

Neonicotinoids

Pesticides Placing New Jersey's Wildlife, Farms, and Families at Risk

Neonicotinoids (“neonics”) are systemic insecticides registered for use on hundreds of crops and also used in many home gardens. These chemicals are a leading cause of the massive declines in bee populations vital to agricultural production and seriously harm other species fundamental to healthy natural ecosystems, such as aquatic invertebrates. In addition to proving toxic to birds, new studies suggest possible impacts on human health, with data showing neonics commonly appear in the food we eat and in New Jersey’s waters.



If not outright lethal, neonics impair bees’ foraging and navigation abilities, reduce survival rates and their critical pollination services.

Impacts on Human Health

- Standard treatment methods do not remove most neonics from drinking water and they cannot be rinsed off of produce.
- Emerging research suggests neonatal and early-life exposure to neonics may be linked with developmental defects, including autism, heart deformations, muscle tremors, and memory loss.
- Neonics are the most commonly found pesticide in infant and toddler foods.

Need for Action in New Jersey

- With federal action unlikely, NJ can proactively protect its natural resources and lead the nation by taking action to regulate specific uses of these dangerous toxins.

Threats to Essential Non-Target Species

- Neonics have both lethal and extensive sub-lethal effects on bees, resulting in massive population declines in recent decades. A single neonic-coated seed contains enough active ingredient to kill 300 thousand bees.
- Pollinators threatened by neonics are responsible for one third of the food we eat. Pollination services provided by native species are vital to New Jersey’s most valuable fruits and vegetables, worth approximately \$270 million in 2017 alone.
- Neonics readily dissolve in water and accumulate in rivers and streams, where they poison invertebrates essential to aquatic ecosystems.
- Consuming just one neonic-treated seed can kill an average-sized bird.



Birds encounter neonic-coated seeds when feeding in agricultural areas.
Photo: Connor Stefanison



Like bees, White-crowned sparrows suffer both lethal and sub-lethal impacts from neonic exposure.

Responses Around the World

- The European Union voted to completely ban all outdoor uses of three types of neonics, citing their impacts to honey bees. Canada recently followed suit, planning to phase out all outdoor use of three specific neonics in 3-5 years because of impacts to aquatic ecosystems.
- Both Maryland and Connecticut have banned sales of neonics for use by general consumers in backyard garden settings.

