

# Got a question?

## We have answers!

Check out our frequently asked questions.

To jump to a section, simply click on the below menu bar items.

Vectorite™ with CR-7

Bumble Bee Hives

Honey Bee Hives

Bee Keeper Specific

### **BVT's biological fungicide (Vectorite with CR-7) for control of common fungal diseases**

#### **1. How will the application of foliar fungicides/insecticides affect Vectorite with CR-7 performance?**

**Fungicides:** CR-7 is intended to provide a solid foundation for the protection of a crop against Botrytis or other diseases: it should be part of an Integrated Pest Management (IPM) or Integrated Pest and Disease Management (IPDM) program. Understanding environmental conditions and disease pressure is critical to type, dose and timing of fungicide applications. Multi-year trials (through university research centers and on commercial grower fields) have measured and confirmed the additive effect of bee-vectored CR-7 combined with a conventional or organic fungicide application program: it results in increased yields and a measurable reduction in pathogens. However, since CR-7 is a fungus, certain fungicide use can impact early establishment of the product on plant tissue. As bees continue to deliver CR-7 to the flowers, the product will establish itself as fungicide activity decreases.

BVT has a working list of fungicides that reduce the performance of Vectorite with CR-7. Contact us at [support@beevt.com](mailto:support@beevt.com) for this information.

**Insecticides:** Insecticides should have negligible effects on CR-7. However, please pay special attention to products or application methods that inhibit bee activity.

#### **2. Does Vectorite with CR-7 have phytotoxic issues with any crops?**

BVT has extensively evaluated CR-7 on multiple crops and no phytotoxic or pathogenic effects have been observed with the recommended use pattern and suggested rates.

#### **3. How does Vectorite with CR-7 affect bees?**

BVT has spent several years testing the bee vectoring of CR-7 on different crops and in different regions throughout North America and other parts of the world. We have done extensive work with honey bees and replicated trials with independent researchers.

We have observed no negative effects on bee health or behavior in our trials, and none have been reported by bee keepers using the system. In addition, the United States regulatory approval process through the Environmental Protection Agency (EPA) for registration of Vectorite with CR-7 in 2019 required bee safety to be taken into account and included acute and chronic feeding studies on bees. For more information on bee health and safety, visit [www.VectoriteBVT.com/resources](http://www.VectoriteBVT.com/resources).

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#### 4. How should I transport Vectorite with CR-7 after removing packs from the refrigerator before refilling dispensers or replacing trays?

Ideally, the sealed VectorPak™ trays containing product should be transported in a cooler (above freezing temperature) until they are placed in the hives. However, an air conditioned vehicle is fine; as long as the product is placed the same day it's removed from the fridge.

#### 5. Can I reuse Vectorite with CR-7 left in old trays (for bumble bee hives) or old cartridges (for honey bee hives)?

Product left over in a hive should never be reused: bacteria and bee defecate will build up over time, which can have a negative impact on bees, as well as lower product efficacy on disease control.

#### 6. When is the best time of day to change/refill trays?

Changing them in the evening, once the sun has gone down and the bees aren't flying, lets you minimize interaction with the bees, and allows you to transport the product when the temperature is lower.

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### **BEE VECTORING:** Commercial Bumble Bee Hive Related Questions

#### **1. Why aren't the bees flying? I can't see them in the field or entering/leaving the hives.**

Bumble bees usually fly very early in the morning and stay out longer than honey bees do. They also tend to work in a more linear fashion, meaning they can be harder to spot in the field. If the bee hive makes noise when you tap it that means it's alive and working.

#### **2. At what temperatures will bumble bees vector?**

The optimal minimal foraging temperature for bumble bees is 50 °F (10 °C), although they forage over a wide range of temperatures.

#### **3. Should I be concerned that honey bees are swarming my bumble bee hives?**

In some conditions honey bees will swarm a bumble bee hive to strip it of resources. This happens when there isn't a lot of nectar around for the honey bees to feed on, or if a bumble bee hive is too close to a honey bee hive. If resources are scarce, bumble bee hives should be deployed at 10% bloom coverage. Contact us at [support@beevt.com](mailto:support@beevt.com) for more tips to address this.

#### **4. When should I start bee vectoring?**

Bumble bee hives should be deployed no earlier than two to three days before blooming starts, ideally at 10% bloom.

#### **5. When should I stop bee vectoring?**

New product should be added to the hive up until at least 90% bloom, or to the end of your bloom. However, the bumble bee hives can remain in the field until the colony is no longer active (see question 16 in this section).

#### **6. How far will the bumble bees carry Vectorite with CR-7?**

In perfect conditions, they can carry product up to a mile. However, 350-500 yards is the average maximum distance.

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### 7. What is the appropriate distance to space my bumble bee hives?

Bumble bee hives should be placed around the field, with all treated areas falling within a 500-yard radius.

### 8. Is there anything I need to do for the hives in cold/frost conditions?

Close the hive exits in advance (blue tabs), allowing the bees to enter, but not exit, then fully close the hives for a minimum of four hours, and keep them closed when you bring them into a barn or closed space. If you can't move the hive, put blankets over them for the duration of the frost, opening the hive entrances again once ambient temperatures reach 50 °F/10 °C.

### 9. Why is the bumble bee brood outgrowing their hive?

As hives age, they grow in size. At around the eight-week mark, they reach full maturity and may outgrow their hive space. This is a good sign, as it means the hive is extremely healthy. If the tray area gets intruded, scrape away any brood built there and replace it with a new VectorPak tray containing fresh Vectorite with CR-7.

### 10. If I need to move a bumble bee hive, when is the best time?

Hives should be moved at night when the bees are less active. Close the exits (blue tabs) four hours before you move them, and keep them fully closed as you move. Once the hives have been repositioned, reopen all hive doors to allow bees free entry and exit.

### 11. What happens to the bumble bees when I spray insecticide?

Even bee-safe insecticides can have a detrimental effect on hives. We recommend only spraying at night when the bees are inactive. Or you can close the hive doors (blue tabs) and keep them closed for four hours after you've sprayed.

### 12. Why are there dead bumble bees in the VectorPak trays in the hive? How many is too many?

It is normal to find dead bees in the tray, as some will die naturally and end up in the tray area. However, if you find more than 15 dead bees after one tray change, that is cause for concern, and you should monitor that hive closely.

Please check your pesticide application regime as some insecticides and tank mixes of insecticides with fungicides could harm bees. Pesticide drift from neighboring fields could also affect health of the beehives.

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**13. When I open the tray area and see a lot of bumble bees there, should I continue to change the trays?**

If there are a lot of bumble bees in the tray, your best option is to try again later in the day. Alternatively, you can just carefully lift the tray out, leave it on the ground close to the hive, put a new one in, and return later in the day to dispose of the first tray properly.

**14. What if the bumble bee hive/quad has been damaged in transit?**

If the hive has been damaged, please contact BVT immediately at [support@beevt.com](mailto:support@beevt.com).

**15. Are the BVT tents/coverings really necessary over my bumble bee hives? What if I don't use pallets under my hives?**

Covering the hive boxes over top keeps the product dry and the bees healthier. Pallets under the hives also help keep the bees out of any potential flooding or heavy rain on the ground. We highly recommend using the tents and pallets, or at least raising the hive boxes off the ground.

**16. What do I do with the bumble bees and hives when the bloom is finished?**

The bumble bee hives operate for eight to 12 weeks after placement. After this period, close the hives entrances, and recycle or dispose of the parts.

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### **BEE VECTORING:** Commercial Honey Bee Hive Related Questions

1. Vectorite with CR-7 is building up on the bottom board of the honey bee hives during humid and/or rainy conditions, what should I do?

If there is powder building up on the bottom board of the VectorHive™ dispenser, simply wipe it off. You may need to adjust the system to drop product at a slower interval.

2. At what temperatures will honey bees vector?

Honey bees vector between 55 °F and 90 °F (13 °C and 32 °C). However, other weather conditions like humidity, wind and rain all play a part in when they will leave the hive.

3. What happens to the honey bees if there are other pollinating crops or plants nearby?

Typically, honey bees will forage on what is closest to the hive. They will still locate other resources, but to maximize their effectiveness on your crop, keep hives close to your target fields.

4. What is the proper distance to space my honey bee hives?

Although honey bee hives can be placed next to one another (a common beekeeping practice), it's best to ensure that hives are equally spaced around the field to maximize product dispersal and obtain optimum results. The treated area should, at the farthest point, be a maximum of 250 yards from a hive.

5. How far will honey bees carry Vectorite with CR-7?

Honey bees can deliver Vectorite with CR-7 about 250 yards from the hive. It is possible for them to carry it farther, but that is dependent on the length of the flight and number of flowers visited. It is important to space hives around the field to maximize product dispersal.

6. Do I need to have a water source near the hives?

If flowers are nectar-poor or the weather is hot and dry, you'll need a water supply: a small pail of water with floating islands placed nearby is sufficient.

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### 7. Is Vectorite with CR-7 safe for honey bees?

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We have observed no negative effects on bee health or behavior in our trials, and none have been reported by bee keepers using the system. In addition, the United States regulatory approval process through the Environmental Protection Agency (EPA) for registration of CR-7 in 2019 required bee safety to be taken into account, and included acute and chronic feeding studies on bees. For more information on bee health and safety, visit [www.VectoriteBVT.com/resources](http://www.VectoriteBVT.com/resources).

### 8. Will Vectorite with CR-7 affect honey quantity or quality?

No. The VectorHive dispenser and Vectorite with CR-7 does not impact the quality or quantity of honey.

### 9. How do I know the honey bees are delivering Vectorite with CR-7?

The best indicator that the honey bees are doing their job is that they are active and the VectorHive dispenser is dropping product.

### 10. When should I start bee vectoring?

Place the honey bee hives in the field three days before the crop blooms, and you should begin dispensing product when the blooms first open, at around 10% bloom.

### 11. When should I stop bee vectoring?

New product should be added to the hive up until at least 90% of bloom has been reached, or to the end of your bloom.

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### **FOR BEE KEEPERS:** frequently asked questions about honey bee hives

**1. Will the VectorHive dispenser fit my 8 or 10 frame hives?**

Yes. It's designed to fit both sizes.

**2. Do I need to remove my entrance reducer?**

A hive reducer can remain in place. However, the system requires the front of the hive be flush with the reducer, since the entrance to the dispenser rests on the bottom board, or flat with the entrance.

**3. Will the system affect bees' ability to enter and leave the hive?**

No. It has no effect on bee activity in or around the hive.

**4. Does Vectorite with CR-7 affect my honey production?**

No. It has no affect on honey production or quality.

**5. There are some holes in my hive, should I close them up?**

Yes. For optimal product performance, all bees in each hive must leave through the dispenser - additional exits will reduce the effectiveness of the system.

**6. I put my hives 4/6 to a pallet, do I need to take them off?**

No. The VectorHive dispenser fits onto the front of each hive, so they can remain on the pallets. The only reason to remove them is if there isn't enough room for the dispensers to fit.

**7. Can I ship/transport hives with the VectorHive dispenser attached?**

Yes, this is possible, but please ensure the dispenser is secured to the hive with at least two screws, and remove cartridges from the dispensers.



# Need help?

Contact BVT Customer Service



Toll-Free 1-888-442-8910



Support@beevt.com

Visit our Resources Center for additional information:

**[www.VectoriteBVT.com/resources](http://www.VectoriteBVT.com/resources)**



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