

## Neonics: The New DDT Protect Birds, Bees, Food & Water from Neonicotinoid Pesticide Contamination

An EPA study from May 2023 shows that the three most commonly-used neonics likely jeopardize the continued existence of *over 200 threatened and endangered species*—or about 11% of the entire endangered species list.<sup>i</sup>

New York just banned non-agricultural uses of neonics and most neonic-treated seed. Ten states have some restrictions already in place, and most neonic uses are banned in Europe and parts of Canada. ***It's time for Connecticut to halt wasteful uses of these dangerous pesticides on lawns and gardens and as seed coatings.***

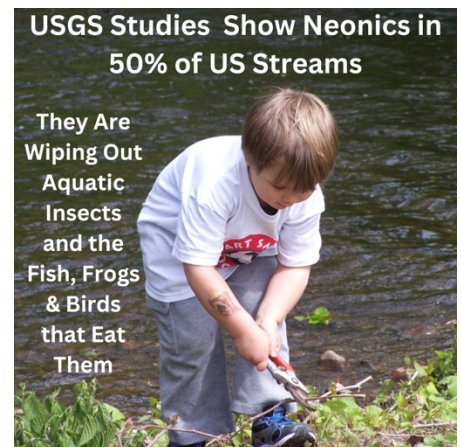


### Why Do Scientists Believe Neonics Are So Dangerous?

- Nicotine-like, they affect the neurological system. Research shows harms to heart<sup>ii</sup> and brain<sup>iii</sup> development in prenatally exposed children.
- They are in our water. USGS studies show they are in over 50% of American streams<sup>iv</sup> including the Norwalk and Connecticut Rivers.
- And in drinking water. For example, a study on Long Island found neonics in 30% of drinking water.<sup>v</sup>
- In 2014 USDA found 63% of food samples collected in the US contained at least one neonic, and 57% contained more than one.<sup>vi</sup>
- The CDC found neonics in 50% of the population with the highest concentrations found in children.<sup>vii</sup>
- A recent study of 171 pregnant women in the U.S. found that over 95% had neonics in their bodies.<sup>viii</sup>

### Neonics Destroy Food Chains Hollowing Out Ecosystems

- Sharp declines in bee and other insect populations have been linked to neonics in hundreds of studies compiled by Cornell University<sup>ix</sup> and others.
- Neonics have made U.S. agriculture 48-times more harmful to insects since the mid-1990s.<sup>x</sup>
- The loss of 3 billion birds in the last 50 years has been linked to neonics, with the sharpest declines seen in birds that eat insects.<sup>xi</sup> Just one coated seed is enough to kill a songbird.<sup>xii</sup>
- Neonics also affect mammals. They have been linked to gross congenital defects in white-tailed deer<sup>xiii</sup>
- Data on surface water contamination show concentrations of several neonics high enough to be causing impacts in aquatic food chains, i.e. killing the insects that feed the fish, frogs, birds, and other animals.<sup>xiv</sup>



### Corn Seeds Coated with Neonic Pesticides Dominate the Market



The toxin spreads through the plant.  
It kills pollinators, birds, other wildlife and endangers human health.

## The Problem with Neonic-Coated Seeds

- The Department of Agriculture does not track how much corn sold in CT is grown from neonic-coated seeds because, thanks to a loophole, this pesticide seed coating has been exempted from government regulation on the grounds that it is not labeled a pesticide when on a seed. We do know that over 800 million corn seeds are planted each year in Connecticut and virtually all (except organic) are coated with neonics.
- **Only 5% of that pesticide coating is taken up into the plant, according to industry research. The remaining 95% moves through soil and air into waterways.<sup>xv</sup>**
- Several studies including a recent one by Cornell University reports that using neonic-coated seeds most offers “no overall net income benefits” to farmers or there are safer alternatives.<sup>xvi</sup>
- Plants grown from neonic-coated seeds contain systemic pesticides; they are force multipliers creating 24-hour pesticide dispersal from seedling through final disintegration. The pollen, fruit, and even the dew on the leaves of these plants are toxic to bees and other insects.
- The pesticides on the seeds are being used preventively, whether the plant faces a pest problem or not.

## Alternatives for Neonics for Grub Control

Much of the use of neonics in Connecticut is on lawns and golf courses to control grubs, the larvae of Japanese beetles. However, there are viable, more sustainable alternatives.

- 1) Nematodes are microscopic worms that are effective against all types of grubs. The strain *Heterohabdis ssp* is the most effective. The Cornell Report referenced above says “Nematodes are the most reliable non-chemical treatment for white grubs in New York turfgrass.”
- 2) *Milky spore* is a Japanese beetle grub killing bacterium best applied in late summer. (Less effective in cold climates.)
- 3) A parasitic wasp called *Spring Tiphia* is reported to be very effective at control of Japanese beetles by the University of Connecticut.
- 4) A bio-insecticide, Grub-Gone, employs *Btg (Bacillus thuringiensis gallerias)*, available since 2018.

i EPA, 2023; <https://www.epa.gov/pesticides/epa-takes-next-step-endangered-species-act-review-three-neonicotinoids>

ii NIH Library, 2014; <https://pubmed.ncbi.nlm.nih.gov/25262086/>

iii NIH, Library 2014. <https://pubmed.ncbi.nlm.nih.gov/24553680/>

iv USGS; 2015: [https://www.usgs.gov/programs/environmental-health-program/science/first-national-scale-reconnaissance-neonicotinoid?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/programs/environmental-health-program/science/first-national-scale-reconnaissance-neonicotinoid?qt-science_center_objects=0#qt-science_center_objects)

v NRDC, 2017; <https://www.nrdc.org/sites/default/files/impacts-neonics-in-ny-water-report.pdf>

vi <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5289916/#r52>

vii CDC, 2019, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6710140/pdf/nihms-1044628.pdf>

viii Beckman Institute, 2022, <https://beckman.illinois.edu/about/news/article/2022/05/10/long-term-study-of-pregnant-women-finds-increasing-chemical-exposure>

ix Cornell, 2020 <https://cornell.app.box.com/v/2020-neonicotinoid-report>

x Michael DiBartolomeis, 2019. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0220029>

xi Cornell Ornithology Labs, 2022. <https://www.allaboutbirds.org/news/neonic-nation-is-widespread-pesticide-use-connected-to-grassland-bird-declines/>

xii American Bird Conservancy study, 2013. <https://abcbirds.org/news/birds-bees-and-aquatic-life-threatened-by-gross-underestimate-of-toxicity-of-worlds-most-widely-used-pesticide-2/>

xiii 2019, <https://www.nature.com/articles/s41598-019-40994-9#citeas>

xiv American Bird Conservancy study, Pierre Mineau, 2013.

xv Bayer CropScience AG, 2003; <http://www.bulletinofinsectology.org/pdfarticles/vol56-2003-035-040sur.pdf>

xvi Cornell University, 2020: <https://cornell.app.box.com/v/2020-neonicotinoid-report>