciencemag.org/content/365/6458/1177</u>

**2** Letter from Minnesota Dept of Agriculture to EPA on treated seed contamination, 2024. https://www.regulations.gov/comment/EPA-HQ-OPP-2023-0420-0139.

**3** National toxicology report from US Dept. of Health and Human Services ISSN: 2473-4756 https://ntp.niehs.nih.gov/ntp/results/pubs/rr/reports/rr15\_508.pdf

Neurosciencenews.com, *Neonic causes autism-like symptoms* (2022) <u>https://neurosciencenews.com/neonicotinoid-asd-21898/</u>

NRDC Briefing to Congress on Neonic Pesticide Human Health Harms, October 2019. https://www.nrdc.org/experts/jennifer-sass/nrdc-briefs-congress-neonic-pesticide-human-healthharms

**4** Surface water pesticides of concern, Minnesota Department of Agriculture (2020) https://www.mda.state.mn.us/surface-water-pesticides-concern

**5** Scientific Reports: *Effects of Neonicotinoid Insecticides on Physiology and Reproductive Characteristics of Captive Female and Fawn White-tailed Deer*. Elise Hughes Berheim, Jonathan A. Jenks, Jonathan G. Lundgren, et al. volume 9, Article number: 4534 (2019) <u>https://www.nature.com/articles/s41598-019-40994-9</u>

*Pesticide effects of neonic exposure to white-tailed deer in Minnesota,* 2021 Minnesota Department of Natural Resources

https://www.dnr.state.mn.us/news/2021/03/01/preliminary-results-pesticide-study-show-widespread-neonicotinoid-exposure-minnesota-white-tailed-deer

**6** There's a red flag here: how an ethanol plant is dangerously polluting a US village | Nebraska, The Guardian, <a href="https://www.theguardian.com/us-news/2021/jan/10/mead-nebraska-ethanol-plant-pollution-danger">https://www.theguardian.com/us-news/2021/jan/10/mead-nebraska-ethanol-plant-pollution-danger</a>

**7** *Neonicotinoid insecticides in New York City*, 2020. Cornell University researchers found there is no overall net income benefit to using neonicotinoid treatments on corn and soybean seeds instead of untreated seeds, Page 236. <u>https://cornell.app.box.com/v/2020-neonicotinoid-report</u>

*Effectiveness of Neonic Seed in Soybeans*, 12-University including U of Minnesota study fouund the current use of neonicotinoid seed treatments in soybean and other crops far exceeds pest pressures. <u>https://extension.psu.edu/effectiveness-of-neonicotinoid-seed-treatments-in-soybean</u>

*Neonicotinoid seed treatments of soybean provide negligible benefits to US farmers*, Scientific reports, Article number 11207 (2019) Mourtzinis, Krupke, et al. results demonstrate that the current widespread prophylactic use of NST in the key soybean-producing areas of the US should be re-evaluated. <u>https://www.nature.com/articles/s41598-019-47442-8</u>

**8** The science behind the role neonics play in harming bees. Xerces Society, Jennifer Hopwood, Aimee Code, Mace Vaughan et al. (2016) <u>https://xerces.org/sites/default/files/2018-05/16-023 01 XercesSoc ExecSummary How-Neonicotinoids-Can-Kill-Bees web.pdf</u>

The Worldwide Integrated Assessment on Systemic Insecticides: Impacts on Organisms and Ecosystems: 2021 Pisa, Goulson, Yang, Gibbons, Sanchez-Bayo <a href="https://link.springer.com/article/10.1007/s11356-017-0341-3">https://link.springer.com/article/10.1007/s11356-017-0341-3</a>

Compiled by Lucas Rhoads, Senior Attorney, Food & Agriculture, Natural Resources Defense Council, AND Greg Larson, Minnesota Environmental Partnership Pollinator Cluster AND Laurie Schneider, Executive Director, Pollinator Friendly Alliance