



City of Big Lake Environmental Education Newsletter

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Why are people so concerned about pollinator protection?

Colony Collapse Disorder

- 2006: Beekeepers reported losing between 30% and 90% of their colonies
- No single factor could explain the sudden loss in honey bees
- In 2015-2016, Minnesota reached a total winter loss of 44,784 colonies, which is about twice the normal rate of loss over the winter

Because of their familiarity and wide geographic range, we recognize honey bees and monarch butterflies as flagship species for all pollinators; however, many other species of bees, butterflies, moths, beetles and birds are also pollinators.

Pollinators provide enormous ecological and economic benefits. They are critical to maintaining the healthy ecosystems of Minnesota. Bees are the most efficient and important animal pollinators for many of our food crops. Honey bees' pollination of food crops in the United States provides an estimated \$16 billion to the economy, and native pollinators provide an additional \$3 billion in value. We must also recognize the significant worth of native plant pollination, food and habitat for wildlife and other benefits that pollinators provide. Honey bees (a species not native to North America) attract attention because they are an important part of food production.



More than one-third of the world's crop species such as alfalfa, sunflower, and numerous fruits and vegetables depend on bee pollination, an ecological service valued in North America at \$20 billion a year. In North America the trends in honey bee numbers are decidedly downward, with the number of managed hives decreasing by 50% since the 1950s and the amount of crop acreage requiring bee pollination is at an all-time high. The cereal grains that make up the largest part of our diets, such as

corn, rice and wheat, are wind pollinated. But crop declines in the most nutritious—and arguably, most interesting—parts of our diet like fruit, vegetables, and alfalfa for meat and dairy production, are possible. While honey bees pollinate most of our crops, other bees are also important pollinators. The blue orchard bee flies early in the spring, when it might be too cold for honey bees, and pollinates fruit trees like apple and cherry trees. And the squash bee will seek out pumpkins and squash, making it a superior pollinator for those plants. Bumble bees make great tomato and pepper pollinators thanks to their habit of buzzing the flower to shake pollen loose. Bees ensure garden plants, ornamentals, and wildflowers get adequate pollination.

Bees play a keystone role in the productivity of agriculture and the beauty of our world through the pollination of fruits, vegetables, nuts, and flowers. The disruption of natural habitats leading to lack of “bee flowers,” the widespread overuse of pesticides, and numerous bee diseases and parasites have pushed honey bees to the tipping point. This honey bee crisis is broadly termed Colony Collapse Disorder. Our native bees are also in decline due to unprecedented habitat loss, pesticide contamination, and their own diseases.



You can help bees in three ways:

1. Plant bee flowers everywhere
2. Provide nesting habitat
3. Keep bee flowers clean - do not treat bee-friendly flowers with pesticides (insecticides, fungicides, herbicides, etc.).

Information came from the US Fish and Wildlife Service, University of Minnesota Bee Lab, and the MN Environmental Quality Board