

## **The Importance of Bees in Nature**

Let's acknowledge the incredible importance of bees in our natural world. Bees, whether wild or domesticated, are true workhorses of the ecosystem. Their primary job is pollination, which means they help plants reproduce by transferring pollen from one flower to another.

This process not only sustains natural environments but also ensures the production of fruits, nuts, and seeds that form the foundation of many food chains.

Overall, bees play a central role in providing a wide range of ecosystem services that not only enhance human well-being but also sustain the fundamental life support systems of our planet. These ecosystem services are inherently aligned with the pursuit of global sustainable development goals (SDGs).

## **Bees decline**

Bee populations are on the decline due to a combination of factors, including habitat loss, pesticide usage, the proliferation of parasites, fluctuations in the availability and variety of food sources, alterations in land use, shifts in climate patterns, and competition among different species. It's crucial to note that these influences frequently interact in intricate ways. For instance, the growing demand for agricultural products has led to the intensification of farming practices, which has not only limited bees' access to food resources but also raised their potential exposure to harmful agricultural chemicals.

## **Colony Collapse Disorder**

The colony collapse disorder (CCD) is a mysterious syndrome that consists of a simply low number of adult bees in the hive. There are no bodies, and although there are often many disease organisms present, no outward signs of disease, pests, or parasites exist. Often there is still food in the hive, and immature bees (brood) are present. The cause of the loss of bees seems to be the sudden early death, in the field, of large numbers of adult workers.

## **Safety measures**

In urban areas, there is a growing trend of implementing protective measures to improve the well-being of these bees. These measures include constructing bee houses, expanding the quantity and accessibility of bee-favored plants, and creating green roofs.

However, it's important to note that many of these protective initiatives primarily target formally managed green spaces such as urban parks, public and private gardens, and designated "ecological areas" with partial protection status.

# Questions

## The Importance of Bees in Nature

**1. What is the main role of bees in the natural ecosystem and how do they influence plant reproduction?**

- **Correct answer:** Bees are crucial pollinators, transferring pollen between flowers to enable plants to reproduce.
- **Wrong answer:** Bees perform a wide range of ecosystem services that enhance human well-being.
- **Wrong answer:** Bees produce honey, a nutrient necessary for the survival of a large number of animal species.
- **Wrong answer:** Bees, only wild, also support the basic life support systems of our planet.

## Bees decline

**2. What are the main factors contributing to the decline of bee populations and how do they interact with each other?**

- **Correct answer:** Habitat loss, pesticide use, pests, food shortages, climate change, and interspecies competition are factors contributing to the decline of bees.
- **Wrong answer:** Bees are very resilient to change. Only potential exposure to harmful agricultural chemicals is contributing to population decline.
- **Wrong answer:** The main reason for the decline of bees is the increase in organic crops. These types of crops do not use pesticides, which leads to the overpopulation of pests that harm bees.
- **Wrong answer:** The main cause of bee decline is the decrease in honey production. Due to the decreased demand for honey, beekeepers have reduced hive care, causing the decline of bees.

## Colony Collapse Disorder

**3. What is Colony Collapse Disorder (CCD)?**

- **Correct answer:** It is a mysterious syndrome characterized by low numbers of adult bees in the hive with no obvious signs of disease or parasites.
- **Wrong answer:** It indicates the tendency of bees to migrate to warmer areas during winter to return to the hive during warmer periods.
- **Wrong answer:** This is an event that occurs when bees cannot find food in the immediate vicinity of the hive.
- **Wrong answer:** It consists of the emptying of hives due to the presence of predators.

## Safety measures

**4. What are some of the protective measures taken in urban areas to improve bee welfare and conserve populations?**

- **Correct answer:** Safety measures in urban areas include building beehives, adding bee-pleasing plants and creating green roofs.
- **Wrong answer:** The main safety measure is to completely remove flowering plants from over-trafficked spaces to prevent bees from being attracted to dangerous areas.

- **Wrong answer:** The main safety measure for bees in urban areas is the implementation of "bee safe zones," which are areas with special walls to contain bees within them.
- **Wrong answer:** To ensure the safety of bees, it is essential to use specific pesticides to reduce the amount of other insect species in the vicinity of hives. This reduces competition for food and protects the bees' food resources, ensuring their safe environment.