

Promising Varroa Resistance Research from Otago



BY ROD WILLIAMS,
HIVE WORLD BEEKEEPING SUPPLIES

The varroa problem would be one of the major issues that the New Zealand beekeeper faces in hive management – both in time to treat and in cost. I would estimate Kiwi beekeepers would spend up to \$7 million on synthetic varroa treatments every spring and autumn – up to \$14 million per year. This is not to mention having to dispose of all those toxic strips (hopefully safely) or the fact that the mite is known to build up resistance to these chemicals. Alternative treatments are helpful, but also can have safety issues either for the user or the bees themselves.

I believe that any investigation into dealing with this mite should be encouraged and promoted. If we could help the bees to clean this scourge themselves, it would be a great advantage. There was


a beekeeper on the West Coast who claimed he was breeding varroa resistant bees. However, no-one in influential positions really took him seriously or supported the idea.

Now we hear that University of Otago research reveals that the bee's own sense of smell may give them a fighting chance against this parasite. Bees have 170 odour receptors, up to 40 times more sensitive than that of a human. This is how they tell which flowers have pollen and nectar.

The Otago University researchers have found (as our West-Coaster found) that some colonies show resistance to varroa. For these colonies, varroa infestation triggers a strong behaviour response in the bees known as varroa sensitive hygiene behaviour (VSH). VSH is exhibited by worker bees who uncap infested brood cells and kill the developing bee and then remove all cell contents including the mites. Doing this interrupts the mite's reproductive cycle.

Researcher Fanny Mondet from the National Institute of Agriculture in Avignon, France, is currently working with the University of Otago and has identified six varroa-related compounds that trigger VSH behaviour. These compounds are found in varroa infested brood cells and their levels provide a reliable indicator of the numbers of juvenile mites present in the cells.

Obviously a lot more work will need to be done, but I believe that this could be a turning point in our ongoing fight to cope with this unwanted parasite.

Further information can be found on the Otago University website: www.otago.ac.nz/news/news/otago824263.html 

Glyphosate trace results you can trust.

Be confident that your honey meets international export standards with glyphosate trace level reporting.

Our dedicated team test for glyphosate down to the export limit and our trace alert will report down to 0.004 mg/kg, providing you with the extra reassurance you need when exporting honey and making business decisions.

As New Zealand's largest independent lab, we offer IANZ accredited and MPI recognised results you can trust.

Talk to us about glyphosate testing today.



Hill Laboratories

