

# Bee Vectoring Technology: an army of commercially reared bees to deliverorganic pesticides to crops

\*Sakshi Saxena, Shivani Suman, Naveen and Nishikant Yadav Ph.D. Research Scholars, Department of Entomology, College of Agriculture, Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior, Madhya Pradesh

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## Introduction

Bees are amazing creatures. They pollinate plants, make delicious honey, and where possible, bees are used to control plants with insecticides to fight disease and increase yield. Bee Vectoring Technology (BVT) is commercializing a system that uses the natural pollination process used by bees to provide safe, organic crop treatment products for crops, help them control pests and diseases, and achieve higher yields farmers, while also using synthetic "Chemical pesticides" is

friendly and environment-friendly pesticide application method. BVT has developed a natural precision agriculture System, which replaces chemical pesticides and wasteful crop protection spray applications by providing organic pesticide substitutes for commercially grown bees' crops. BVT's Precision Vectoring is completely safe for bees and can remove trace amounts of natural pesticides. Directly transported to flowers, compared with traditional chemical pesticides, it provides better crop protection and better yield results-and improves

the health of the soil, the microbiome, and the environment

# The working concept of Bee Vectoring Technology

The BVT inoculum delivery system is integrated into the shell of a commercial wasp nest. The



The future of

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for

an animal-



dispenser is a removable tray that contains the powdered form of the crop control inoculum andthe product mix that allows the bees to pick up the product as it leaves the hive. When the bees come into contact with the flowers, they will send a small amount of Vector it powder ontoeach plant they visit, and they will visit about 10 flowers per minute. Beekeeping Technology (BVT) works with commercial hive operators hired by farms to pollinate crops. BVT installed a honeycomb dispenser that contains a patented natural and organic fungicide in powder form. When the bees leave the hive, they pass through the powder and carry it to the crops. When bees land and shake to release pollen from plants, the fungicide buildsup in the flowers, where it acts as adeterrent certain pests. It is a biological agent that provides a biological agent.

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### Successful field trials Result

The trial of the bee vectoring system is effective and efficient for sunflower growers to use for disease control and improve yields. The results validated the technology, quantified hive distribution needed to achieve satisfactory Sclerotinia head rot control (and measured increased yield results and reduced sclerotia contamination. "Sclerotinia head rot is a major challenge for sunflower producers and has been identified as a high priority by the National Sunflower Association," said Sherri Tedford, Laboratory and Field-Testing Manager at BVT. "First-year trial data from two sites indicate BVT reduced incidence and severity of Sclerotinia head rot by up to 62% over the control plots and increased yield by about 15%.



BVT-treated sunflowers also have fewer sclerotia contamination (down from 6.1 and 7.4 % in the control plots to 3.1 and 3.3 % in the BVT-treated plots), well below the 4% maximum level allowed for processing seeds into oil for human consumption. This is important for growers, as seeds for human consumption can be sold for a higher price than seeds for other purposes, such as animal feed."

The method isn't a cure-all, and won't prevent every type of crop disease. This is a solution that is best suited for diseases that affect crops through the flower. BVT works with bumblebees to deliver a bio pesticide that prevents botrytis, a fungal infection, from growing in strawberries. It takes approximately a hive and half of bumblebees (roughly 200 insects at the hive's peak) to work an acre of strawberries. BVT sees its biotechnology as a solution for berry, almond, stone, tomato, and chili producers. In fact, during its first commercial growing season in the United States, it attracted customers from growing regions that cover more than 80% of blueberry acreage in the United States. Blueberry growers in the Southeast account for about 75% of our bill sales in 2020. The BVT boss said that looking at the 2021 crop, he sees continued growth in the Southeast and new revenue in Michigan and the Pacific Northwest from blueberry growers at this facility. We will develop other crops such as fruit trees and nuts (stone fruit, almonds) and house-grown vegetables (tomatoes, peppers) in the medium to long term

### Milestones Revolutionizing a Vital Market

Expanding BVT's product line through third-party biologics licensing is one of BVT's key innovation projects. This allows us to open up new income streams by increasing our target market. Bee Vectoring's crop control is its versatility in this market. These products not only have the potential to generate additional income, but also expand the geographic reach of BVT and into new cropsCurrently, BVT holds more than 65 issued patents, more than 35 patents pending in all major agricultural countries of the world, and the US EPA has registered Vectorit<sup>TM</sup> with CR7 (EPA Registered) number 906412) for sale as a registered bio fungicide for trademark use culturesregions of the world, scaling our potential to generate sustainable growth through income diversity.

Bee Vectoring on the Brink of Revolutionizing the Agricultural Sector



Agriculture is undergoing a modern revolution and the market potential for natural pesticides is huge. It opens up a lot of food opportunities and opens up biological processes," It is a very large company. Agriculture, we know, will be one of the fastest-growing sectors. We need to produce 70% more food to feed this population for the next 20 years or so. The future of agriculture lies on the wings of bees. With its revolutionary dispensing system, Bee Vectoring is sure to become a hit in the industry. Due to an increasingly green and healthconscious society, there is an increasing demand for effective and organic pesticide solutions in the agricultural sector. Vectorization of bees is on track to disrupt the agricultural market economically and environmentally with its innovative inoculum delivery system. "BVT allows crop control by pollination without the harmful consequences of chemical spraying." "BVT was created to provide effective flower protection against pathogens and pests, which is essential for high yield and quality in many crops. The complete system for increased yield, creating better quality products, and increasing and improving shelf life without the use of chemicals and water. The result will be better for the environment. "A product is the natural enemy of a plant pathogen, be it another insect-eating insect or a fungus that attacks an insect.

### Advantage of BVT's

- BVT's commitment to sustainable agriculture requires us to do all we can to help farmers grow their crops as efficiently as possible, while also caring for the environment and being good stewards of the land.
- BVT's technology, precise vector design, is completely harmless to bees and delivers small amounts of natural pesticides (called organics) directly to flowers, helping to protect crops and improve yields compared to traditional chemical pesticides and improve soil, microbiome, and environmental health.
- BVT hopes to eliminate addiction to unhealthy synthetic pesticides and that would be great for the environment.
- "Having a safe, environmentally responsible, and affordable food delivery system is something we should all be concerned about," BVT's commitment to sustainable agriculture requires us to do all we can to help farmers grow their crops as efficiently as possible, while also caring for the environment and being good stewards of the land.



- The benefit of the bee delivery system is that farmers can increase their crop yield while minimizing waste.
- Additionally, BVT's fungicide is naturally derived and needs no water for its application.
- The good news for the bees is that the bio pesticide BVT developed does not harm the insects or impact their honey.



