

## Source 1: Trouble in the Hive

Let's talk about four big problems that honeybees face: disease, pests, pesticides, and Colony Collapse Disorder. Colony Collapse Disorder, often called CCD, is something of a mystery. When it happens, a healthy seeming colony suddenly falls apart. All or almost all the worker bees disappear, leaving behind the queen and maybe a few nurse bees. The thousands of missing workers don't die (at least not in the hive). They simply disappear. This phenomenon began in the autumn of 2006. A wide number of culprits have been brought up. It's hard to be sure, though, because no one thing is always present when CCD takes place, and some things, while maybe not the direct cause, can really weaken the colony and make it more vulnerable to whatever does cause CCD. One possibility is disease. What we do know is that an average of 30% of colonies have died from CCD since 2006, with some beekeepers losing as much as 90% of their colonies virtually overnight.

Disease is another huge problem. American Foulbrood is extremely contagious and a huge threat to honeybee populations. It only affects worker, queen, and drone larvae that is less than 2 ½ days old, but that's more than enough to kill the hive. The larva eats the, and it multiplies inside it until it dies. The larva turns from their healthy, succulent white to a flattened brown. Eventually the dead larva hardens to a small, black scale inside its cell. Another disease is Paralysis. It can come from eating pollen of certain plants. The bees lose their hair, take on a greasy look, and tremble. A colony can recover from paralysis naturally, but if it doesn't, you should find a new queen so that it doesn't spread.

Honeybees have plenty of enemies in nature. The stories are true - bears really do love honey, and they'll go to great lengths to get it, including smashing the hive beyond repair. Mice are a problem in winter for beekeeper boxes, when they'll crawl inside a nice warm beehive to build their nests. A mouse will stay in the corner of the hive, away from the bees, but it will chew through wax and frames to make room, and the smell of its pee will keep the bees from coming back into the hive in the Spring. In addition to invaders of the hive wasps, hornets, and yellow jackets will sometimes kill bees at the entrance to their hive or out in the wild.

One of the most deadly hazards to bees actually comes from humans, in the form of pesticides. Bees are insects, after all, and chemicals designed to kill insects don't make exceptions for the ones we like. Unfortunately, many pesticides are harmful to bee population. There are some pesticides that kill the bees directly. This occurs when bees are on the flowers at the time of application of the insecticide, and the bees die instantly. Some other types of pesticides allow the bees to return home and then they die. Such types are easy to identify than the first ones. There are certain pesticides that do not have any effect on the adult honeybees, but cause damage to young, immature bees.

## Source 2 : Bees: Buzzing With Importance

Bees are amongst the most important creatures to humans on Earth. Bees pollinate 80% of flowering plants on Earth. One single bee colony can pollinate 300 million flowers each day. Bee pollination helps to provide nourishing habits like bushes and trees for animals like birds and other insects. Bees are major contributors the flowery landscapes that we know and love in nature. They help create beautiful scenery.

Bees are also important to the human food supply. Did you know 1 in 3 bites of food we eat is comes from plants pollinated by bees? Bees pollinate about 75% of fruits, nuts, and vegetables grown in the US. Almonds are a food that is totally dependent on bee pollination. No bees, no almonds. Avocados, apples, and cherries are over 90% dependent on bee pollination. Cucumbers, kiwis, and melon are others that are very dependent on bee pollination. And what about honey? One of the biggest reasons to care about saving the bees. HONEY! No honeybees, no honey. Honey acts as a natural cough syrup, helps with sneezy, itchy eyed allergies, and helps people manage health problems like diabetes and being overweight. Honey is a healthier sweetener than sugar and can help reduce cholesterol. Too much cholesterol can be dangerous for your heart.

Bees are an important part of history. Bees have been producing honey from flowering plants for 10-20 million years. Honey is mentioned in books that are thousands and thousands of years old. Honey was used in ancient Egyptian kitchens as a sweetening agent and as a tribute or form of payment. Honey was also used for medicinal purposes in American Colonies in the 17th Century.

Bees are great for American economy and help families and businesses survive. Honeybees provided for over \$19 billion dollars in added value to the agriculture business in 2010. Commercial beekeeping businesses are commonly family businesses passed down for generations. \$150 million of honey is produced every year in the United States.

**Directions:**

After reading the articles “Bees: Buzzing with Importance” and “Trouble in the Hive.” Write an informational essay in which you explain the challenges bees are facing and why we should help them.

Manage your time carefully so that you can

- read the passages;
- plan your response;
- write your response; and
- revise and edit your response.

Be sure to include

- an introduction;
- information from the passages as support; and
- a conclusion that is related to the information presented.

Your response should be in the form of a well-organized, multi paragraph essay.