



Setting the Record Straight on the Birds and Bees Protection Act (A7429/S699B)

With U.S. beekeepers experiencing the [second worst yearly losses on record](#),¹ and declines of other bees, butterflies, and insects reaching levels some now call an “[insect apocalypse](#),”² there has never been a more urgent need to address a key leading cause—the widespread use of neurotoxic neonicotinoid pesticides, or “neonics.” A recent [Cornell University review](#) of 1,121 peer-reviewed studies (“Cornell Report”) reveals that the neonic uses that pose the greatest threats to New York’s bees are also those that provide little-to-no benefits to users or are easily replaceable with safer alternatives. **The Birds and Bees Protection Act** ([A7429-Englebright/S699B-Hoylman](#)) prohibits these wasteful uses—specifically, neonic-treated corn, soybean, and wheat seeds and non-agricultural, turf and ornamental uses. Recently, false, misleading, or unsupported claims have arisen regarding the bill. These claims are addressed below:



What’s in the bill?

Claim: *The bill would prohibit neonic use on fruit and vegetable crops.*

Response: **False.** The bill only prohibits the sale of neonic-treated corn, soybean, and wheat seeds, which the [Cornell Report](#) finds provide “no overall net income benefit” to New York farmers.³ It prohibits no other agricultural neonic uses.

Claim: *The bill would prevent use of neonics against invasive species like hemlock wooly adelgid.*

Response: **False.** The bill prohibits neonic use on “outdoor ornamental plants and turf,” which are distinct from pesticide uses to treat for invasive species. Department of Environmental Conservation (DEC) regulations distinguish ornamental and turf pesticide applications from use in forestry and to control regulated pests, including invasive species. See 6 N.Y.C.R.R. § 325.16 (distinguishing between “ornamental and turf pest control,” “forest pest control,” and “regulatory pest control”). Importantly, the bill also explicitly allows DEC to permit neonic use where “necessary to manage, control or prevent invasive species.”

Claim: *The bill would require individual farmers to each go through a notice and comment period to plant neonic-treated seed under the bill’s exemption provisions.*

Response: **False.** The bill allows DEC, in consultation with the Department of Agriculture and Markets (DAM), to suspend the ban on neonic-treated corn, soybean, and wheat seeds for a particular type of seed if that seed is not “commercially available” or if its purchase would impose “unreasonable costs.” This process would be led by the agencies, include notice and comment, and affect sale or purchase of that seed anywhere in the state. Individual farmers could, of course, participate in the notice and comment period, but would not be required to in order to take advantage of a DEC decision.

Claim: *The bill would prohibit all neonic use on corn, soybean, and wheat crops.*

Response: **False.** The bill prohibits the sale, distribution, or purchase of neonic-treated *seeds*, which account for 73% of all agricultural neonic use in New York.⁴ All other agricultural neonic uses—including soil and spray applications on corn, soybean, and wheat crops—would not be prohibited.

What effect would the bill have?

Claim: Non-treated seeds would not be available for New York farmers if the bill took effect.

Response 1: This is false/unsupported. Non-neonic-treated soybean and wheat seeds are already widely available, as is conventional corn seed with one or fewer genetically modified traits if purchasers notify their seed dealer in advance. Further, other jurisdictions have eliminated or restricted neonic-treated seed use without availability issues. The European Union [banned the use](#) of neonic-treated corn and soybean seeds in 2013, and Ontario, Canada, [significantly limited their use](#) starting in 2017 (with Quebec now also [following suit](#)).⁵ In both cases, non-neonic treated seed was and is available and yields have been consistent (see below). Market competition is fierce between seed manufacturers, and it is highly unlikely that any would abandon New York's more than one million acres of corn and soybeans.

Response 2: The bill safeguards against this by allowing DEC, in consultation with DAM, to suspend the ban for a particular type of seed if it determines that either: (1) the seed is not commercially available without neonic treatment (or reasonably expected to be); or (2) purchasing non-treated seed would impose "unreasonable costs." See A7429/S699B, § 3(13)(a).

Claim: Neonic-treated seeds are less expensive than non-treated seeds.

Response: False. The [Cornell Report](#) finds that untreated corn seeds cost \$20.15 less per acre than neonic-treated seeds, and fungicide-only seeds cost \$6.80 less (see p. 128).⁶ The prices are those provided by Bayer CropScience—now likely the largest U.S. corn seed manufacturer after acquiring Monsanto—for a 2018 study (p. 141-142). For soybeans, the Cornell Report finds untreated seeds cost \$20.70 less than neonic-treated seeds, and fungicide-only seeds cost \$5.10 less based upon farm-level data from independent research (p. 146). Similarly, [a 2014-15 Iowa study](#) estimates the additional cost of neonic soybean seed treatments at \$10-15 an acre.⁷

Claim: The bill's prohibitions will result in greater widespread use of more toxic pesticides.

Response 1: False. Neonics have made U.S. agriculture [up to 48-times](#) more harmful to insect life since their introduction in the mid-1990s, and have also dramatically increased the amount of land treated with insecticides.⁸ Before the advent of neonics, only 35% of conventional corn acres and 5% of soybean acres were treated with an insecticide at all during the entire growing season, but today, [those numbers are up to 100% and 50%](#), respectively, just for neonic-treated seed use alone. Regardless of total weight or volume used, insecticide use today is more ecologically toxic and widespread due to neonics.

Response 2: This hasn't happened in other countries that have restricted neonics. Europe's 2013 ban on treated corn and soybean seeds was expanded to all outdoor uses for the three major neonic chemicals in 2018.⁹ Where data exists for insecticide use alone, it indicates total use [has dropped](#) for the relevant crops, even as yields remained constant.¹⁰ In both Europe and Canada, where other synthetic insecticides have been substituted for neonics, they are often from the newer anthranilic diamide class—which current research shows are much less toxic to bees, other wildlife, and people (see, e.g., [here](#)).

Response 3: Targeting high-cost, low-benefit neonic uses prevents "regrettable substitutions." The bill targets neonic uses that the Cornell Report finds pose substantial risks to pollinators but provide little-to-no benefits to users or are readily replaceable with less harmful alternatives.

Response 4: This ignores the wide variety of effective non-chemical, organic, and minimum risk alternatives. In fact, [78% of neonic uses can be replaced with non-chemical alternatives](#).¹¹ Where chemicals are used, reduced risk solutions exist—including non-synthetic materials approved for organic crops, see 7 C.F.R. § 205.601 et seq., and federally designated "minimum risk" pesticides. See 40 C.F.R. § 152.25(f).

Claim: The bill will impair efforts to manage pest resistance to insecticides.

Response: False. Current neonic use patterns on corn, soybean, and wheat seeds—where neonics are used over vast areas year after year yet provide "no overall net income benefit" to farmers—are a breeding ground for pests to become resistant. Eliminating widespread, prophylactic, low-to-no benefit uses of neonics on

these seeds as well as in non-agricultural turf and ornamental uses will better protect neonics' efficacy for other agricultural uses and management of invasive species like hemlock wooly adelgid and emerald ash borer.

Claim: The bill will prevent farmers from obtaining replant protection.

Response 1: Crop insurance covers replant costs. All common crop insurance policies provide replant coverage for crops damaged early in the season by pests. While coverage levels vary, farmers can generally elect to increase their replant coverage.

Response 2: Replant guarantees will still be available. As mentioned, competition for corn and soybean acres is fierce among seed sellers, so it is highly likely that seed sellers will offer replant policies for non-neonic-treated seeds—especially where an alternative insecticide is used. Many companies in the U.S. already offer policies for seeds that are not treated with neonicotinoids—for example, large seed dealer Beck's offers a [100% replant guarantee](#) for all of its organic seeds. In Canada, many seed dealers are phasing out neonicotinoid treatments, yet continue to offer replant guarantees.¹²

Response 3: The bill protects against this. To the extent that purchase of non-neonic-treated seeds would impose unreasonable costs, DEC may suspend the ban for a particular type of seed.

Claim: Prohibiting neonic-treated corn, soybean, and wheat seeds would be bad for New York farmers.

Response 1: The Cornell report contradicts this. The report finds that neonic-treated corn, soybean, and wheat seeds pose “substantial” risks to pollinators, but provide “no overall net income benefit” to farmers. As these seed treatments account for nearly three quarters of the neonics used in New York agriculture,¹³ this makes them not only likely the largest and most widespread neonic use in the state, but also the most needless.

Response 2: Needless neonic use hurts New York farmers by killing pollinators. [Recent research](#) reveals top New York crops like apples and cherries are “pollinator limited” across the nation,¹⁴ meaning yields would be higher if more pollinators were present. Widespread neonic use—driven primarily by the use of neonic-treated corn and soybean seeds—is a lead cause of declines in honey bees and native bees, both of which are critical to crop pollination. Wasteful and needless neonic use on corn and soybean seeds, therefore, hurts thousands of New York farmers while providing no monetary benefits to users. New York's organic farmers have already [voiced these concerns](#).¹⁵

Response 3: Needless neonic use kills pest predators and may harm soil health. Neonics kill predators of plant pests, such as beetles and wasps, that naturally control pest populations. Neonics have made U.S. agriculture up to [48-times more harmful](#) to insect life, with beneficial pest predators especially at risk from eating contaminated insects.¹⁶ Because neonics migrate long distances through soil, these impacts are not only a concern for corn and soybean farmers, but also for neighboring farms. Migratory neonics are likewise concerning for soil health, [especially for organic farmers](#). Research now shows neonic contamination can kill or harm organisms critical for soil health, like earthworms,¹⁷ and change the composition of soil microbial communities—harming beneficial bacteria crucial for plant growth and health and soil fertility and quality (see, e.g., [here](#)).¹⁸

Claim: The bill usurps DEC authority.

Response: False. DEC maintains it has no regulatory authority over treated seeds. As an example, in 2007, DEC [denied registration](#) for outdoor applications of the neonic clothianidin, citing unresolved concerns about harms to pollinators and water contamination. Yet, clothianidin is the most used neonic in New York agriculture (see Table 6, p.9, [here](#)) because it comes into the state as a treatment on corn, soybean, and wheat seeds, evading DEC regulation.

Neonics Generally and Federal and International Action

Claim: Neonic use is an essential component of “integrated pest management” (IPM) and no-till farming.

Response: False. Current neonic use patterns directly contradict IPM principles, which guide growers to only use pesticides as needed, and then to preferentially use the least-toxic pesticides. In contrast, most neonic use is prophylactic, widespread, and generally needless. For example, corn and soybean seed treatments account for an estimated 73% of all neonics used in New York agriculture, but the Cornell Report finds they provide “no overall net income benefit” to farmers. In some cases neonics may even decrease yields or profits by [killing pest predators](#) or pollinators.¹⁹ Neonic harms to pest predators and [soil health](#) hamper long-term viable no-till farming. True IPM—i.e. using pesticides only if and where a pest problem exists, rather than prophylactically to seeds—is the [better alternative for no-till systems](#) (see p. 9).

Claim: The European Union has rolled back its restrictions on neonics, proof that prohibition on neonic-treated corn, soybean, and wheat seeds would be impracticable in New York.

Response 1: This is largely irrelevant or false. There has been recent movement by several European Union (EU) countries to temporarily allow [use of neonics on sugar beet crops](#), which would not be targeted under the Birds and Bees Protection Act (A7429/S699B).²⁰ Hungary and Romania have, at points, allowed limited, temporary use of neonics on corn seeds since the 2013 ban, but corn production has largely been consistent among EU countries (or influenced by other factors [such as drought](#)) regardless of whether neonic-treated seed use was temporarily permitted or not for a given year.²¹ Likewise, total production of corn and soybeans has been stable or increased (see [here](#) and [here](#)). In Canada, where neonic-treated seed use has greatly fallen in the last few years, production has also been essentially unchanged (see [here](#)).

Response 2: Production of other crops affected by the 2013 ban also appear to be stable or up, and [available data](#) also show that the weight of insecticide use is also down.²²

Claim: EPA stringently and effectively regulates neonic-treated seeds.

Response: False. EPA exempts pesticide-treated seeds as exempt “treated articles,” despite the fact that their intended pesticidal effect is identical to other registered pesticides. This loophole has led to tragic contamination events like that seen in [Mead, Nebraska](#), and created loopholes in state regulatory programs, as described with DEC above. Although EPA regulates the pesticides used to treat seeds, this has proven ineffective. Treated seeds are the single largest neonic use, and the pesticides widely contaminate water supplies in New York at levels above EPA benchmarks for ecological harm (see [here](#) and [here](#)) as honey bee deaths nationwide [remain near record numbers](#).²³ The Cornell Report also found neonic-treated seeds posed “substantial” risks to bees and other pollinators. While both Europe and Canada have either banned or restricted neonic-treated seed use, the EPA, in the waning days of the Trump administration, proposed effectively [continuing the status quo](#) of its non-regulation of neonic-treated seeds.²⁴

Claim: EPA’s pesticide approval process and product labels will be sufficient to protect New York’s pollinators and the health of its environment and people.

Response: This is patently false. Neonics contaminate water supplies in New York at levels above EPA benchmarks for ecological harm (see [here](#) and [here](#)) as honey bee deaths nationwide [remain near record numbers](#).²⁵ History is also full of examples of EPA’s [notoriously industry-friendly pesticide office](#) ignoring health and environmental harms in its approvals of pesticides, [even harms identified by its own scientists](#).²⁶ Regarding neonics, EPA recently proposed prohibiting certain long-ago-approved residential neonic uses due to human health concerns (see [here](#) at p. 41)²⁷—and that move comes even though EPA has been fudging the math in violation of the Food Quality Protection Act (FQPA) to [make neonics appear safer to people than they actually are](#).²⁸ The small label adjustments proposed by the Trump administration EPA [will do little to nothing to protect pollinators, people, and the environment](#).²⁹

-
- ¹ Science News, *US Beekeepers Reported Lower Winter Losses but Abnormally High Summer Losses*, Science Daily (Jun. 22, 2020), <https://bit.ly/2Kblprc>.
- ² Brooke Jarvis, *The Insect Apocalypse Is Here*, New York Times Mag. (Nov. 27, 2018), <https://nyti.ms/2Aq0jMX>.
- ³ Travis A. Grout et al., *Neonicotinoid Insecticides in New York State*, Cornell University, 236 (Jun. 23, 2020), <https://bit.ly/2XIB2cA> [hereinafter “Cornell Report”].
- ⁴ Pierre Mineau, *An Assessment of Neonicotinoid Insecticides with Emphasis on New York: Use, Contamination, Impacts on Aquatic Systems, and Agronomic Aspects*, 49 (2019), <https://on.nrdc.org/3eeav0g>.
- ⁵ Commission Implementing Regulation (EU) No 485/2013 of 24 May 2013, <https://bit.ly/3uW1b7f>; Credit Valley Conservation, Ontario Limits Pesticide Use to Help Pollinators (Aug. 1, 2017), <https://bit.ly/2Pzfkah>; CBC News, *Quebec Places New Restrictions on Pesticides in Bid to Protect Honeybees* (Feb. 19, 2018), <https://bit.ly/3ebRTyb>.
- ⁶ See Cornell Report.
- ⁷ See Practical Farmers of Iowa, *Are Neonic-Treated Soybeans Worth the Cost?* (visited Mar. 5, 2021), <https://bit.ly/3e9ZXPX>.
- ⁸ Michael DiBartolomeis et al., *An Assessment of Acute Insecticide Toxicity Loading (AITL) of Chemical Pesticides Used on Agricultural Land in the United States*, PLoS One (Aug. 6, 2019), <https://bit.ly/2Yr4Xc7>; Margaret Douglas et al., *County-level Analysis Reveals a Rapidly Shifting Landscape of Insecticide Hazard to Honey Bees (*Apis Mellifera*) on US Farmland*, Scientific Reports (Jan. 21, 2020), <https://go.nature.com/2SKhiHP>.
- ⁹ Declan Butler, *Scientists Hail European Ban on Bee-Harming Pesticides*, Nature (Apr. 27, 2018), <https://go.nature.com/3ibsftg>.
- ¹⁰ Letter from Prof. Dave Goulson to New York State Governor Andrew Cuomo (Jan. 28, 2020), <https://on.nrdc.org/3svzmBG>.
- ¹¹ Hervé Jactel, *Alternatives to Neonicotinoids*, Environment International (May 29, 2019), <https://bit.ly/3oQhFKC>.
- ¹² Pride Seeds, for example, is phasing out all neonic treatments on corn seed in favor of the diamide, cyantraniliprole. The company still offers the same “stand protection policy” for these seeds. Pride Seeds, *Corn Stand Protection Policy* (visited May 13, 2021), <https://bit.ly/2RNSMDS>.
- ¹³ Pierre Mineau, *An Assessment of Neonicotinoid Insecticides with Emphasis on New York: Use, Contamination, Impacts on Aquatic Systems, and Agronomic Aspects*, 49 (2019), <https://on.nrdc.org/3eeav0g>.
- ¹⁴ J.R. Reilly et al., *Crop Production in the USA Is Frequently Limited by a Lack of Pollinators*, Proceedings of the Royal Society B (Jul. 29, 2020), <https://bit.ly/3nMLQkN>.
- ¹⁵ Letter to Governor Cuomo from Northeast Organic Farmers Association re: Neonic Pesticides (Dec. 3, 2020), <https://on.nrdc.org/30hQ7DC>.
- ¹⁶ Kendra Klein & Anna Lappé, *America's Agriculture Is 48 Times More Toxic Than 25 Years Ago. Blame Neonics*, The Guardian (Aug. 7, 2019), <https://bit.ly/3sTg7kW>.
- ¹⁷ Leonard Pisa et al., *Effects of Neonicotinoids and Fipronil on Non-Target Invertebrates*, Environ. Sci. Pollut. Res. Int. (Sep. 17, 2014), <https://bit.ly/3u3pHS9>.
- ¹⁸ Mona Parizadeh et al., *Effects of Neonicotinoid Seed Treatments on Phyllosphere and Soil Bacterial Communities Over Time*, Research Square (Sep. 17, 2020), <https://bit.ly/3sYtfVX>.
- ¹⁹ See Purdue University, *Don't Just Spray – Survey*, <https://on.nrdc.org/2m0a9Bt>; Margaret Douglas et al., *Neonicotinoid Insecticide Travels Through a Soil Food Chain, Disrupting Biological Control of Non-Target Pests and Decreasing Soya Bean Yield*, Journal of Applied Ecology (Dec. 4, 2014), <https://bit.ly/2IRr4ME>; Rui Catarino et al., *Bee Pollination Outperforms Pesticides for Oilseed Crop Production and Profitability*, (Oct. 9, 2019), <https://bit.ly/2OUw0Xu>; Dara A. Stanley et al., *Neonicotinoid Pesticide Exposure Impairs Crop Pollination Services Provided by Bumblebees*, Nature (Nov. 18, 2015), <https://bit.ly/2qnhWLW>; Claire LaCanne & Jonathan Lundgren, *Regenerative Agriculture: Merging Farming and Natural Resource Conservation Profitably*, PeerJ (Feb. 28, 2018), <https://bit.ly/2YNxiop>.
- ²⁰ European Food Safety Authority, *Pesticides: EFSA to Examine Emergency Use of Neonicotinoids* (Dec. 8, 2020), <https://bit.ly/3c6Yh6Z>.
- ²¹ Eurostat, *Production of Main Cereals, EU-27, 2009-2019* (visited Mar. 5, 2021), <https://bit.ly/2Opmu0f>.
- ²² Letter from Prof. Dave Goulson to New York State Governor Andrew Cuomo (Jan. 28, 2020), <https://on.nrdc.org/3svzmBG>.
- ²³ USFWS, *Pilot Study to Evaluate Neonicotinoid Pesticides in New York and Pennsylvania Streams* (Nov. 2018), <https://bit.ly/2Gc2CYl> (finding neonics in New York streams “in excess of toxicity and regulatory thresholds.”); Mineau 2019; Science News, *US Beekeepers Reported Lower Winter Losses but Abnormally High Summer Losses*, Science Daily (Jun. 22, 2020), <https://bit.ly/2Kblprc>.
- ²⁴ See NRDC, *Comments on the Proposed Interim Registration Review Decisions for the Neonicotinoid Insecticide Class* (May 4, 2020), <https://on.nrdc.org/35KomGE>.
- ²⁵ USFWS, *Pilot Study to Evaluate Neonicotinoid Pesticides in New York and Pennsylvania Streams* (Nov. 2018), <https://bit.ly/2Gc2CYl> (finding neonics in New York streams “in excess of toxicity and regulatory thresholds.”); Mineau 2019; Science News, *US Beekeepers Reported Lower Winter Losses but Abnormally High Summer Losses*, Science Daily (Jun. 22, 2020), <https://bit.ly/2Kblprc>.
- ²⁶ Jennifer Sass, *ATSDR Report Confirms Glyphosate Cancer Risks*, NRDC (Apr. 11, 2019), <https://on.nrdc.org/3iodrrl>; Time Magazine, *Appeals Court Orders EPA to Ban a Pesticide Known to Harm Children* (Aug. 9, 2018), <https://bit.ly/38NuD6z>.
- ²⁷ EPA, *Imidacloprid: Proposed Interim Registration Review Decision* (Jan. 2020), <https://bit.ly/3nJnJ6l>.
- ²⁸ Jennifer Sass, *Neonic Pesticides: Potential Risks to Brain and Sperm*, NRDC (Jan. 5, 2021), <https://on.nrdc.org/3qq5wwE>.

²⁹ See NRDC, *Comments on the Proposed Interim Registration Review Decisions for the Neonicotinoid Insecticide Class* (May 4, 2020), <https://on.nrdc.org/35KomGE>.