Desk Statement

EPA Proposes New Protections Related to Neonicotinoid Pesticides

EPA is proposing new measures to protect human health and the environment in its proposed decisions for imidacloprid, clothianidin, thiamethoxam, dinotefuran and acetamiprid. These chemicals, collectively known as neonicotinoids, are a group of insecticides used on a wide variety of crops, turf, ornamentals, pets (for flea treatment), and other residential and commercial indoor and outdoor uses.

EPA recognizes the important benefits associated with maintaining the neonicotinoids as a tool to combat difficult pest pressures. However, EPA's ecological risk assessments indicate potential risks. Potential risks to bees was a focus of the EPA's risk assessments given concerns regarding pollinator health.

To address these risks, EPA is proposing reductions in the amounts that can be applied. These reductions are tailored specifically to the risks and benefits associated with each crop. EPA is also proposing to reduce critical pre-bloom application for certain crops and is working with the industry on stewardship and best management practices. These measures are expected to significantly reduce potential ecological risks, particularly to pollinators, including native bee species.

Potential human health risks are mitigated by additional personal protective equipment for workers and other proposed restrictions. For example, there are potential risks to children and adults that exceed EPA's level of concern from spray applications of imidacloprid to residential turf. Therefore, EPA is proposing to cancel all uses of imidacloprid on residential turf under the Food Quality Protection Act (FQPA) due to these concerns. If implemented, this cancellation will also reduce imidacloprid risks to bees in residential areas.

The Agency invites comments on the decisions in the following linked dockets through DATE:

[HYPERLINK "https://www.regulations.gov/docket?D=EPA-HQ-OPP-2008-0844"]
[HYPERLINK "https://www.regulations.gov/docket?D=EPA-HQ-OPP-2011-0865"]
[HYPERLINK "https://www.regulations.gov/docket?D=EPA-HQ-OPP-2011-0581"]
[HYPERLINK "https://www.regulations.gov/docket?D=EPA-HQ-OPP-2011-0920"]
[HYPERLINK "https://www.regulations.gov/docket?D=EPA-HQ-OPP-2012-0329"]

Additional Background

Though all five of the aforementioned substances are in the neonicotinoid class, acetamiprid is chemically distinct (cyano-substituted) from the others (nitroguanidine-substituted, or N-S) and has a generally lower risk profile to people and non-target species, such as bees, than the other four N-S compounds. Please see the acetamiprid docket linked above for more information.

Balancing environmental risks against benefits is a key requirement of U.S. pesticide law. While other countries only look at risk, federal law requires EPA to use the most robust data available to identify risks as well as benefits and consider both in our pesticide regulatory decisions.

EPA has applied this same approach to identify and address potential risks to other non-target species, including birds and aquatic species, across all registered uses. Through well-informed, targeted approaches to mitigation, the Agency is confident the risks that remain from registered uses of the neonics are appropriately balanced by the benefits, as defined in federal law.

Neonic PID Internal Qs & As

Q1) Why isn't EPA banning the neonics like they have in the EU, Canada and other countries?

One reason why EPA's pesticide regulatory decisions sometimes do not track with those of foreign countries is the nature of federal pesticide law in the United States. The Federal Insecticide, Rodenticide and Fungicide Act requires EPA to consider the risks and benefits of registered pesticide use, but many other countries only look at risks. This naturally leads to different regulatory conclusions than a paradigm that requires risks to be weighed against benefits.

Another reason EPA's decisions differ from other countries is that our crops, climate and other factors differ, which results in both different pest pressures and associated registered uses. Canada, for example, has no commercial citrus groves and produces less than 2 percent of the quantity of grapes as the U.S.

Q2) Canada is banning the neonics due to risks to aquatic invertebrates. Why isn't EPA doing the same?

Potential risks to aquatic invertebrates, which play a foundational role in ecological food webs, are a potential risk concern, but Canada does not have the risk/benefit balancing requirement that EPA must account for under FIFRA. To address concerns about aquatic invertebrates under U.S. law, EPA put unprecedented effort into evaluating the risks to aquatic invertebrates that are associated with all uses, crops, crop stages, sites, etc. Adjusting application rates or timing will lower potential risks to these ecologically important species while still maintaining the availability of these tools for growers.

Q3) What about risks to birds from seeds that have been coated with neonicotinoids to protect the plant as it sprouts and grows?

Seed treatments have very high benefits and a lower risk profile for people and wildlife, including endangered species, compared to spray applications to the surface of an entire field.

That being said, there are potential risks to birds and small mammals that eat seeds coated with neonicotinoids. We believe that best management practices—such as farmers picking up spilled seed—will reduce exposure. High-tech, computer-controlled planting equipment is also becoming increasingly common in the U.S. and helps decrease incidence of spills compared to older, manually operated equipment.

Q4) What about risks from pet flea and tick products?

Though this has been less of a hot topic in media reporting compared to pollinator concerns, EPA has received human and pet health incident reports associated with neonicotinoid spot-ons and collars. Over the years, EPA has required registrants to make changes to spot-on products to address these concerns. At this time, we are not proposing additional mitigation on pet collars because the benefits are very high, with tens of millions of collars sold per year without ill effects, and the risks remain unclear. The Agency will continue to monitor these incidents.

Q5) What about the human health risks?

In addition to the risks to both children and adults from residential turf spray applications of imidacloprid described in the statement above, EPA also identified exceedances for several occupational use scenarios. For example, workers in seed treatment facilities and applicators in certain agricultural spray scenarios have potential for risk that exceeds the Agency's level of concern. EPA is proposing additional personal protective equipment, such as gloves and respirators, or requiring closed loading systems and a restriction of on-farm treatments on labels. The Agency does not anticipate significant objections to these proposals.

Q6) What about bee kills caused by dust from off-site drift from seed treatments?

For most of the neonicotinoid active ingredients with seed treatment uses, the potential for off-site drift of contaminated dust at the time of planting was identified in the risk assessments. EPA is focusing on mitigating risks from this exposure pathway through wider education and encouraging best management practices. The Agency is working with the regulated community to develop new technologies to reduce potential dust-off during planting. [HYPERLINK "https://www.epa.gov/pollinator-protection/2013-summit-reducing-exposure-dust-treated-seed"] provides more information on this issue.

The docket at the time of release of the proposed interim decision will also include stewardship pieces from EPA and technical registrants discussing potential ways for increasing education on best management practices that reduce potential exposure to bees from dust-off.

Q7) Is EPA's proposed mitigation protective of bees/pollinators?

EPA's risk management approach for neonicotinoids is to preserve a key tool for growers while maximizing targeted risk reduction, particularly to honey bees, which provide a benefit to agriculture through pollination. Rate reductions for certain crops where pollinator exposure is expected and restricting critical pre-bloom application for certain crops is expected to significantly reduce potential risks to pollinators, including native bee species.

Voluntary stewardship efforts to encourage best practices, education and outreach to applicators and beekeepers are also a key component in promoting pollinator protection.

Neonic PID Tweets

New data support EPA's proposal to cancel residential turf applications of imidacloprid, a neonicotinoid insecticide.

Like orange juice? Asian citrus psyllid represents an existential threat to US citrus growers. EPA's proposed regulatory decisions on neonic insecticides lets growers continue protecting their groves from citrus greening disease.