

Enhancing pollination where it matters most



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Pollination remains a critical factor in crop production. By Rob Elfick

Pollination directly impacts yield quality, consistency and profitability, particularly in fruit and nut crops that are highly dependent on insect pollinators. Honeybees play a critical role in this process, but several factors can limit their effectiveness in commercial orchards. These include inconsistent floral cues, monoculture planting, adverse weather, competing wildflower resources, the use of incompatible crop protection products, on-farm crop management practices, and also the use of netting (which can significantly reduce bee

activity and pollination efficiency). Hence, pollination is often uneven or suboptimal, even with adequate hive placement.

In response to this challenge, River Bioscience has introduced Apis Bloom, a pollination enhancer designed to increase honeybee foraging activity and improve pollen transfer during critical bloom periods. Developed using a proprietary blend of natural bee-attractant pheromones, Apis Bloom mimics the chemical signals released by worker bees when they discover high-quality nectar sources. This pheromone encourages other bees to visit the same area, thus improving forager recruitment, pollination frequency, and honeybee dispersal throughout the orchard.

The product is formulated using SPLAT (Specialised Pheromone and Lure Application Technology), a pink wax-like paste that is rain-fast and slowly releases the attractant over three to four weeks. When applied as dollops throughout the orchard, the formulation encourages consistent bee activity across the treated area, reducing the likelihood of pollination gaps and increasing fruit set uniformity. This system is especially valuable in crops that are less naturally attractive to bees, or in orchards where natural pollination activity is inconsistent.

Apis Bloom was first developed in the US with research being conducted on a large scale in almonds, blueberries, watermelons and raspberries. Results indicated that Apis Bloom applications increased pollinator activity and that this had a wide-ranging impact on fruit quantity and quality.

Apis Bloom applications improved berry uniformity and weight and increased the number of large watermelons harvested over the season. Treatment with Apis Bloom had positive impacts on almonds as well, enhancing harvested nuts by up to 40 % on trial farms. In SA, efficacy trials were first conducted in kiwifruit orchards. Results showed a 47% increase in bee activity at hive entrances in Apis Bloom – treated blocks compared to untreated

The critical pollination role of honeybees can be compromised by several factors in commercial orchards.



PHOTOS | ROB ELFICK

Apis Bloom applied on plums in Ceres

controls. In addition, bees in treated areas collected 61.2% more pollen, and fruit set increased by 14% per vine. Further studies have also been conducted with avocados, macadamias, blueberries and plums in SA. Avocados and macadamias experienced a 15–25% increase in fruit and nut set respectively, with bee activity remaining high despite treatment blocks being located upwards of 250 m away from bee hives. Honeybee flower visitation in treated blueberry and plum blocks increased by 50–75 % across the trials, with a marked improvement in afternoon pollination activity relative to control blocks. Although many factors, besides pollination, play a role in crop yield, there was an approximate 4–8 % benefit to yields (t/ha) in treated blueberry and plum blocks. Successful demonstration trials have also been conducted on pome

fruit, onion, carrot and cauliflower crops in SA. These varying results demonstrate that strategic enhancement of bee attraction during bloom can have a measurable and positive impact on both pollination efficiency and overall crop performance.

Importantly, Apis Bloom is environmentally safe. The active ingredients are naturally occurring compounds that do not pose a risk to bees, beneficial insects, or surrounding ecosystems. The product contains no conventional pesticides or harmful residues and supports growers in meeting residue-free market requirements.

As growers continue to adopt more sustainable farming practices, tools like Apis Bloom provide a way to enhance productivity without compromising ecological integrity. By improving the attractiveness of flowering crops and



Apis Bloom applied on blueberries

supporting bee activity when and where it matters most, the product offers a practical, low-impact solution for maximising pollination during the most critical phase of the crop cycle.

Apis Bloom is now available from River Bioscience to South African growers preparing for the upcoming bloom season. With field results available on a wide variety of crops, and a straightforward application method, it represents a valuable addition to any pollination management strategy focused on yield optimisation and sustainable production. ▶

Apis Bloom is a pollination enhancer
Not classified as a hazardous substance
| Active Ingredient: Proprietary mixture of terpenes (containing honeybee pheromone) 10% m/m |
READ THE LABEL BEFORE USE |
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