

Sweet idea for bees 2003

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Technology lifts income for orchardists

Michael Herman

Orchardists are reporting increases in earnings of between \$10,000 and \$30,000 a hectare since using technology that enhances the pollinating efficiency of bees.

Using a "targeted biochemical delivery system" designed and developed in Christchurch by EDAC Electronics, orchardists are able to dust bees with specific pollen and other beneficial products to improve crop quality and fruit size.

EDAC project manager Henry Bettle said the beeFORCE unit eliminated the need to spray thousands of litres of chemicals, and the potential for chemical drift, a cause of particular concern for organic farmers.

"With this it is going to direct to the actual flower, increasing fruit and crop size while reducing rejects," he said.

Bettle, who received a "highly commended" in this year's Young Achiever of the Year category at the Westpac Hi Tech Awards, said beeFORCE is generating significant market interest for this rapidly growing company. EDAC has doubled its turnover and staff in the past financial year, and expects to double growth again in 2004.

Bettle said part of the technology's appeal was that it introduced a previously unobtainable level of precision by dramatically reducing the risk of cross-pollination and biochemical wastage.

The development of the beeFORCE unit had opened other avenues, and the company had released a prototype companion unit for dispensing sugar to make the bees more productive, he said.

"We released a prototype about two months ago that releases sugar for the bees."

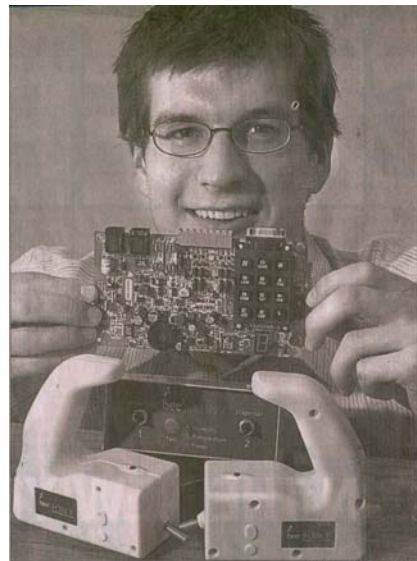
"Now we can dispense sugar and pollen so the bee, all it is doing now, is distributing pollen, it is not spending any time going to get food for itself"

EDAC is also researching how bees can be used to dispense bio-organics to combat diseases in orchards, which could end costly spraying techniques.

"Instead of using litres and litres of chemicals, you can just use an extremely small amount of chemical, Bettle said.

"With increasing aversion to widespread aerial spraying the possibilities for beeFORCE are unlimited, as the bees target the plants directly with minimal affect to the environment and themselves."

"The horticultural industry is really excited about it," Bettle said.



Biotech devices: Henry Bettle, project manager, at EDAC Electronics. PHOTO: DAVID ALEXANDER

Although EDAC has hit a sweet spot in the horticultural industry with its targeted biochemical delivery system, the company is now exploring other applications for the technology that are unrelated to farming.

One of these is using the technology rather than the spraying to combat alien insects such as the painted apple moth.

“That’s one of the areas we’d really like to look into and see if we can develop a few products for it, and hopefully not just save the council money, but also the lungs of all the people they’re spraying,” he said.

Field trials have shown that beeFORCE is able to help control the sclerotinia infection that plagues kiwifruit and trials are under way in Australia and New Zealand to improve fungal control in orchards.

Other biological agents were being researched, and EDAC was investigating whether the unit could help fight the varroa bee mite.

If successful, this would open another huge market for the company, he said.

For the moment, though, EDAC is focussing on the Australasian market.

Bettle said 2000 beeFORCE units had been deployed throughout the North Island, with trials under way for pip and stone fruit in Northern Australia. Although alternative methods existed to the company’s targeted biochemical delivery system, none was as accurate, or performed as well, Bettle said.

“There’s no other technology like it.”