

## **A Synthetic Pesticide is Killing Bees and Endangering our Food Crops – But will the Feds Step In?**

For years, honeybees have been dying at an alarming rate, and a major contributing factor has been the increasingly widespread use in Western countries of a popular synthetic family of pesticides called neonicotinoids, or neonics.

This is a major concern for our national ecosystem and the global environment. Managed bee populations are relied upon by the agriculture industry because they are responsible for cross-pollinating and keeping commercial agriculture productive. About a third of our foods (some 100 key crops) rely on these insects, including apples, nuts, all the favorite summer fruits (like blueberries and strawberries), and alfalfa (important to the dairy and beef industries because cows eat it). In total, bees contribute more than \$15 billion to U.S. crop production, hardly small potatoes.

According to the United Nations, of the 100 crop species that provide 90 per cent of the world's food, over 70 crop species are pollinated by bees. World food production is therefore dependent on bees and their pollinating activity. While climate change is also a factor, man-made pesticides, the application of which can be easily controlled or suspended, are a relatively recent and significantly damaging influence.

Neonicotinoids have been linked by scientific studies to a decline in bee populations worldwide, as well as to the diminished pollinating productivity of the bees that remain. This is based on evidence that neonics compromise the immune system of bees as well as their ability to gather pollen and to reproduce. The United Nations has issued warnings about the decline in the bee populations due to the use of neonics since 2011.

The Obama Administration banned the use of neonics based on scientific evidence that they were harmful to the bee population and stood to endanger food crops worldwide. The Trump Administration lifted the ban in 2018, in part due to lobbying by the agriculture industry. The challenge is that while neonicotinoids are increasingly known to the public as a class of chemicals responsible for widespread pollinator decline, to growers they are a cheap means of dealing with historically difficult soil pests and are heavily used throughout the United States as a preventative measure. They are also heavily backed by agrobusiness and are responsible for generating revenue of up to \$1 billion annually. But an inconvenient truth is also part of the story: Neonics are killing bees.

Neonics have been proven to be a contributing factor in their population decline because exposure to them seems to open the door to other killers. For example, bees exposed to sub-lethal doses of neonicotinoids—the type the European Union is banning and that are used routinely in the U.S. on wheat, corn, soy, and cotton crops—become more easily infected by the gut parasite *Nosema*. In addition, in 2012, a French study indicated that this same class of chemicals can fog honeybee brains and alter behavior. And a British study on bumblebees, a natural pollinator in decline in many places, reported neonicotinoids prevent bees from supplying their hives with enough food for queen production. This is partly due to what researchers believe to be a neonics-induced loss of the ability of bees to navigate their way back to the hive.

Still more European nations have taken action based on their own scientific studies. Two large scale studies, one focused on honeybees in Canada and the other covering three species of bees in the United Kingdom, Germany and Hungary, tested the popular agrochemical's influence on bees on real world settings (not laboratory conditions) and concluded that it not only compromised their ability to

reproduce, but actually killed them. These new studies say the environmental levels of neonicotinoids surrounding farms do not obliterate bee colonies outright, but instead kill them over extended periods of time. The pesticides also threaten bee queens in particular — which means colonies have lower reproductive rates. The Canadian study tracked the use of neonics continuously over a full five-month growing season, unlike previous studies which had monitored impact on bee populations only periodically.

What is hard to believe is that despite mounting scientific evidence, the controversy over the cause of the decline in the bee population continues, in part due to the financial interests of those who sell and use neonics, and the influence they can bring to bear on policymakers, as evidenced by the lifting of the Obama-era ban on neonics.

In June 2021, U.S. Representatives Earl Blumenauer (D-OR) and Jim McGovern (D-MA) reintroduced the Saving America's Pollinators Act (SAPA), H.R. 4079, to reverse ongoing declines in wild and managed pollinators, including honeybees. New data released in June for 2020-21 documents the second highest honey bee losses in 15 years. H.R. 4079 uses the latest scientific research in an effort to ensure that pollinators are protected. The bill would suspend the use of neonicotinoid (neonic) insecticides and other pesticides harmful to bees and other pollinators until an independent board of experts determines that they are safe to use, based on a strong scientific assessment. You can urge your elected representatives to support this legislation here:

<https://secure.everyaction.com/iifhj5bJsEeJPgwdzoP69Q2?emci=535a4dca-11e1-eb11-a7ad-501ac57b8fa7&emdi=ea000000-0000-0000-0000-000000000001&ceid=>

At this writing, it is unclear whether the Biden Administration will let the federal legislation run its course, or step in as President Obama did and prohibit the use of neonics by executive order. Another helpful course of action will be to educate farmers on the risks and benefits of neonicotinoids, as well as potential government oversight to promote non-neonics treated seed production. Both could go a long way in reducing neonicotinoids in our agricultural systems, and their impact on the bee population. A third path would be to call on major retailers like the online giant Amazon to stop selling bee-killing pesticides. Lowes announced in April 2015 that it would stop selling neonics-containing pesticides. Home Depot committed to following suit by the end of 2018...so it may be time for Amazon to join them. In the absence of decisive action in the next few years, honeybees could well become an endangered species, with a damaging ripple effect on world food supplies.

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