



AUGUST 2008

# Taranaki Bee Keeping Club



## BEEKEEPING IN AUGUST

The season has just started as the gorse and the plum trees have come into bloom. All we need now is some sun with no wind and we will be on the treadmill once more.

Choose the first warm, windless day to have a look into your hives to see how much brood rearing there has been over these last few weeks.

I would not expect much as it has been too cold and wet but you may be lucky enough to have a Micro-climate at your place and in past years there have been swarms in September!! I don't expect that to happen this year!

Make this first inspection a quick one to see how much brood there is and how many frames of honey they have eaten and more important, how much they have left! Have a quick inspection of the brood but don't shake the bees off the frames as you would in a real 'Spring Check' as the brood must be kept warm at all times.

If you see any old, empty, black or damaged frames you should replace them with drawn comb – don't put in foundation at this time of the year! If they are damaged but have honey in them move them one space to the outside but not if they contain brood.

You could scrape the bottom board if it has a lot of grunge on it but it would be better left to a later date when more bees are flying and it is warmer. If you are rich enough to have another clean bottom board, then substitute that and clean the old one at your leisure.

I think it is a little early to put in "Varroa Strips" but if you haven't got your supply in for the season, order them now. You could do a Varroa Check by putting a 'sticky board' under the brood chamber when you do the inspection to give you an idea of Mite numbers.

Make sure that the hive is dry. If it appears to be 'sweating' and there is water on the hive walls, put a couple of matchsticks under the edges of the top or 'crown board' to increase the airflow through the hive. Is the bottom board sloping slightly downhill to the entrance to get rid of rainwater?

Remember the better you treat your hives in the Spring the better opportunity the bees have to get off to a good start!

*Next club meeting*  
**MONDAY August 18th**  
**In the Plunket rooms**  
**6.30pm**

Next to New World Supermarket

Winners of the club honey  
competition were:

Liquid Honey - Tara Sandbrook  
Cryst. Honey - A.S.D. King.

## Feeding to Stimulate Colony Growth

To stimulate a colony to grow more bees, it is best to feed continuously over several weeks. The feed does not need to be consumed very quickly. The syrup can be a 2:1 ratio of water to dry sugar.

The ratio of water to dry sugar does not need to be exact. However, syrup ferments faster when it contains a lot of water, and when the weather is hot.

### Granulated Sugar

Granulated sugar is another good way to feed bees without overly-stimulating brood-rearing. Bees will eat the granulated sugar only if they don't have enough honey. Sugar crystals can be poured on an inner cover or onto a thin board between supers above the bees. If granulated sugar is poured inside the hive, sometimes the bees will carry it out of the hive and throw it away.

## Researchers find sustainable varroa solution

*Natural fungus is mite's 'worst enemy'*

**Auckland, New Zealand, 1 August 2008** -New Zealand scientists searching for sustainable, chemical free ways to combat the varroa bee mite say a naturally occurring fungus may be the best solution yet to protecting bees from the destructive pest. Honeybee researchers at HortResearch have successfully used a strain of the common insect fungus *Metarhizium* to treat beehives infected with varroa, opening the opportunity for a truly organic solution to varroa control.

The discovery will help sustain the entire New Zealand bee industry, but represents a real lifeline to organic producers who were running out of commercially viable options for varroa control.

The work was funded by the MAF Sustainable Farming Fund and the National Beekeepers Association.

*Metarhizium* is a ubiquitous fungus that occurs naturally in the environment. Harmless to humans, it is known to infect a large number of insects and has previously been used as a biocontrol for plant pests.

The concept of using the fungus to combat varroa is not new, however other attempts to develop a commercially viable *Metarhizium* -based product have failed because the fungus is rapidly removed from the hive by the bees themselves as part of their normal hive cleaning and maintenance behaviour.

HortResearch honeybee expert Dr Mark Goodwin says his team have solved this problem by finding a way to keep the fungus within the hive; ensuring populations remain high enough to achieve mite control.

Dr Goodwin's team started their research by screening for a *Metarhizium* strain that kills varroa. They eventually selected a New Zealand strain that proved lethal to the bee mite, however, the treatment eventually lost effectiveness as the fungus population dwindled and the bees tried to clear it out. Keeping populations at effective mite-killing levels required numerous applications - a process that would be too expensive and time-consuming for beekeepers with hundreds of hives, many in remote locations.

"It was enormously frustrating. This strain of *Metarhizium* is varroa's worst enemy. So we had an excellent biocontrol for varroa but were being thwarted by a bunch of very house proud bees," says Dr Goodwin.

"We said to ourselves, 'This is a biological product. We need to stop thinking of it as a pesticide treatment and more as a living organism'. When we did that we found a way to make *Metarhizium* part of the overall hive ecosystem. The bees accept it, and the fungus is able to get on with killing varroa."

"The treatment will be a huge boost for beekeepers in their fight against varroa and certainly could be a real saviour for New Zealand's organic honey industry in particular. As varroa creeps south beekeepers are finding fewer and fewer areas where they can produce honey on a commercially viable scale without using chemical treatments. There are some organic miticides available but their impact is variable. This new treatment should solve that problem."

HortResearch acting Chief Executive Dr Bruce Campbell says the good news for beekeepers worldwide is that the science can

be commercialised and made available in a very short time-frame. HortResearch is now working with an international partner to produce a commercial version of the treatment before the end of the year.

"Earlier this year we announced work on another biological solution to varroa - genetically resistant bees. That work is progressing well, but beekeepers need help now, so a new *Metarhizium* -based product will be welcome.

"New Zealand's beekeepers are very focused on the sustainability of their industry, from both an ecological and economic viewpoint. They don't like using existing chemical treatments - they view them as a necessary evil. Chemicals also represent a problem in that varroa breed rapidly and have quickly built up resistance to chemical controls worldwide.

"One of the key reasons that HortResearch investigates biological control agents for pest control is that these natural defence mechanisms are living weapons against pests and constantly able to improve themselves, so it much harder to build resistance to a biological control agent. If varroa were to become resistant to *Metarhizium* then new strains can be selected that continue to kill the mites."

### ABOUT HORTRESEARCH

HortResearch is a New Zealand-based science company, acknowledged as a world leader in integrated fruit research using unique resources in fruit, plants and sustainable production systems to provide novel technologies, innovative fruit and food products with high consumer appeal.

Home to leading-edge scientific capability in plant breeding, tree, vine and fruit physiology, HortResearch has earned considerable acclaim as the name behind development of ZESPRI™ Gold kiwifruit, ENZA JAZZ™ brand apples and a range of other successful cultivars including blueberries, peaches and pears.

The company enjoys further praise as the research team behind the development of the world's first intelligent fruit labelling system, ripeSense™ marketed by RISENSE Limited.

HortResearch is now enhancing its commercial science capability, utilising skills in plant molecular biology, nutrigenomics, food chemistry and human physiology to find new ways to improve health, wellbeing and performance.

The company is also developing breakthrough science and technology to meet emerging markets for functional foods and naturally produced flavours and fragrances.

### HORTRESEARCH MEDIA CONTACT

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# Waikato Branch NBA

Invites you to our Spring

Field Day

Saturday 30<sup>th</sup> August

Cost: Free to NBA members (with card),

Non Members \$5

Where: Matangi Hall On outskirts of Matangi Village on Tauwhare road – will have sign-



posts.9-30a.m. get together for cuppa **All Beekeepers Welcome**

BYO bee veil/suit

BBQ lunch steak and sausages, onions and bread Also drinks and Soup available. Prices to be determined

Raffles – Prizes to be won!!!

AFB books for sale – NEW EDITION

Promotion of AFB recognition course for 1<sup>st</sup> Saturday in October, Venue: Waiotapu Rotorua

Gadget Shield – bring along your gadgets for judging

Identified/named bee friendly plants on display for your information

## Programme

10-00-10-30	Rex Baynes,	Update on PMS – your chance to ask questions
10-30-11-00	Mark Goodwin	Metarhizium fungi – future Varroa treatment
11-00-11-30	Neale Cameron	Beesafe group - what do they do to minimize bee poisonings
11-30-12-00	Andrew Primrose,	Farmsafe courses 4wd, four wheel motor bikes etc
Supplier speakers before lunch		Tunncliffe, Ecroyd, Ceracell, etc
1-00-3-00		Grafting Queen bees – hands on session – come and learn
		How to set up Starter Hives and finishers, feeding regimes
3-30-4-00	Gary	Roadlife trucks Diesel v's Petrol Big v's small
4-00	someone for utes?	Speaking times for speakers may change

**NOTE: No Vehicles to have sticky substances on decks**

American foulbrood is a bacterial disease infecting brood of the honey bee (*Apis mellifera*). The disease is present in almost all countries where honey bees are found. American foulbrood was first recorded in New Zealand in 1877, 38 years after honey bees were introduced. Within 10 years, the disease had spread to all parts of New Zealand and was being blamed for a 70% reduction in the nation's honey production.

Information on the numbers of beehives infected with the dis-

ease was not recorded during the early period of beekeeping development in New Zealand. Part of the reason was that beekeepers attempted to manage the disease, rather than destroy infected hives.

Honey bee colonies with light infections were "shook swarmed". Bees were shaken from infected hives into hives that contained only foundation.

While the method was often effective at eliminating the disease, painstaking effort was required, and some colonies still developed heavy infections and had to be destroyed.

Early attempts at managing AFB using "shook swarming" make interesting reading:

## **American Foulbrood Disease In New Zealand**

*"The districts in which the Ruakura State Apiary is situated were amongst the worst in the Dominion for foulbrood. The colonies I started the State Apiary with, that were already on the farm, were affected. By constant attention and treatment we were able to keep the disease from spreading and when we left for the Christchurch Exhibition (1906) there were six out of over 70 slightly affected with foulbrood. When*

*we returned in the following June we found the disease had spread through robbing to*

*nearly every colony. Early in the following season we treated a number of the worst cases and replaced bad with clean combs. As this did not turn out as satisfactory as we hoped, I hoped to treat the whole of the colonies the next spring."*

In 1950, it was decided that the incidence of AFB could not be reduced further if shook swarming continued to be used. Beekeepers were therefore instructed by the Department of Agriculture to "destroy the contents of diseased hives and to sterilise thoroughly any remaining hive equipment by approved methods."

***Shook swarming is illegal in New Zealand.***

## WHAT IS A 'DECA'?

A Disease Elimination Conformity Agreement, or DECA, is a formal agreement between you as a beekeeper and the Management Agency. The agreement sets out a 'code of beekeeping practice' to ensure that the incidence of AFB in your hives will reduce to zero over a period of time and remain at that level once achieved.

Scientific and case study knowledge show that this goal is attainable if beekeepers follow the correct procedures. Courses will be available to all beekeepers from time to time, depending on demand at centres throughout New Zealand.

The DECA agreements are tailored to suit each beekeeper's particular circumstances. If you have little or no AFB you won't need to change your beekeeping procedures much, if at all. Beekeepers with a progressively more serious AFB incidence in their hives will need tighter controls and more attention to detail in order to reduce the incidence.

In consultation with the Management Agency or the contractors, you will be able to review your procedures over time to ensure that the goal of AFB elimination is reached. The aim is to use these agreements to ensure that you get all the help and advice available to eliminate AFB from your beehives, and hence, from all beehives in the country!

## WHO SHOULD HAVE A DECA?

Hopefully nearly every beekeeper will eventually have a DECA. Remember, the PMS applies to any and every beekeeper, hobbyist and commercial. There will be some who, for a number of reasons, will not enter into an agreement to control AFB.

If you take up the offer of a DECA, you will need to show your proficiency in AFB identification and control by passing a Disease Recognition and Destruction Competency Test. This test can be "cold" or after completing a Disease Recognition and Destruction course. These courses will be made available to all beekeepers at centres throughout New Zealand.

If you enter into a DECA you will have Approved Beekeeper status and will receive a Certificate of Inspection Exemption. You will not have to complete a

Certificate of Inspection each year for your hives. However, you must maintain a record of inspection dates and relevant information for audit purposes. As part of the DECA you agree to undertake a test on AFB recognition and control within 6 months of your DECA being approved.

## WITHOUT A DECA

Those beekeepers who fail to respond to the Management Agency's offer to enter into a DECA agreement will be, for the purposes of the PMS, "unapproved" beekeepers. These beekeepers must furnish a Certificate of Inspection each year for their hives.

This certificate must be completed, and hives inspected by, an Approved Beekeeper, or by Management Agency personnel. Most beekeepers will incur some cost to have this work done for them.

Providing the Certificate of Inspection is not optional. If the beekeeper fails to arrange for this to happen the Management Agency will authorise a contractor to do the work and the beekeeper will be liable to pay for the services.

Beekeepers who for any reason do not have a DECA must furnish a Certificate of Inspection each year, again completed by an Approved Beekeeper, or by Management Agency personnel. These beekeepers will need to complete the Disease Recognition and Destruction course and pass the test before a DECA will be issued.

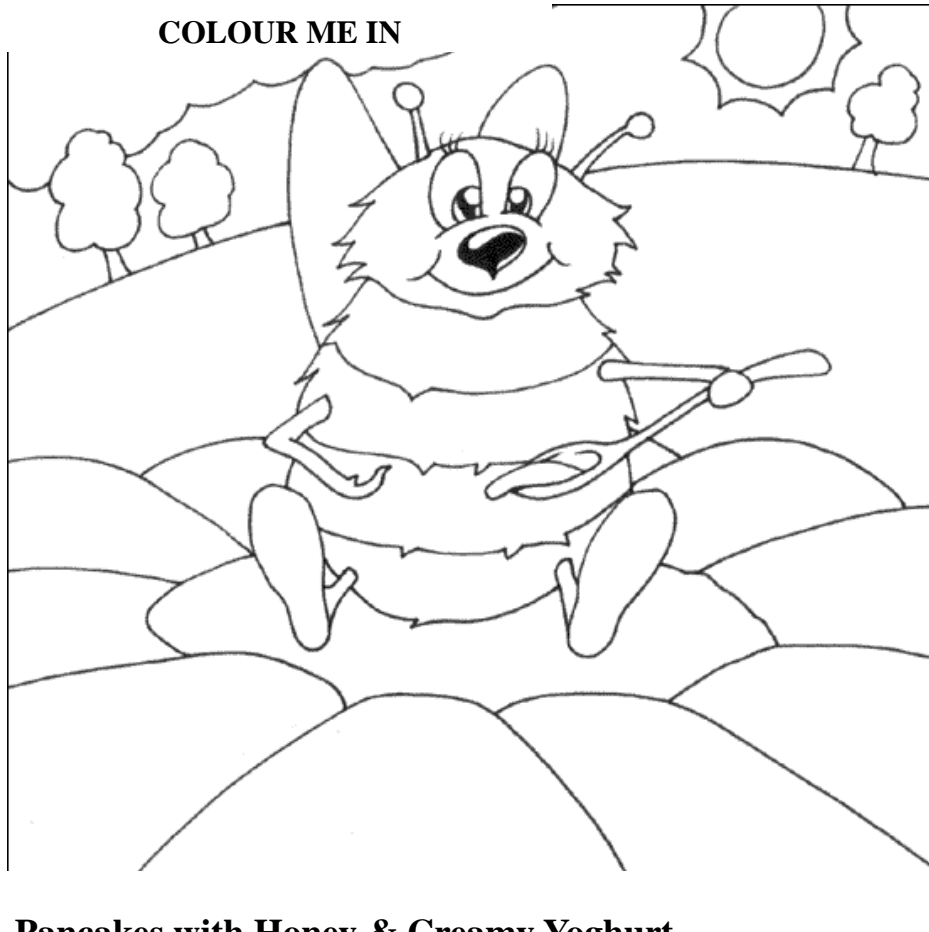
## National Pest Management Strategy

PO Box 44282, Lower Hutt, New Zealand

E-mail: [info@afb.org.nz](mailto:info@afb.org.nz)



## COLOUR ME IN



## Bee jokes 02

Q: What did the confused bee say?  
A: To bee or not to bee!

Q: What's black, yellow and covered in blackberries?  
A: A bramble bee!

Q: What do bees do if they want to use public transport?  
A: Wait at a buzz stop!

Q: What is the bees favorite film?  
A: The Sting!

Q: What goes hum-choo, hum choo?  
A: A bee with a cold!

Q: What's a bee-line?  
A: The shortest distance between two buzz-stops!

Q: What is a baby bee?  
A: A little humbug!

Q: What do bees chew?  
A: Bumble gum!

Q: What does a bee say before it stings you?  
A: This is going to hurt me a lot more than it hurts you!

Q: What kind of bee can keep an aeroplane dry?  
A: An aero-drone!

## Club Contacts

<b>Adrian King</b>	7534681	President
<b>Stephen Black</b>	7526860	Secretary
<b>Sue Billing</b>	7574337	Treasurer

## Pancakes with Honey & Creamy Yoghurt

### Ingredients:

2 eggs  
200mls milk  
2 teaspoons liquid floral honey  
1 teaspoon olive oil  
100g plain flour  
pinch of salt  
extra olive oil for cooking  
1 cup creamy natural yoghurt  
4 tablespoons honey

### Method :

Put the eggs, milk, honey, olive oil, flour and salt in the food processor. Run the motor for about 30 seconds until the ingredients are well mixed. Allow this mixture to stand for half an hour. To cook the pancakes, heat a frying pan with a teaspoon of oil. (I keep a special crepe pan for this, which is never washed but just wiped out after use it has developed a fabulous surface over the years so the crepes never stick.) Pour a generous tablespoon of the batter into the pan, swirl it round so it spreads well and cook over a medium heat until the first side is golden. Turn over carefully and cook on the second side. Stack the crepes as they cook so they stay moist. Makes 10-12. Serve with figs, yoghurt and a drizzle of honey.

