



# Bee on Your Best Beehive-iour: What You Can Do to Protect Bees

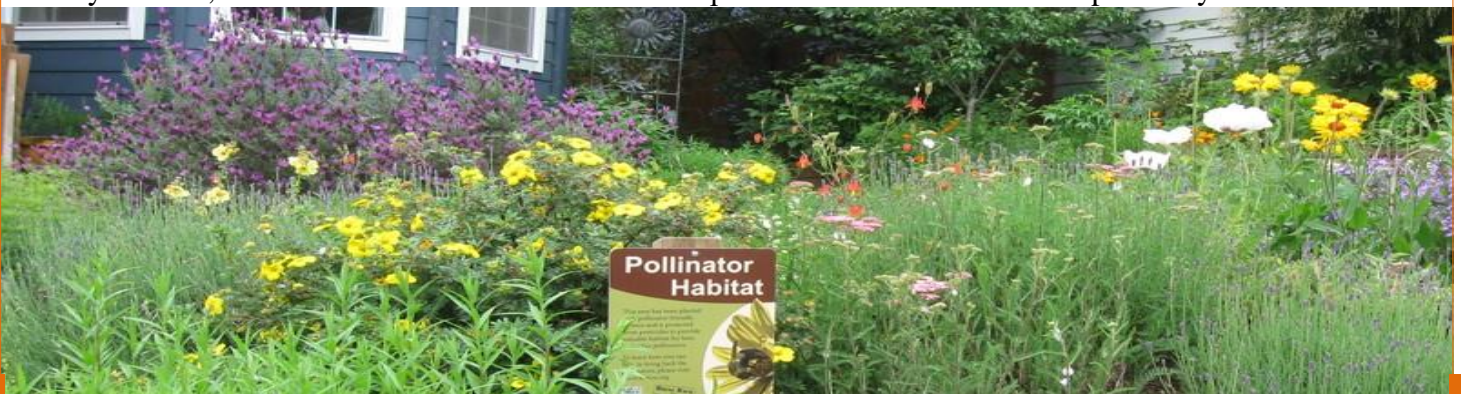
## Overview

Pollinators, such as honey bees, beetles, butterflies, moths, and hummingbirds, are indispensable components of our food web. Globally, animal and insect pollinators contribute to 35% of all food production, with 87 of the leading 115 crops dependent on these native pollinators.<sup>i</sup> A significant decline in honey bees, will result in smaller harvests and higher food prices for staple foods like almonds, apples, cucumbers, melons, and cranberries.

Unfortunately, there is a global decline in bee populations and massive bee die-offs for the last two decades. Since 2006, beekeepers are reporting abandoned beehives full of honey, a sign of a phenomenon known as colony collapse disorder. In 2019, beekeepers reported losing 40% of their hives.<sup>ii</sup> Between 40-68% of New York honey bee colonies have died each year since 2006.<sup>iii</sup> In order to protect the pollinators we all rely on, there are a number of actions we can all take at home to promote healthy bee populations.

## Top 8 Bee-Protective Beehive-iours

**1. Choose native and bee-friendly plants.** Bees rely on nectar and pollen as their sole food source and choosing blooming plants that are naturally found in your region can help ensure sustainable bee populations. In New York, there are over 400 species of bees, with pollination occurring from early spring through the fall. Keeping wildflowers and shrubs blooming, including a variety of colors, will help bee populations thrive when we need them most. Native plantings also have the benefit of not requiring additional fertilizers, pesticides, or watering, which benefits not only bee populations but also protects our drinking water resources, health, and communities. For help finding which plants are native to your area, National Wildlife Federation's native plant finder database here: <https://bit.ly/33dYaDJ>.<sup>iv</sup>



**2. Let go of the idea of a “perfect lawn!” Manicured lawns offer little to no habitat for bees.**

Frequently clipping grass and weeding means that bees cannot find the nectar and pollen they need. In fact, plants like dandelions, astors, and milkweed are a great food source for our pollinators, so just allowing weeds to grow in your yard provides benefits for local pollinators.

**3. Help keep bees hydrated.** Bees can drown, so they tend to avoid deep drinking water sources. One simple and effective way you can help local pollinators is to create a safe place on your property for bees to hydrate. You can fill up a small birdbath or basin with water, and then add stones and/or floating cork for the bees to stand on while they drink. Just make sure you change the water every few days to avoid mosquito larvae from collecting in the still water.



**4. Do NOT use pesticides.** Overuse of pesticides is detrimental to our pollinator populations. The use of pesticides has unintended consequence including harming or killing bees and other beneficial insects. Bees die by direct contact with the pesticide while foraging and can also endanger the whole colony by returning to the hive with pesticide residual on its body. Even pesticides labeled as “organic” can still be toxic to bees. The safest option is to not use pesticides. Use alternative approaches to keeping pests out of your garden, such as attracting beneficial insects, such as praying mantises and ladybugs, which prey on pests. Planting companion plants, such as herbs, that deter pests. Remove weeds and pests by hand or use natural pest control products such as neem oil extract or diatomaceous earth.



**5. Buy local honey.** The decline in bee populations and colony collapse disorder threatens local beekeeper businesses, and in turn, the local agriculture that rely on bees. Choosing to buy local honey is great way to support your beekeepers while ensuring that the honey you get is undiluted, and rich in vitamins and antioxidants. The taste of the honey will vary based on the local landscape, including the types of wildflower nectar available in the area. New

York is home to a wide variety of local honey; explore and try all the different honeys near you!

**6. Promote bee nesting.** Most bees in this country do not live communally; they are solitary and lay their eggs one at time in a series of tunnels. These bees are not aggressive and rarely sting humans since they are not defending a hive. In New York, over half our native bees are solitary digger bees which lay eggs and nest in the ground.<sup>v</sup> Simply leaving some bare patches of ground in your yard provides local bees with the habitat they need to reproduce and nest safely. Other bees nest above ground in small places so that they



can tunnel into the ground. Some common bee habitats include hollow plant stems and the wood of trees with existing boring holes from beetles or other insects. You can further support bees' nesting habitat by either having these types of natural nests available, or even build a "bee hotel" in your backyard out of bamboo, reeds, wood, and other common materials.<sup>vi</sup>

**7. Avoid exterminating bees.** If you happen to have a beehive or colony on your property, your first call should NOT be to an exterminator or pesticide applicator. Trained professionals, including beekeepers, are usually able to relocate hives without killing the bees. There has been legislation introduced, but not yet passed, in New York State requiring that the Division of Plant Industry of the NYS Department of Agriculture and Markets and/or local beekeepers are contacted to attempt to save the bees before allowing the colony to be exterminated. If you have an issue with bees on your property, the best thing to do is to call the Division of Plant Industry (518-457-2087) or call local beekeepers in your area to safely extract the bees.



**8. Support legislation that protects pollinators.** Neonicotinoids, a.k.a. "neonics," are a class of pesticides that attack the nervous system of insects, including bees. These pesticides can be sprayed on plants or applied as a coating to the seeds of plants such as corn, potatoes, and soybeans by pesticides companies. The chemicals persist and spread as the plant grows, making the entire plant toxic to bees and other pollinators. Numerous studies demonstrate these chemicals damage bees' brain function,<sup>vii</sup> including their ability to "home in," or find, their hive. While the pesticides in seed coatings contribute a great deal to the loss of pollinator populations, a recent study found they do little to increase agricultural production or provide economic benefits to farmers.<sup>viii</sup> The European Union has banned these pesticides due to their unacceptable risk to bee populations, but many of these toxic neonics are still commonly used in New York. Neonic corn and soybean seed treatment account for 73% of neonics used in New York agriculture.<sup>ix</sup> Curbing New York's use of neonics is critical in protecting our pollinators.

Multiple bills have been introduced in the New York State legislature to address neonics, and new bills will likely be introduced in 2021. Stay up to date on legislation to protect bees and how you can help pollinators by signing up for CCE action alerts at [www.citizenscampaign.org](http://www.citizenscampaign.org)!

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<sup>i</sup> Pollinators Help One-third Of The World's Food Crop Production. University of California Berkeley. 2006. [https://www.sciencedaily.com/releases/2006/10/061025165904.htm#:~:text=Summary%3A&text=Pollinators%20such%20as%20bees%2C%20birds,published%20today%20\(Wednesday%2C%20Oct.](https://www.sciencedaily.com/releases/2006/10/061025165904.htm#:~:text=Summary%3A&text=Pollinators%20such%20as%20bees%2C%20birds,published%20today%20(Wednesday%2C%20Oct.)

<sup>ii</sup> Milman O. US beekeepers lost 40% of honeybee colonies over past year, survey finds. The Guardian. 2019. <https://www.theguardian.com/environment/2019/jun/19/us-beekeepers-lost-40-of-honeybee-colonies-over-past-year-survey-finds>

<sup>iii</sup> Neonicotinoid Insecticides in New York State: Economic benefits and risk to pollinators. Cornell College of Agriculture and Life Sciences. July 15, 2020 presentation.

<sup>iv</sup> Native Plant Finder. National Wildlife Federation.

[https://www.nwf.org/NativePlantFinder/?\\_ga=2.74303570.1348712935.1592849652-287904317.1592849652](https://www.nwf.org/NativePlantFinder/?_ga=2.74303570.1348712935.1592849652-287904317.1592849652)

<sup>v</sup> Bee Diversity in New York. Cornell University. 2020. <https://pollinator.cals.cornell.edu/wild-bees-new-york/bee-diversity-new-york/#:~:text=We%20estimate%20that%20there%20are,Melissodes%2C%20Bombus%2C%20and%20Coelioxys.>

<sup>vi</sup> Build Your Own Bee Hotel. National Geographic. <https://www.nationalgeographic.org/media/build-your-own-bee-hotel/#:~:text=Bee%20hotels%20are%20places%20for,live%20alone%2C%20not%20in%20hives.&text=Solitary%20bees%20lay%20their%20eggs,has%20laid%20an%20egg%20inside.>

<sup>vii</sup> Pesticides impair baby bee brain development. Imperial College London. 2020.

<https://www.sciencedaily.com/releases/2020/03/200303204458.htm>

<sup>viii</sup> Grout T, et al. Neonicotinoid Insecticides in New York State: economic benefits and risk to pollinators. Cornell University. 2020.

<https://pollinator.cals.cornell.edu/sites/pollinator.cals.cornell.edu/files/shared/documents/0727%20Accessible%20Neonicotinoid%20Assessment%20compressed.pdf>

<sup>ix</sup> Grout T, et al. Neonicotinoid Insecticides in New York State: economic benefits and risk to pollinators. Cornell University. 2020.

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