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Save the Bees

Analysis by Dr. Joseph Mercola Fact Checked | July 18, 2023

STORY AT-A-GLANCE

- Information from a survey by the University of Maryland and Auburn University found that 48% of the honeybee colonies were lost from April 2022 to April 2023. More than 130 fruits, vegetables and nuts and 35% of the world's crops depend on pollinators, like bees
- One of the primary challenges to the bee population is parasitic mites that originated in Asia. It once took a 60% infestation to damage a colony of bees that now experience massive problems from a 2% infestation
- Experts believe that if neonicotinoid pesticides (neonics) don't kill bees outright, they weaken immunity, making bees more vulnerable to parasites like the Varroa mite. Neonics may also enhance the fertility of the mite, increasing damage to the bee population
- As Amy van Saun, senior attorney for the Center for Food Safety, notes, the EPA has effectively abdicated its role as an agency to protect the health and environment in America. They are increasingly and knowingly approving chemicals that are harmful to people and the environment
- The application of dangerous pesticides affects people eating plant and meat-based diets. As the fake-food industry pushes more people toward an ultraprocessed, plant-based food diet, you have to ask if this is a coordinated attack to kill livestock and destroy crops through pollination loss ultimately pushing people to all lab-grown "food"

More than 130 fruits, vegetables and nuts,[1] and 35% of the world's crops depend on pollinators.[2] The USDA estimates that's 1 out of every 3 bites of food that go into your

mouth, and likely more than that if you eat a whole food diet.

One of the primary pollinators is honeybees, which have suffered drastic population losses in the past decade and last year was no different.[3] Farmers are unable to grow certain crops, such as blueberries, almonds, apples and other fruits, without bees. The loss of wild bees has meant farmers must rely on rented bees from commercial beekeepers who move their hives from one location to the next to help farmers pollinate their crops.[4]

Hail Bennett of Bennett Orchards in Frankford, Delaware, is one such farmer who rents bees.[5] He has millions of flowers across 6 acres of blueberries, and "each flower has to be visited six to eight times by a honeybee in order to be fully pollinated," he told NPR. "It's pretty amazing how much work the bees have to do."

Most crops benefit from a variety of pollinators, so farmers are encouraged to nurture those that live around the farm. However, as is demonstrated by the rapidly declining population of bees, relying on one pollinator is a financially and environmentally risky business.

Renting honeybees for pollination may be insurance against crop failure, but it is only a stopgap process. It is essential that native pollinators are nurtured, and resilience is built in those populations to ensure a stable food supply, and that includes honeybees.

48% of Bee Colonies Lost in the Year Ending April 1, 2023

Information from a survey by the University of Maryland and Auburn University found that 48% of the honeybee colonies were lost from April 2022 to April 2023.[6] The survey also found that in the summer of 2022, an estimated 24.9% of honeybee colonies managed in the U.S. were lost.[7] However, the summer loss rate was only slightly higher than the previous 12 years of colony losses.

It was the rising 2022 to 2023 winter losses that were the second highest loss since experts began tracking honeybee colony losses. Commercial beekeepers rank an

acceptable winter loss rate as 21.3%, yet the losses during the winter of 2022 to 2023 were an estimated 37.4%.

Over the year from April 1, 2022, to April 1, 2023, it's estimated 48.2% of the managed honeybee colonies in the U.S. were lost, which is 9.2 percentage points higher than the previous year and nearly as high as the highest annual loss on record which occurred between 2020 and 2021.[8]

The data come from an online questionnaire of 3,006 beekeepers who collectively manage 314,360 colonies. Experts estimate that this represents 12% of the managed honey-producing colonies during 2022 in the U.S. When Bennett was in high school, he remembers hearing stories about honeybee colony collapse or bees disappearing from their hives. The situation hasn't changed and, in fact, it's getting worse.

Former USDA research scientist Jeff Pettis spoke to NPR about the survey findings. "It's bad," Pettis said. "It shows beekeepers are still being affected by a number of challenges."[9] Pettis said a major problem for bees is the Varroa mite that feeds on bees and increases the risk of early death.

The mite originated in Asia and responds to expensive and time-consuming organic acids or synthetic products. Pettis listed other challenges, including pesticides, monocropping leading to less diverse food sources, and urbanization. However, it’s the Varroa mite that increases the bee’s vulnerability to pesticides that appears to have a significant impact on the bee population. While the mite is a challenge, it’s the combination that has created a large problem.

University of Maryland bee researcher Nathalie Steinhauer told AP News[10] that it used to take 60% of the colony to be infected with the Varroa mite to cause problems with the hive, but presently an infestation of up to 2% can cause massive problems.

Pollinator Loss Reason for Millions of Early Human Deaths

In an article in Common Dreams,[11] Amy van Saun, senior attorney for the Center for Food Safety, commented on a study published in Environmental Health Perspectives[12] that

found the loss of pollinators throughout the world has caused one-half million early deaths each year, drastically reducing the global supply of foods dependent on pollination.

She writes that the crisis is linked to "an overwhelming number of scientific studies"[13] demonstrating the decline in bee population is directly linked to their exposure to toxic chemical pesticides, many of which have long-term detrimental effects on the bee population and pose an increased risk to the ecosystem.

In the 2022 study,[14] researchers created a model that demonstrated the impact insufficient pollination has had on global human health. In addition to this, they also estimated the impact it has on inter-regional trade and made a comparative risk assessment on dietary changes and mortality by country.

The data revealed that between 3% and 5% of fruit, vegetable and nut production is lost, which has led to an estimated 427,000 excess deaths each year from loss of nutrition and an increase in associated diseases.

Interestingly, the model demonstrated that the highest impact on consumption and mortality was in middle and high-income countries where there was also a higher rate of noncommunicable diseases, while low-income countries experienced a significant loss in income and crop yield.

Neonics Pose an Ecosystem-Wide Threat

What many Americans don't know is that the majority of soybean, corn, canola, sunflower, potato and many vegetable seeds planted across America are precoated with neonicotinoid insecticides,[15] also known as neonics. Unlike traditional pesticides that sit on the outside of the plant, neonics become systemic and are absorbed into the plant.[16]

This means that pollinators are exposed to the chemicals when they collect pollen, nectar or even drink dew droplets on the plant leaves. The insecticide interferes with the insect's nervous system, triggering paralysis and death. According to van Saun, one treated corn seed has enough to kill over 80,000 honeybees or one songbird.[17]

Ironically, this class of insecticides was introduced as a safer alternative. Yet over the years, data have repeatedly shown the opposite to be true. A 2017 review[18] of the evidence published in Environmental Science and Pollution Research International summarized the concerns.

The paper noted that 5% of the active ingredient in the pesticide is absorbed by the crop and the rest is dispersed throughout the environment. After risk assessments, the European Union adopted a partial ban in 2013, saying:[19]

> *"Whilst much of the recent work has focused on the impact of neonicotinoids on bees, a growing body of evidence demonstrates that persistent, low levels of neonicotinoids can have negative impacts on a wide range of free-living organisms."*

Although much attention has been focused on the dangers of glyphosate in modern agriculture, neonics are just as much a threat. Data show that neonics weaken bees' immunity,[20] which makes them more vulnerable to viruses and parasites, like the Varroa mite. The insecticide may also enhance the fertility of the Varroa mite.[21]

Since the chemicals are water soluble, they can also get into the waterways where they affect wildlife. By 2018, the European Union expanded the ban on neonics[22] after the 2013 moratorium. A 2019 study[23] found:

> *"[O]ur screening analysis demonstrates an increase in pesticide toxicity loading over the past 26 years, which potentially threatens the health of honeybees and other pollinators and may contribute to declines in beneficial insect populations as well as insectivorous birds and other insect consumers."*

EPA Abdicates Protection Role

As van Saun notes, the EPA has effectively abdicated its role as an agency to protect the health and environment in America. They are increasingly and knowingly approving chemicals[24] that are harmful to people and the environment. She writes:[25]

> *"Last June, a federal court ruled[26] that EPA's reapproval of glyphosate, the main ingredient in Roundup, was unlawful for all uses. It even rebuked the agency for ignoring real-world evidence of cancer risks from glyphosate, and for failing to consider impacts to endangered species.*
>
> *While the court ordered EPA to redo its human health and ecological risk assessments by October 2022, the agency blew its deadline and now says it won't complete this vital review until 2026."*

Despite research data showing it increases the risk of cancer, possibly by 41%,[27] and IARC noting in 2015[28] that glyphosate is "probably carcinogenic to humans," as well as civil court actions against the manufacturer for the same,[29] the EPA announced in 2022 that "EPA's underlying scientific findings regarding glyphosate, including its finding that glyphosate is not likely to be carcinogenic to humans, remain the same."[30]

Even without exposure during application, your health is still at risk from food contamination, and more than 70% of Americans have detectable levels of glyphosate in their body.[31] Glyphosate inhibits the shikimate pathway in the plant,[32] yet Monsanto, now Bayer, has long defended the chemical's safety, saying it cannot affect humans because we do not have this pathway.

However, the shikimate pathway is found in human gut bacteria, which we now know play a vital role in human health and which is the basis of one lawsuit.[33] van Saun also writes[34] about another super pesticide sold under the name Enlist that is linked to reproductive problems in humans, Non-Hodgkin lymphoma and Parkinson's disease.

It's an old and dangerous pesticide that the industry says is necessary due to the widespread pesticide resistance in weeds. Despite knowledge of the deadly risks associated with the ingredients, the EPA gave Enlist a seven-year green light in 2022.

Plant-Based Processed Foods Also Depend on Pollinators

The application of dangerous pesticides affects people eating plant and meat-based diets. Animals fed grains and plants sprayed with glyphosate[35] or neonics[36] can likely

absorb these chemicals into their flesh in the same way that they are found in humans.

As the fake-food industry pushes more people toward an ultraprocessed, plant-based food diet, I have to ask if this is a coordinated attack to **kill livestock** and destroy the crops through pollination loss to push people to all lab-grown "food." Nearly all the ingredients in Beyond "beef"[37] and Impossible "Burgers"[38] include plants that are self-pollinators and do not need the help of insects.

It doesn't take too much imagination to think that the industries are colluding to ensure the loss of easily purchased whole food no matter where it's grown. Without pollinators,[39] apples, melons and most berries grown in your backyard will disappear. Coffee and chocolate will be a thing of the past — unless, of course, it's grown in the lab.

What can survive is corn, soy and sunflower, some of the main ingredients in fake meat that do not require pollinators to produce seeds. The question of how healthy or **unhealthy fake food is** may be a moot point if lab-grown meat, soy and corn are all that are left to support life.

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