



"Always Growing"



**THE CONSERVATION OF BEES IN UNISPICE FARMS**  
**JULY 2023**



The Guardian (2023) recently published an article “U.S. honeybees suffer second deadliest season on record,” where it explains how nearly 50% of bee colonies in the United States perished during the year ending on April 1, 2022, and how conservationists and beekeepers have worked tirelessly to create new colonies to maintain their existence relatively stable.

In this publication, we cite the causes that led to this phenomenon and explain how UniSpice works on its farms to conserve different bee species within its surroundings.

## THE IMPORTANCE OF BEES FOR FOOD SAFETY

The article mentions how “Honeybees are crucial to food supply, pollinating more than 100 of the crops we eat, including nuts, vegetables, berries, citruses, and melons. The U.S. Department of Agriculture says 35% of the human diet comes from insect-pollinated plants and the honeybee is responsible for 80% of that pollination.”

The staff at UniSpice farms has identified at least four different species of bees in the crop environment:

Anthophila,  
the most important pollinators in various crops. In this picture, it is seen during the blooming of the sweet corn crop.



Apis mellifera,  
essential pollinators, vital for the production and reproduction of many crops and wild plants. In this picture, it is seen inside a flower of Zucchini.





From the meliponines tribe, “stingless bees,” one of the smallest specimens of the apidae family, found foraging within farm areas. In this picture, it is seen on an index finger.



Scaptotrigonas, bees characterized by being larger than the previous ones, they are black and multifloral. In this picture, it was found foraging during the flowering of French Beans, carrying out the process of pollination.



## CAUSES OF LOSSES IN THE UNITED STATES

The article mentions that “Scientists said a combination of parasites, pesticides, starvation, and the effects of the climate crisis keep causing large die-offs. Last year’s 48% annual loss is up from the previous year’s loss of 39% and the 12 year average of 39.6%, but it’s not as high as 2020-2021’s 50.8% mortality rate, according to the survey, which was funded and administered by the nonprofit research group Bee Informed Partnership. Beekeepers told the surveying scientists that a 21% loss over the winter is acceptable, and more than three fifths of beekeepers surveyed said their losses were greater than that.”

## ACTIONS TAKEN FOR CONSERVATION ON FARMS

Recognizing their vital importance in the production process, the staff at the farms take the following actions for their conservation:



**Understanding and respecting their habitat:** As a first step, the staff is informed, trained, and made aware of the importance of bee conservation including the important role they play in pollination. They generally inhabit the canopies of the tallest trees or inaccessible cavities where they can take refuge. However, when swarms are found resting near the crop fields, the staff is warned not to disturb them for the common good and for their conservation.

**Modifying pesticide use:** On one hand, precautions are taken to schedule pesticide applications at times when bees are not active. On the other hand, products that do not cause harm to beneficial insects are being used, meaning gentle products that do not affect bees, as some species, especially the smaller ones, are very sensitive when it comes to the ecosystem where they live and forage.



**Having live barriers to build their hives:** The policy at the farms is zero deforestation. This supports the conservation of trees around and within the farms so bees can build their hives.

**Taking care of biodiversity in the farms:** Unispice has adopted best production practices to preserve the connectivity of the natural habitat in the farms, so that wildlife can move freely and to ensure that the productive infrastructure doesn't disrupt this connectivity.



**Swarm mobilizations into modern beehives:** UniSpice has knowledgeable beekeeping personnel who give recommendations and monitor the hives to preserve the swarms, so they are beneficial to the crops. When a swarm is in an area scheduled for harvest, it is moved to a modern Langstroth beehive. These swarms decide where their next habitat will be; they usually choose to stay nearby and help with the pollination process. They are physically located in a remote area, and it is strongly recommended not to disturb them or not to approach them without proper personal protective equipment.



## REFERENCES

The Guardian (2023). US honeybees suffer second deadliest season on record. News Topics/ Climate crisis; UK. Recovered from: [https://www.theguardian.com/environment/2023/jun/23/us-honeybees-second-deadliest-season?CMP=oth\\_b-aplnews\\_d-1](https://www.theguardian.com/environment/2023/jun/23/us-honeybees-second-deadliest-season?CMP=oth_b-aplnews_d-1).