



BOMBUS TERRESTRIS (EARTH BUMBLEBEE)

Bumblebees (*bombus terrestris*) are a unique alternative to manual pollination. Several benefits have emerged with the development of natural pollination including, labour saving, production increase and quality improvement.

Life cycle and efficacy

The bumblebee queen emerges from the ground after a period of dormancy and searches for food. At the same time, she looks for a suitable nest site to establish a population. At first, she lays a few eggs. She nurtures this brood with pollen and nectar that she collects alone. The eggs become larvae and after some time they pupate, from which the young workers emerge. The queen now stays up in the nest and takes care of egg laying. The workers now take care of the brood. To do this, they need to collect pollen and nectar. Which results in the pollination of flowers. A bumblebee hive is hatched with 60 - 80 workers and grows into a hive with 150 - 450 workers. After this, new bumblebee queens and drones are born. The pollination activity of the hive then slowly decreases. The old queen stops laying eggs and dies after some time. The young bumblebee queens and drones start mating, after which the fertilised bumblebee queens again find a suitable place in the ground to rest, waiting for the new season.

Nestbox

The nest box is exclusively developed and constructed from environmentally friendly components. The inner and outer dimensions are such that the bumblebee colony can develop properly, there is sufficient food available for the entire pollination period and the box is easy to handle. Thanks to the well-thought-out construction, optimum ventilation also takes place which benefits the longevity of the hive. Dimensions: L29 x W25 x H20.



Food

Since some crop flowers (tomato, among others) do not produce nectar (sugars), the bumblebee hives are given the necessary nutrition in the form of specially manufactured sugar substances. This ready-made nutrient solution (sugar water) is enough for the entire pollination period of the bumblebee hive.

Instruction manual

- Check the hive upon receipt before use for damage that could cause the bumblebees to escape or leak sugar water.
- Place the hive as soon as possible near the plants to be pollinated, but not in a hobby greenhouse, because the surface area is too small and over-flying can cause damage to the plants.
- Place the hive on a horizontal support (if the hive is at an angle, the sugar water may leak).
- Place the bumblebee hive with the flight opening facing east, but not in full sunlight.
- Protect the hive against heavy rain.
- After placement, let the bumblebee hive rest for at least half an hour before opening the slide.
- Make sure ants cannot reach the hive by using grease or insect glue to create a barrier and avoid contact between plant parts and the hive.
- If pollination activity is desired for an extended period, new nest boxes should be placed regularly.

Climate conditions

Bumblebees work optimally at an ambient temperature of 17°C-28°C.

Side effects

There are two flight holes in the nest box. One of them provides a facility, allowing the bumblebees to enter but not fly out. The other flight hole allows flight in both directions. This system makes it possible to quickly get the bumblebees into the nest box at any time, if this is required due to a crop spray. To do this, close the flight hole for two-way traffic. All bumblebees will be back in the nest box within 1 hour.



Precautions

Bumblebees can be attracted to certain colours and fragrances, blue clothing, aftershave, make-up and the like. Bumblebees are not aggressive and they rarely sting. An acquired bumblebee sting will in most cases only result in localised swelling and itching. This is not alarming! Azaron (available at drugstores) reduces the pain or itching. However, some people develop a hypersensitivity reaction the second or a later time they are stung. This leads, for example, to itching in places other than where stung or all over the body, to redness, blisters, breathing difficulties, nausea, sneezing, irritation in the nose, throat or on the eyes. **In such cases, consult a doctor immediately.**