

The NEW ZEALAND BeeKeeper

APRIL 2015 | VOLUME 23 No. 3

AFB PMP updates

Rex Baynes

Conference Information

Jane Lorimer

APIARY AUDITOR
National American Foulbrood Pest Management Plan

THE MANAGEMENT AGENCY
NATIONAL AMERICAN FOULBROOD
PEST MANAGEMENT PLAN

Auditor No. 017
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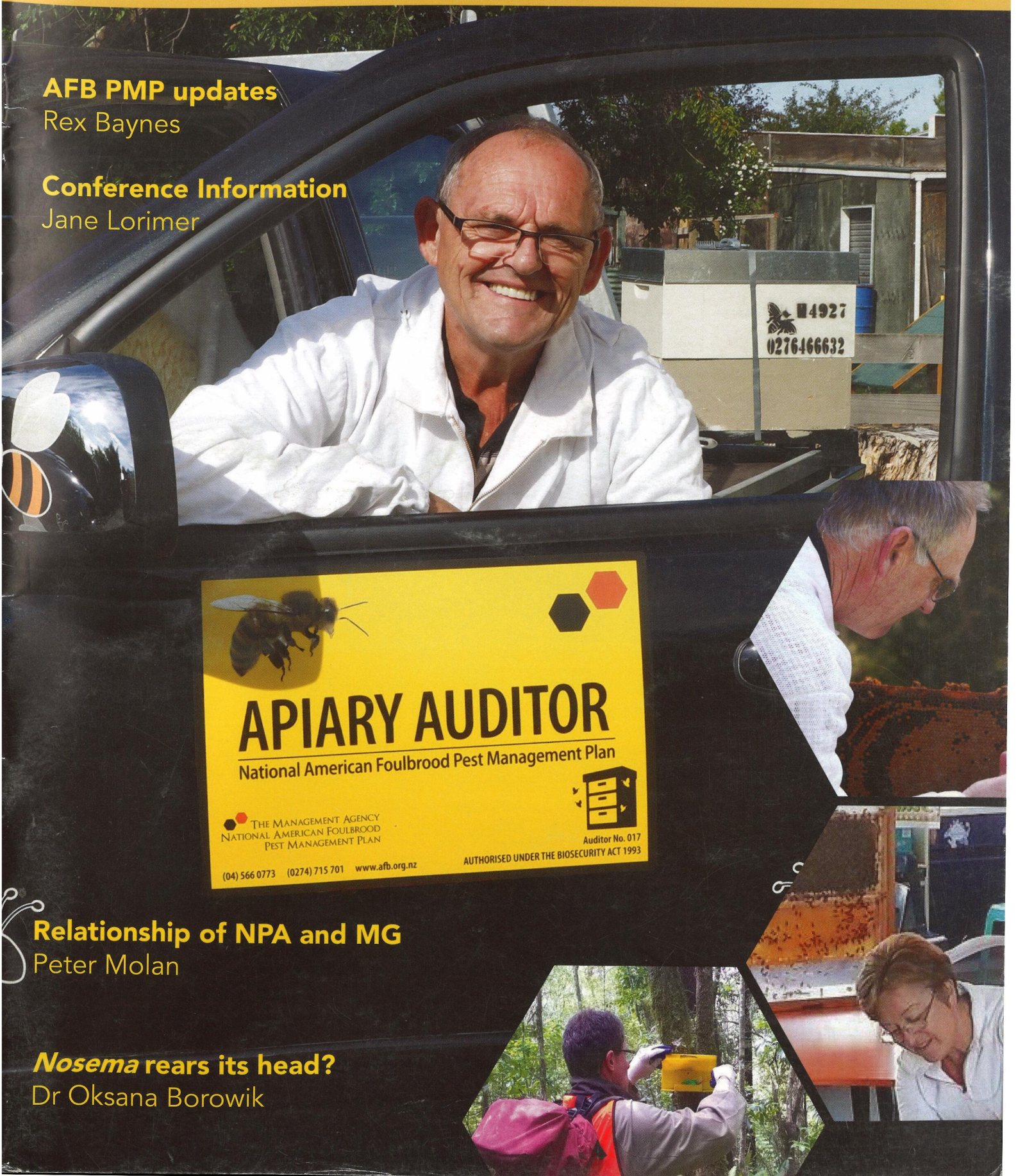
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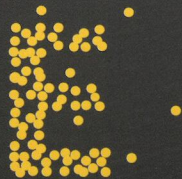
Relationship of NPA and MG

Peter Molan

Nosema rears its head?

Dr Oksana Borowik





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TABLE OF CONTENTS

We need you	4	New Zealand beekeeper, hive and apiary statistics	34
Conference: Practical Beekeeping	6	Kiwifruit pollination under covers	35
An interview with Kim Poynter	9	New tutin limits in force from 12 March 2015	37
Report on honey bee health in the Coromandel	11	Dealing with old plastic frames	38
Using FGMO and foggers	13	Industry-wide survey summary	39
The true relationship of NPA and MG levels	14	DOC pilots wasp control programme	41
Reassessing a reassessment	19	BPSC meeting report	43
Good things take time	21	From the colonies	44
AFB PMP report	22	Advice for overwintering hives	45
29 AFB auditors inspecting apiaries near you	26	Current beekeeping practices weakening the industry	49
I.T. updates from the Management Agency	27	Letters to the editor	51
New policy on DECA applications	32	AFB PMP financial statements to 31 May 2014	53
AFB recognition courses planned for 2015	33		

Front cover: An AFB Apiary Auditor in a town near you. Photo of Peter Ferris © Pete Nikolaison. See article on page 26.

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PRESIDENT'S REPORT

WE NEED YOU

Ricki Leahy, NBA President

The industry-wide survey has now closed. The results have only just come through and a brief summary is on page 39. The reply rate was pretty much lower than expected, but the positive point is everyone has had ample opportunity to participate. By no means was it a waste of time: actually, quite the opposite.

For those who found the inclination to partake, thank you. I am sure your comments will be very useful. Rest assured they will be taken seriously into consideration in designing a structural model to present to us all. We have a very capable independent team in Catalyst® Ltd leading us in this regard.

For those who didn't take part, please don't worry. The intention, under a more modern and future-focused industry structure, is for your beekeeping welfare to still be taken care of, not just the same, but better than before.

We need all beekeepers—especially those commercial operators who choose to remain unaffiliated. We need you to get your act together and to contribute and take part in your industry. We are going through this whole process of industry unification to create an industry representative body that has the resources and backing to deliver on all the issues we face as members of this industry. And there are lots of issues: an increasing number that can't be managed properly by the approach we currently take, which is largely based on volunteers willingly giving their time and expertise.

That model may have worked just fine in the 1980s and 1990s but we are now well into the 21st century, and part of a modern and progressive industry that services export markets all over the world with a multi-million dollar product.

It is extremely disappointing that such a large number of beekeepers (and even some big commercial players who supposedly 'do very nicely, thank you') choose to trade on the backs of the volunteers and those members who agree to pay subs. These unaffiliated beekeepers contribute absolutely nothing to the generic wellbeing of New Zealand's beekeeping industry but are content to reap

all the benefits our underfunded and under-resourced industry associations can deliver to the industry.

Perhaps it's time for you to actually think about what may be getting accomplished behind the scenes. A constant stream of situations need addressing, taking a perspective that keeps us all in the industry well represented and in a good manner. Mostly there is no way—and indeed no intention—that we can distinguish between members or non-members of either particular organisation. That's where you, the unaffiliated, gain the benefit by default. The amount of work that goes into dealing with government alone is staggering. All this is done on behalf of our industry by a small group of public-spirited industry representatives working together in a good-intentioned and cooperative manner, accompanied with that cornerstone attitude of keeping the good of the whole industry in mind.

**We need all
beekeepers—
especially those
commercial
operators who
choose to remain
unaffiliated.**

You might think, well what about the NBA Management Team in Wellington? What do they do? Actually, a lot for a comparatively large membership organisation as the NBA surely is, but the team is under-resourced for their expected workload. You may see three people in the NBA's office, but actually the NBA employs the equivalent of less than one full-time staffer to do all the work. Daniel, Pauline and Lauren share the work because we can't afford to pay for more full-time people. So they are limited to focusing on member administration and the general management of our Association, along with

those industry tasks directed by the Executive Council. But they also, through dedication, volunteer a proportion of their time. It doesn't give us the best result, which is why it is important for the industry to come together and pool resources.

It is vital that we should use all the good that has been developed over the years and try stitching that into something that is suitable and acceptable to the majority of us all. Inevitably, a few people might not be happy with everything that may eventually be proposed. We might all have to compromise to a certain extent, as the industry should not for any reason be restrained from moving forward. We need to be guided by the folk who are being successful, the ones being innovative with their beekeeping, the ones seeking out and developing new products and markets, the ones who are adding value and actually creating a success for us all. To me it is crucial that those folk find true value in being a member and bring their fresh energy and new ideas forward with their visionary thinking.

I do understand that if I were a hobbyist I could be getting tired of all this industry unity talk. I would just want to look after my bees and get on with it. Please be patient and understand that it doesn't matter what we call it—industry, apiculture or whatever—but we must include all sectors such as honey packers, exporters and researchers and indeed, hobbyists. The term 'industry' does that nicely. So hobbyists, please rest assured. You have a very good representative on the Interim Working Group in Kim Poynter and she has your interests well represented. It is important that you know and be supportive of what the commercial side is doing because as much as anything else, you are considered as being in the loop and recognised as an integral part of our 'industry'.

To all those who are affiliated within the industry, thank you. We look forward to your continued support and involvement and hope that many others will consider associating in the future.

I hope you all had a good season and are managing to requeen at least some hives this autumn. Happy beekeeping.

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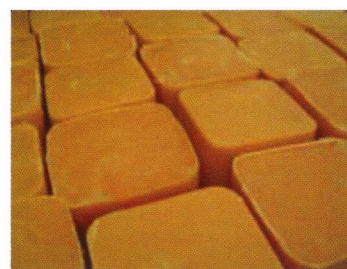


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2015 CONFERENCE

CONFERENCE: PRACTICAL BEEKEEPING

Jane Lorimer, NBA Life Member, on behalf of the conference organisers

The New Zealand Apiculture Conference 2015 will be held at Wairakei Resort Taupo, from 21–26 June. The theme is 'Practical Beekeeping'.

The conference will feature four overseas speakers (AND an opportunity to talk with them on their areas of research in a small group session), as well as workshops, seminars and specialty group meetings.

This conference will be like no other. Our organising committee has critiqued past conferences and identified several new ideas we wish to explore.

One of our main goals is to make conference a fun event—where all people associated with beekeeping can come, network, learn new skills and, above all, have some fun while doing so.

We have chosen the Wairakei Resort Taupo to host the conference because it allows us the scope to broaden the programme, and ticks most of the boxes that we identify as preferred amenities.

The biggest plus for us are the large grounds surrounding the hotel that will allow for hands-on 4WD training. The facility also enables us to have some hives on site to allow for inspection and disease recognition and still be reasonably safe for non-beekeeper visitors and staff.

The programme

Sunday will feature a seminar day with all of our overseas speakers making a presentation.

The day centres round queens and other interesting topics. These seminars will be beneficial for all beekeepers, both hobbyist and commercial, and is likely to be of benefit to many employees of beekeeping operations.

The workshops

NB: numbers may be limited for workshops, so register early!

Workshops will be held on both the Sunday and the Monday. Most will be repeated both days, but some may be for only one of the days. Check carefully and make sure of what you want to attend and that it does not clash with another workshop that you are interested in.

The workshops are:

AFB detector dog: this will be a demonstration in the late afternoon and should provide some interest for everyone. How good is a dog to do this work?

Queen-raising course: this will definitely be a hands-on course. We are planning to provide some grafting material for you to try transferring larvae into queen cells. Also we will be outlining the various methods used to raise queens, feeding of starters and finishers

and what reference material there is available for further reading.

Mead making: here is a fun workshop where we have a professional mead maker on hand to give you an idea of what you need to make a successful mead, and to do a little tasting!

Trees for Bees workshop: Dr Linda Newstrom-Lloyd has done some incredible work identifying good willow species that will provide pollen for our bees over a long period of the spring and early summer. If you want to learn how to identify these, sign up now.

4WD and quad bike training: the hotel has some tracks close by that we will be able to use as a practical course to try new skills—SAFELY! This course will give you a certificate of attendance only, as we do not have enough time to make this a full course.

Measuring the properties of honey: this is a repeat of last year's workshop that was very popular. Dr Karyne Rogers and her team will be looking at the moisture content, hydroxymethylfurfural (HMF) levels and conductivity of honey, etc.

Loading of trucks and utes: this will allow for discussion about the best way to secure loads and how to use cranes properly for loading hives, as well as how to use shackles, etc., in the correct manner.

AFB recognition course: this is the course being taught all round New Zealand. It allows for beekeepers to identify bee diseases and know what to do when they find an American foulbrood hive. However, if you attend the course at conference you will get an opportunity to inspect beehives on site for disease, so bring your bee suit with you!

First aid course: this course will give you a qualification at its completion. It will be hands on, teaching things like CPR and how to use an auto-injector pen such as an EpiPen® for people suffering from anaphylaxis.

Meetings and other activities

Monday will be for the specialty group meetings and will be open to everyone,

DON'T DELAY REGISTER ONLINE TODAY!

- For those unable to register online, contact Tony or Jane Lorimer and we will post a registration form to you. Phone (07) 856 9625 or mail us your request with your address and we will return post.

For details visit our conference website:
www.apicultureconference.co.nz



NZ APICULTURE CONFERENCE WAIKATO 2015

unless they are specified as a closed meeting for members of the group only.

Also on the Monday will be a repeat of most of the workshops outlined above **AND a small group session with our overseas speakers.** Here you will get an opportunity to talk to them about their research and ask more questions.

Monday evening: mix and mingle

Tuesday and Wednesday sees our usual seminar sessions aimed more at the commercial beekeeper, but still of interest to all.

Tuesday evening is sponsors' night, courtesy of the sponsors.

Wednesday night is the conference dinner and entertainment. It also features presentations to the winners of the NBA/100% Pure New Zealand National Honey Competition, the Ecroyd Apiculture Photography Competition and the Roy Paterson Trophy. **Please go to <http://www.nba.org.nz/events/> for more information about how to enter.**

Thursday is the annual general meetings.

Overseas speakers

Fanny Mondet (France)

Dr Fanny Mondet is a researcher at the French Institute for Agricultural Research (INRA), where she specialises in honey bee pathology. She recently completed her Ph.D. in partnership between a French university and the University of Otago in New Zealand (under the supervision of Professor Alison Mercer).

Her main focus of research is on the mite *Varroa destructor* and she investigates the host-parasite interactions between honey bees and varroa. She has studied the impact

of the arrival of the mite in New Zealand on the viruses that infect honey bee colonies.

She is also interested in varroa-sensitive hygiene (VSH), a behavioural trait that can confer survival abilities to honey bee colonies infested by the mite. Some of her research is targeted at developing new methods to fight varroa for the beekeeping industry.

Maryann Frazier (USA)

Maryann received her B.S. in Agriculture Education from Pennsylvania State University in 1980. In 1983 she completed a Master of Agriculture in Entomology, specialising in apiculture. She has worked as the assistant state apiary inspector in Maryland and for two years as a beekeeping specialist in Sudan and later in Central America.

For the past 25 years she has held the position of Senior Extension Associate in the Department of Entomology at Penn State and is responsible for honey bee extension throughout the state and cooperatively across the Mid-Atlantic region. She is working collaboratively with other members of PSU Department of Entomology to understand how pesticides are impacting honey bees and other pollinators.

In addition, she is working with a team of U.S. and Kenyan researchers to understand the impacts of newly introduced varroa mites on East African honey bee subspecies and helping Kenyan beekeepers become more productive.

Madeleine Beekman (Australia)

Madeleine received her Ph.D. at the University of Amsterdam (the Netherlands) in 1998. During her Ph.D. she worked on the bumblebee *Bombus terrestris*, with the aim to understand its life cycle so that it can be used as pollinator in glasshouses, particularly for tomatoes. Before embarking on postdoctorate study in Sheffield (UK), she worked in a small commercial business testing the side effects of pesticides on beneficial arthropods, including honeybees and bumblebees.

From Sheffield, Madeleine moved to Sydney in 2001 where she has been ever since, and from where she continues her work on the Cape honey bee (*Apis mellifera capensis*). She also worked extensively on nest site selection in the Western honeybee as well as Asian honeybee species, doing field work mainly in Thailand. Apart from work on the Cape honey bee, her main research focus at the moment is the evolution of virulence of honeybee viruses.

Ben Oldroyd (Australia)

Ben is well known to many of us and is currently a Professor at the University of Sydney as a behavioural geneticist. He began with a B.Sc. Agriculture (Hons), University of Sydney (1977–1980), majoring in Agricultural Genetics.

Ben did his Ph.D. at the University of Sydney (1981–1984). His thesis title was Breeding and Evaluation of Honey Bees (*Apis mellifera*). He has also worked for the Department of Agriculture in Victoria as an Apicultural research officer and a senior entomologist between 1984 and 1989. From there until 1992, Ben spent his time at Louisiana State University at Baton Rouge, USA as a research geneticist.

Ben has conducted research in the following areas: the Cape bee, the Asian honey bee (*Apis cerana*), genetic testing for Africanisation and pheromone traps to catch queen bees.

For details, visit our conference website: www.apicultureconference.co.nz

Registering

Please note: Registering for the conference will be on an individual basis. In this way, we can easily identify what you want to attend, and the hotel can easily identify if you have special dietary or other needs.

We have decided to charge a base fee for the day. This will include all of the day's meals: morning, afternoon tea and lunch. It will also include some of the administration cost.

Again, visit our website for examples on the cost of the programme to make it easier for you to understand and select what you want to attend.

There will be limits on the numbers who can attend the workshops, so it will be a case of first registered will attend the course.

Should a course prove very popular, the committee will look at options for additional courses. Should a course not have enough participants, we will cancel and notify those who have registered to sort out other options or to refund money.

So register early—it will help in organising a successful conference and save money on the early-bird prices.



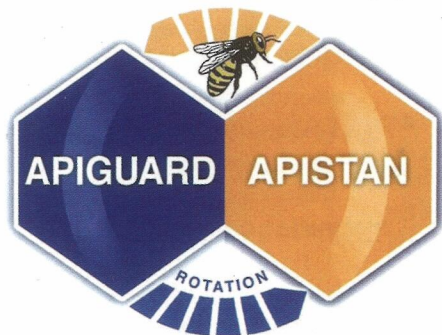
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A good rotation plan is to use **Apistan** in the autumn or early spring and **Apiguard** in the late spring/early summer just prior to the honey flow, or immediately after you take off the honey. This keeps the bees busy removing the gel and will minimise robbing behaviour

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When used according to the instructions, **Apistan** is unlikely to leave any residues in the honey. (If someone says otherwise they are either fools or deliberately trying to mislead you.) **Apistan** in the measured dosage strips and inserted into the hive as per the instructions is harmless to humans and honeybees.

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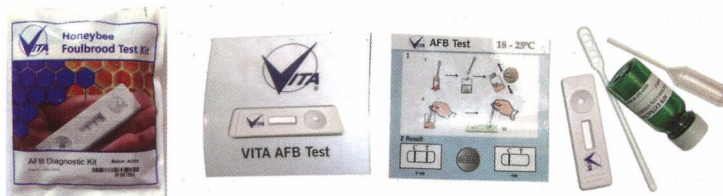


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For more information and videos demonstrating how to use their products visit **Vita-Europe's** website, www.vita-europe.com.

NBA MEMBER PROFILE

AN INTERVIEW WITH KIM POYNTER

Kim Poynter is the new East Coast Ward representative on the Executive Council.

The Publications Committee interviewed her about her role and experience in the industry.

What made you decide to become a beekeeper?

Circumstances finally allowed me to achieve a teenage goal of being a beekeeper. Bees have always fascinated me and I am privileged to be able to spend time with my hobby and passion.

Tell me about your current business.

Being a hobbyist, I do not have a beekeeping business but as President of the Rotorua Honey Bee Club, it sometimes feels like another job!

I am a Registered Nurse and an owner operator of retirement villages and rest homes for 28 years. I have held governance positions in both public and private health and run a consultancy business within the aged care industry, covering structure, operations, financial and quality management.

What do you enjoy most about beekeeping?

The ongoing learning and challenges that bees can present.

Why did you decide to become an Executive Council member?

I was seconded for an interim period and do so willingly. The governance of any organisation is a huge responsibility and one I find interesting and challenging. As the majority of registered beekeepers are hobbyists, it is essential that there is representation of our position in the industry. Along with that, being a woman can bring a different perspective to a group and provide some gender balance.

I would like to see increased access to quality education and support available to all beekeepers and I aim to contribute positively to the health of the apiculture industry in New Zealand.

Tell me a bit about your role on the Executive Council, including your priorities as an Executive Council member.

My role will be to represent the hobbyist sector of our industry as well as contributing to the overall governance of the NBA. I see my priorities as not being afraid to ask questions, to look at things with fresh eyes and to assist in a progressive vision.

What key issues and challenges do you see the beekeeping industry facing?

Clearly this is the issue of a unified industry. I have and continue to enjoy being a member of the Industry Working Group and look forward to the results of the current survey to see what shape those involved in the industry want it to be.

What will you do about those issues and challenges, during your time on the Executive Council?

Attempt to contribute in a positive way to discussions, to always remember who the EC is representing and not be afraid to think outside the square.



When you're not at work or attending a Council meeting, where will we find you?

In the garden growing our own organic food, boating, sharing information with children and adults about bees or absorbed in the workings of a hive.

IMPORTANT NOTICE

ANNUAL DISEASE RETURNS TO BE LODGED ELECTRONICALLY FROM 2016

From 2016 all beekeepers will be required to lodge their Annual Disease Return (ADR) via our online facility, APIWEB. In preparation for this, we are extending to beekeepers an invitation to submit their 2015 ADR via this means.

Our records show that approximately 23% of all registered beekeepers have used the APIWEB system in the last 12 months. It is our hope that these beekeepers, plus as many others as possible, will submit their electronic ADR in 2015.

It is important to note that in April 2015, all beekeepers will receive a paper version of their ADR as in previous years. If you elect in 2015 to utilise the electronic facility, you will be asked to destroy the paperwork.

Testing of an enhanced version of APIWEB is now almost complete and we are hoping that this will be available by the time you read this. In addition to the electronic ADR, this latest development includes the change of input co-ordinate systems (to latitude/longitude), an ability to print out master beekeeper lists and a few bug fixes.

Rex Baynes, AFB PMP Manager

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PEST AND DISEASE CONTROL

REPORT ON HONEY BEE HEALTH IN THE COROMANDEL

Dr Oksana Borowik, scientist and commercial beekeeper in Coromandel

"It looks like it's shaping up to be a season from hell"... John Bassett, Coromandel, October 2014

My friend and long-time NBA member John Bassett often pops in for a cup of tea and a chat about bees. On this particular day in October, we spent our time comparing notes on unexplained beehive depopulation events that were occurring in our area. We concluded that we needed to find out what was going on.

I contacted Dr Mark Goodwin from The New Zealand Institute for Plant and Food Research. Mark came to the Coromandel to assess and take samples from some of the affected hives. From that information, it was clear that we needed to communicate with other beekeepers in the area.

In December, Mark and I organised a meeting of Coromandel beekeepers to discuss the situation. Also in attendance were NBA member Don MacLeod and NBA Executive Council member Russell Berry. The beekeepers communicated openly and participated in a highly collaborative manner, supplying samples to Mark for testing. Many of the beekeepers had experienced significant losses from Great Barrier Island down to Thames due to very similar unexplained depopulation events.

Mark explained to the group what he had learnt so far. He described that he first heard of issues with colonies from beekeepers in the Wairarapa. The symptoms they described appeared similar to what Mark had seen in Coromandel. Mark went on to say that he was quite surprised by the first Coromandel hives we inspected. They all had queens but just a handful of bees. Six weeks earlier these colonies would have been thriving. There were rings of brood that had been capped, but had been chilled and not emerged because of their dramatic decrease. So from 20,000 bees, there were now around 1,000 in these colonies, with a queen.

Mark also commented that he was surprised that all 10 colonies in the apiary looked pretty much the same. There were no dead bees on the floorboards or outside the hives and no

reports of swarms, so it seems that the bees had deserted individually. This is usually a sign of sick bees. He also noticed there were eggs and capped brood, with around 5% of the eggs being reared to larvae and then capped. The bees that were left did not seem capable of looking after the brood.

He concluded by saying that he had not come across this set of symptoms before, despite having worked with a large number of beekeepers.

The next question is, of course, what is the cause of what is happening here? Mark pointed out that we can't know with any certainty at this stage but we can make some guesses.

Mark said that it doesn't look like the effect of bad weather conditions. It's very tempting to say the weather wasn't very good so the colonies declined. But they declined so quickly and because so many bees disappeared, this is not the symptom of bees not getting enough forage. If it had been a pesticide, we would expect dead bees out the front of the hive. But because these sick bees are leaving, it suggests it was a pathogen or a group of pathogens that were having this effect.

The hypothesis that Mark favours at present is *Nosema ceranae*. It is a relatively new pathogen to New Zealand, first found on the Coromandel Peninsula in 2010. Although he didn't get to see the original incursion, it was associated with weak and sickly colonies. You have a new set of symptoms and you have a new pathogen in an area, and it is very tempting to link the two together.

Since the meeting, Mark and the team at Ruakura have counted *Nosema* spores from healthy colonies and in depopulated colonies supplied from the beekeepers that came to the Coromandel meeting. The depopulated colonies had significantly more *Nosema* spores. They did not differentiate between *Nosema ceranae* and *Nosema apis*.

Mark also pointed out a problem with testing samples of bees from hives that have depopulated because most of the sick bees

have actually left, so you only get to sample bees that were not as sick.

I managed to get Mark some samples from three colonies that were depopulating and so that included the bees that, if they didn't end up in the sample, would have ended up leaving the hive and flying elsewhere. And when we looked at those, they had incredibly high *Nosema* levels, higher than I can find in the literature.

A number of other scientists from several different groups, including dnature Ltd., the Ministry for Primary Industries (MPI), andASUREQuality, have participated in trying to elucidate the cause of this event. John Mackay at dnature Ltd. tested the same samples using DNA methods and they had extremely high levels of *Nosema ceranae* and mid to high levels of *Nosema apis*. The team at the MPI lab also reported positive results for *Nosema ceranae* in the sick hives. MPI and dnature Ltd. will try and ascertain with a quantitative PCR (polymerase chain reaction) if there is a relationship between whether a colony was affected with symptoms and the amount of *Nosema* DNA present in the colony.

The tricky thing here is that correlation does not necessarily mean causation. The effect that we see here seems related to *Nosema ceranae* and *Nosema apis*, but is this a cause or effect of something else? If the *Nosema* were not there, would the colonies be healthy? These colonies also tested positive for mid to low levels of Kashmir bee virus.

In conclusion, Mark suggested that there are some very important questions here that really need to be addressed. The first is whether this is just a one-off and we will never see it again? Or is this a taste of what is going to happen in the future? Whatever has happened is a complex problem and requires a careful workup. A national survey to identify normal morbidity within beekeeper operations, as well as a stocktake of bee pathogens, are useful areas of future research to help understand bee disease events in the future.

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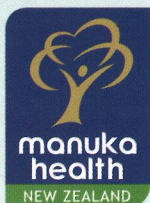
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PEST AND DISEASE CONTROL

USING FGMO AND FOGGERS

Neil Farrer, NBA Life Member

In the early stages of the varroa incursion in New Zealand, a number of methods were registered to give beekeepers a wide choice of varroa treatments.

These methods were separate from the products that international companies were marketing and registering, such as Apistan®, Bayvarol®, etc.

Thanks to Auckland beekeeper Bob Russell, one of the methods registered in New Zealand was the use of Food Grade Mineral Oil (FGMO) with propane foggers. This method has been praised by some and rubbished by others. But the scientific world would have largely ignored it as no one was going to pay for research.

The FGMO/fogger method was first introduced by Dr Pedro Rodriguez, a qualified veterinarian in the US Army and also a beekeeper. He developed the method and also proved that there were no residues in the hive or other side effects. Many hobbyists and commercial beekeepers have purchased foggers and used them in over the past 10 years, some more successfully than others.

The working principle is that when used in a propane fogger, FGMO will be ejected as a dense white cloud. The droplets are 15 microns in size; i.e., very small. The droplets do not worry the bees but it does make them groom themselves, which helps to dislodge varroa on their bodies. More importantly, the droplets block the breathing spiracles on the varroa mite, causing them to die.

It is not possible for varroa to develop resistance to this method. The fog does not penetrate the cell walls, so it affects only the varroa on the bees. Therefore FGMO is another tool to combat varroa.

As with all treatments, there are situations where results are disappointing, and at other times excellent results are achieved. It is important to note that fogging a hive only

takes four seconds (up to four pulls on the fogger trigger) so it is a very quick method, but it should not be done more often than once every seven days. Using a sticky board on the floor or an insert on a mesh floor will quickly show the beekeeper the level of mites on bees in the hive.

Propane foggers can be purchased over the Internet from the USA or other countries at widely different prices. There are also electric models that require conversion to our 240-volt current. Propane bottles are readily available through hardware retailers: the main brands of propane bottles are BernzOmatic or Coleman, as they have the correct thread to screw into the foggers. Lately, new models made in China or Korea have become available. These models use a butane gas canister (also readily available in New Zealand) and the butane canisters are much cheaper than the propane bottles.

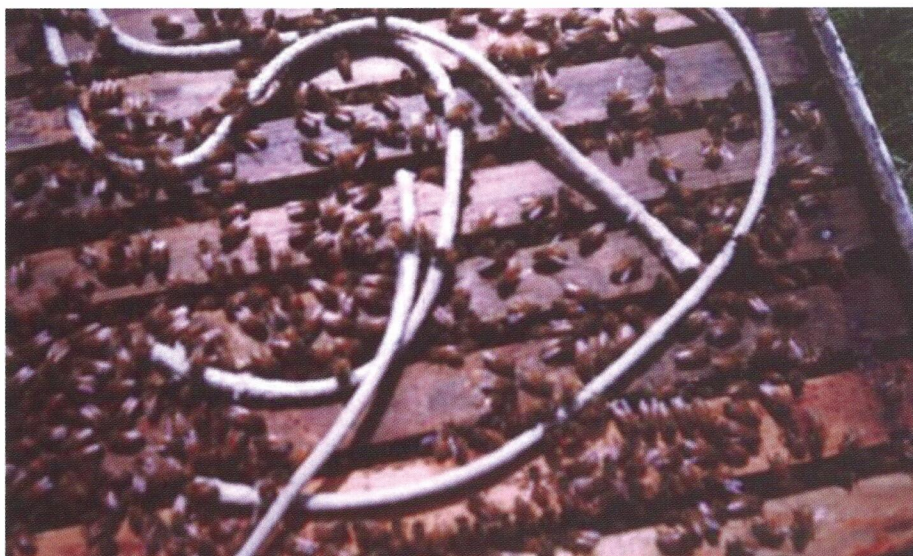
Over the years it has been proven that the use of cotton cords, made up with a recipe

of FGMO, beeswax and honey or sugar syrup, also is very good at controlling varroa. In the winter months, thymol can be added to the cord mix, which enhances the effect. The use of thymol was registered, again in the early stages of varroa in New Zealand. Thymol crystals are very pungent, so protective gear should always be used when making up cords.

Details on using foggers and cords are supplied FREE of charge: contact me (nfarrer@xtra.co.nz) for information or discuss this method at your local bee club.

Purchase of foggers and other related materials can be arranged through me, or you can research and buy over the Internet.

Safety precautions: As with all beekeeping, safety first. Use a mask: either a good quality dust mask or a proper one for organic vapours.



FGMO Emulsion Cords.

Photo from *Guideline for use of food grade mineral oil for control of varroa*, produced by the NBA in August 2005. This guideline was published in the October 2005 journal that was distributed to all registered beekeepers in New Zealand.

RESEARCH

THE TRUE RELATIONSHIP OF NPA AND MG LEVELS

Peter Molan, formerly Professor in Biological Sciences and Director of the Honey Research Unit at the University of Waikato (now retired)

There has been up until now a major misunderstanding of the relationship between different levels of antibacterial activity in manuka honey. It has always been assumed that, for example, a honey with a non-peroxide antibacterial activity (NPA) of 20 is twice as potent as one with a rating of NPA 10, but that is in fact not correct.

The fallacy is due to it not being taken into account that the NPA rating starts at 8, not zero, a rating of 8 being the minimum level of activity that can be detected in the assay. This is the same situation as temperature measured on the Fahrenheit scale. A temperature of 100°F (38°C) is not twice as warm as 50°F (10°C), because the Fahrenheit scale starts at 32°F, not zero (see Figure 1), whereas a temperature of 100°C is exactly twice as warm as 50°C because the Centigrade scale starts at zero.

I got to thinking about this after being asked a simple question by someone new to the honey industry who wanted to calculate the blending of honey to obtain a desired

NPA rating. I was asked whether it should be blended in proportion to the NPA ratings or in proportion to the methylglyoxal (MG) content. Intuitively I would have said to blend in proportion to the active ingredient (in this case methylglyoxal) as would be the case with any other product, but I knew that doing so would not give the desired result with manuka honey. That started me trying to work out why that was so.

Part of the issue is that the NPA rating is not a direct measure of antibacterial activity. The numbers show the concentration (as % in solution) of a standard reference antiseptic (phenol) that has the same level of antibacterial activity in the testing method as the sample of honey has. For the original research for which this testing method was developed, it was the best way of showing how honey compared for potency with other antibacterial substances. But just as the Fahrenheit scale starts at 32°F, not at zero, the antibacterial activity of phenol in the test method used starts at 8, not zero. (For all antibacterial substances there is a

concentration below which they do not affect bacteria, known as the 'minimum inhibitory concentration' for each substance. Phenol at a concentration of 7% or less has no antibacterial activity at all in the testing method used.)

Thus whilst the NPA rating shows the antibacterial activity of honeys as being higher or lower than each other, it does not show their relative activity in direct proportion. A temperature of 100°F (38°C) is actually about four times as warm as 50°F (10°C), not twice as warm, because the starting temperature of 32°F on the Fahrenheit scale has to be subtracted first before looking at the numbers in proportion to each other (i.e., $100^\circ - 32^\circ = 68^\circ$ is compared with $50^\circ - 32^\circ = 18^\circ$). A honey rated NPA 30 has a bit over three times as much antibacterial potency as one rated NPA 15, not twice as much. (i.e., $30 - 8 = 22$ is compared with $15 - 8 = 7$). This consideration brings it in line with the proportions of the active ingredient, methylglyoxal (i.e., 1,600 mg/kg compared with 500 mg/kg, a bit over three times as much). So the level of methylglyoxal present is actually a much better indicator than the NPA rating for consumers to see the relative potency of manuka honeys on sale.

Although the methylglyoxal rating scale does not start on zero either, we found that when we measured it in the laboratory, the minimum inhibitory concentration in the standard test method was low (about 50 mg/kg). Subtracting this relatively small number would have only a small effect on proportionality on a scale going up to numbers well over 1,000 mg/kg.

Another part of the issue is the belief by some that the graph of the correlation between NPA and the level of methylglyoxal is a curve and not a straight line. (See Figure 3 below for an example.) When I was first shown the graph produced by my colleagues in the Chemistry Department at the University of Waikato, I expressed the opinion that the data points sat as two

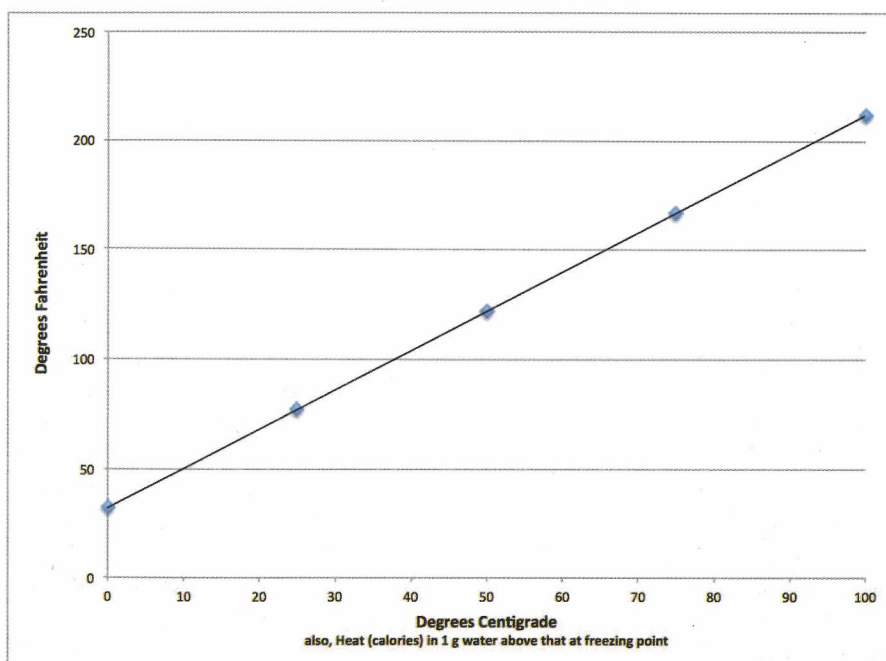


Figure 1: A graph showing the relationship between temperature measured on the Fahrenheit and Centigrade scales. (The Centigrade scale also shows the heat content.)

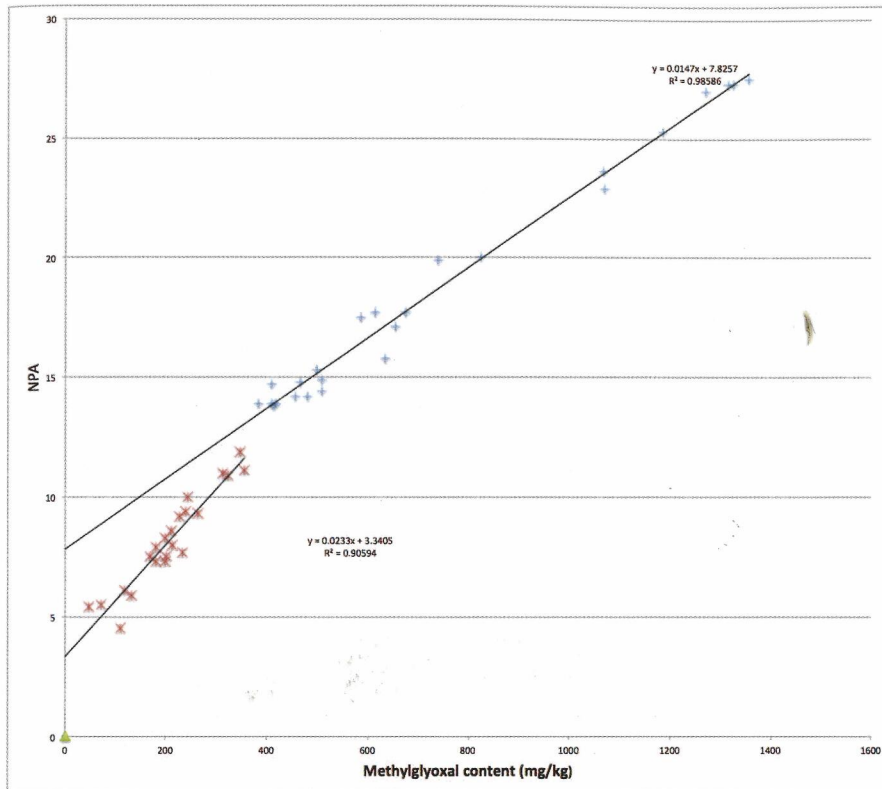


Figure 2: A graph showing the correlation between the level of NPA and methylglyoxal in various samples of manuka honey. (The data is from Adams, C. J., et al. (2008), *Carbohydrate Research*, 343(4): 651–659, corrected in accordance with the Erratum by Adams, C. J., et al. (2009), *Carbohydrate Research*, 344(18): 2609.)

separate straight lines and should not have a curve fitted to the total (see Figure 2). The realisation now that the NPA rating does not start at zero makes it very definite that the graph should be two separate straight lines.

The higher NPA values were obtained by assaying honey by the published method (Allen, Molan, & Reid, 1991), which has become the de facto standard method used internationally. In this method the honey is diluted to a 25% solution to get the optimum level of activity for accurate measurement. This method has a minimum level of detection of activity of 8% phenol, but it is very common for samples of honey with a rating of 11 or lower to give only partial inhibition of the bacterial growth and thus their activity rating cannot be measured. To get a measurement for these and for honeys with NPA below 8, it is necessary to test a more concentrated solution of honey to have a higher level of activity on the test plate. This is done with a 50% solution of honey, so the minimum level of detection then is 4% phenol. That means that the rating scale for honeys tested as a 50% solution starts at NPA 4, not NPA 8 as in the standard method. This can be clearly seen in Figure 2, where the fitted straight lines at the minimum detectable level of activity due to

methylglyoxal (about 50 mg/kg) are at values of about 8% phenol for the higher set of data where NPA was measured with the standard 25% solution of honey, and 4% phenol for the lower set measured with 50% solutions of honey.

Another reason why the correlation graph should have straight lines fitted to the data points rather than a curve is that the relationship between both methylglyoxal and phenol and their strength of antibacterial activity is linear, so their relationship to each other must be linear. On the agar assay plates the area of the zone of inhibition of bacterial growth is a direct measurement of antibacterial potency (i.e., it is not relative to a reference standard; it is directly proportional to the strength of the antibacterial activity). This is a principle that applies to all antibacterial substances. Whereas with some antibacterial substances their potency may increase with concentration in an upward or downward curve, examination of the zone sizes in a random selection of the many assays we have conducted shows perfect straight lines for both phenol and methylglyoxal over a wide range of levels of activity.

The implication of this confirmation that the

graph for correlation of methylglyoxal with NPA is not a curve is that the estimation of NPA from assays of methylglyoxal that is done commercially gives incorrect results. The NPA values being given are too low when below NPA 15. Above this level, the curve and the straight line start to be in about the same place on the graph. The discrepancy is most marked below NPA 8, where the curve is drawn through data that is not on the same scale of measurement (i.e., has been obtained by measurement with 50% solutions of honey).

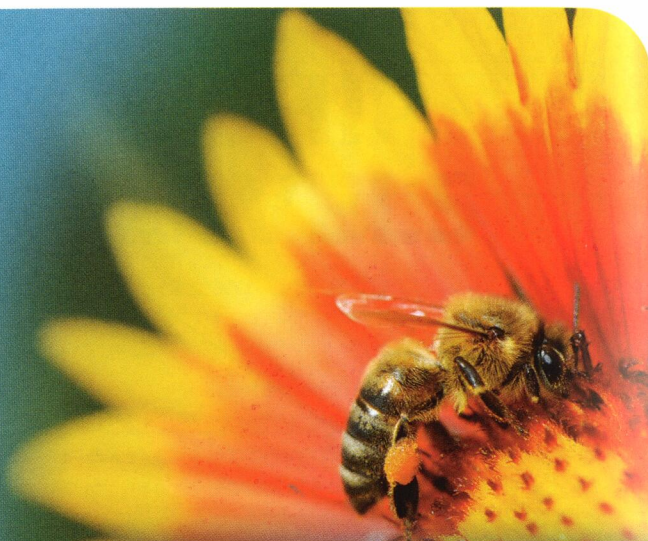
Also, there is quite a large error involved in this region because when tested as double-strength honey solutions (i.e., 50% instead of the standard 25%) to detect the low level of activity, the results obtained for activity are not double, so an adjustment factor is used to get an approximately correct value. However, I have found by assaying a random collection of samples of manuka honey as both 25% and 50% solutions that the adjustment factor is quite different for each sample.

Another consideration is that whereas the standard method (testing as a 25% solution) is an internationally accepted published method, testing as a 50% solution is an ad hoc method with no established protocol. (The method was developed simply to give producers a guide as to whether a batch of honey was worth retaining for blending with honey of higher activity, or if it had potential to achieve an activity rating above 8 on storage. It was never intended to be used for rating honey for sale.)

The whole set of correlation values as are widely used appears to be incorrect anyway. Figure 3 shows the correlation curve used based on the corrected results of Adams et al. that are shown in Figure 2. Superimposed in Figure 3 are the mean results obtained by many testing laboratories in multiple countries who assayed the NPA and/or the methylglyoxal content of a standard set of honeys sent to them by Global Proficiency as an inter-laboratory comparison exercise. [Editor's note: Global Proficiency's website states that it is "a specialist provider of proficiency testing, reference materials, and related services."] It can be seen that the correlation curve gives values for NPA that are about 2 units (2% phenol equivalent) too high for the corresponding level of methylglyoxal. This is not surprising considering that in the past couple of years changes have been made

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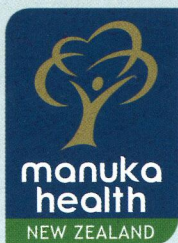


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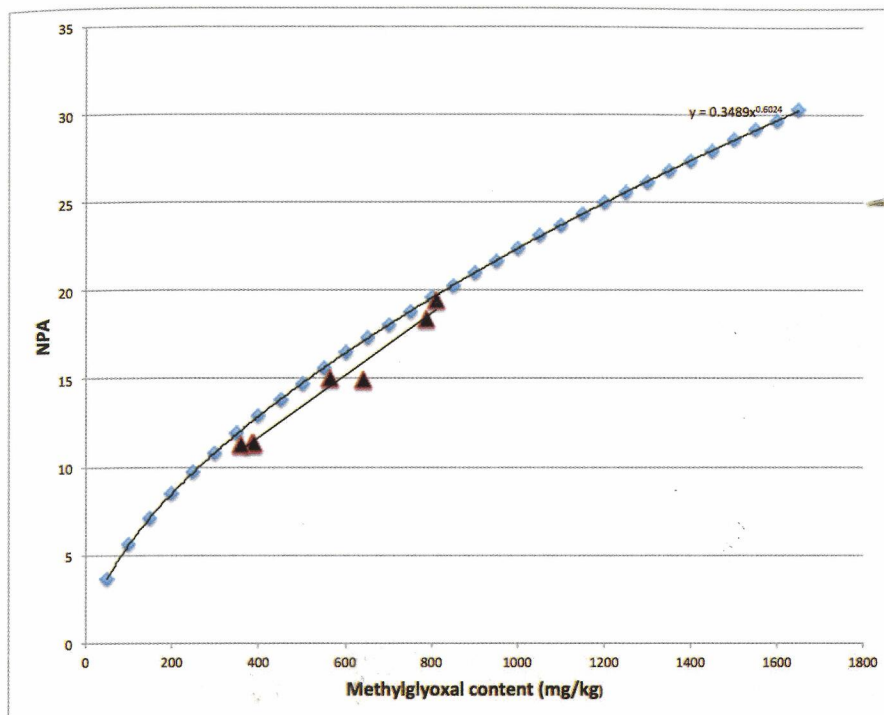


Figure 3: A graph showing as a curve the correlation between the levels of NPA and methylglyoxal in manuka honey. This graph has been plotted from the data generated from the calculator for converting between NPA and methylglyoxal content that was until recently on the UMFHA website. That calculator is based on a smooth curve fitted to the scattered data from the publication by Adams et al. (2008) after correction, as shown in Figure 2 above. Superimposed (with the triangular symbols) are the mean results obtained from the many laboratories that participated in the 2013 and 2014 rounds of the Inter-laboratory Comparison run by Global Proficiency.

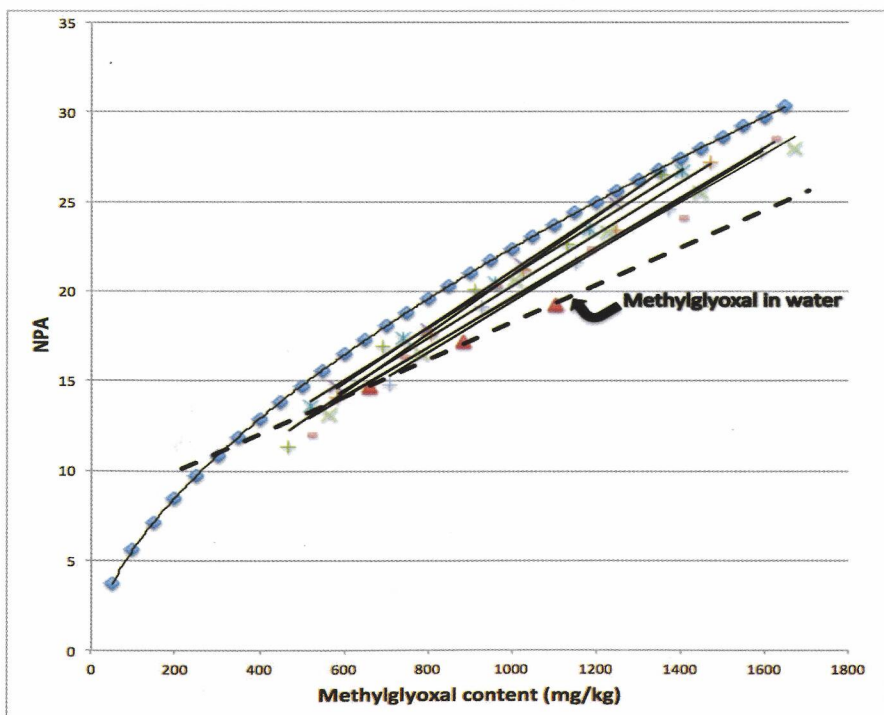


Figure 4: A graph showing the levels of methylglyoxal and NPA obtained when various amounts of methylglyoxal were added to a randomly selected variety of seven samples of manuka honey with different starting levels of methylglyoxal. The lines are superimposed on a copy of the correlation curve shown in Figure 3. Also shown (as a dashed line) are the results obtained from adding various levels of methylglyoxal to water rather than to honey.

in the assay of methylglyoxal to improve its reliability. It is my opinion that the industry should engage Global Proficiency or some other independent organisation such as the Bee Products Standards Council (BPSC) to obtain a new correlation graph with a range of honeys with NPA values from 10 upwards, using a laboratory assaying methylglyoxal with proven reliability.

In an article I wrote which was published in *The New Zealand BeeKeeper* (Molan, 2008), I hypothesised that the explanation for the values for NPA being on a straight line about 8 units (i.e., 8% phenol equivalent) higher than the activity of the corresponding level of methylglyoxal was that there was a synergist present in manuka honey, a component with no antibacterial activity itself but which boosted the antibacterial activity of methylglyoxal.

I was misled into this line of thinking by not realising at the time that methylglyoxal is an unstable substance. In a graph included in that article I showed that methylglyoxal dissolved in water (i.e., not in honey) displayed a much lower level of antibacterial activity than that in honey with the same level of methylglyoxal in it. I later found that the actual content of methylglyoxal in solution in the bottle of reagent we were using was much lower than was stated on the label. (It was failure to take into account this instability of methylglyoxal, giving decomposition of the content in the reference standard used, that was the cause of the failure to get consistent results reported for assays of methylglyoxal in the first couple of rounds of inter-laboratory comparison of methylglyoxal assays.)

I was further misled by the results of a subsequent experiment we conducted, where we added various amounts of methylglyoxal to honeys with different starting levels of activity. Not realising that the actual amounts of methylglyoxal added were a lot lower than believed, I had interpreted these results incorrectly. I had expected the added methylglyoxal to raise the NPA along the line of the graph as shown in Figure 2, but it did not. Instead, the NPA increased less steeply from whatever level to which methylglyoxal had been added. I hypothesised that this was because there were different amounts of synergist present in the honeys of different activity levels to which the methylglyoxal was being added.

I was incorrectly of the view that in honeys with a higher level of NPA, the amounts of synergist would be greater because the proportion of manuka nectar source in the honeys would be greater.

We repeated this experiment more recently using freshly purchased methylglyoxal, with the content of methylglyoxal in it verified by assay in the same analytical laboratory at the same time as the methylglyoxal content of the honey samples was assayed. This time we found that the level of NPA of the honey was increased as steeply as would be expected if accounted for by the antibacterial activity of its methylglyoxal content. These results are shown in Figure 4. Although the lines on the graph for each sample of honey do not coincide with the line of the correlation curve, they are close to the position of the line shown in Figure 3 that shows the values for correlation obtained from Global Proficiency's inter-laboratory comparison, which are more likely to show the correct values.

There is some synergism involved, as can be seen by looking at the line in Figure 4 that shows that lower levels of NPA result from adding various levels of methylglyoxal to water rather than to samples of honey. It has been reported by other researchers also that the antibacterial activity of methylglyoxal is greater when in honey than when on its own in water. We found the likely explanation of this when carrying out experiments to measure the minimum inhibitory concentration of methylglyoxal with bacteria in nutrient broth culture medium rather than on agar plates. We got very variable results depending on the time of exposure of the methylglyoxal to the broth.

Methylglyoxal is a reactive chemical that interacts with proteins and peptides to form addition compounds known as advanced glycation end-products (AGEs). In doing this with peptides in the bacterial culture medium, the level of methylglyoxal present will decrease. (In the agar diffusion assay there is much shorter exposure of methylglyoxal to the nutrient broth because fresh solution is diffusing out all the time from the wells cut in the agar plate.)

It is well known that antioxidants prevent the formation of AGEs from methylglyoxal. It is most likely that the antioxidants in honey are working in this way to preserve the methylglyoxal present. The variation

between different samples of honey in their antioxidant content would account for the lines in Figure 4 obtained from adding methylglyoxal to a range of honeys not all being in exactly the same position, although the differences are not large.

We examined a large range of honeys of types other than manuka and found this synergism in all of them, as would be expected since all honeys contain antioxidants. The highest level of synergism was found to be 28% more than the lowest. The important point to keep in mind about this, though, is that whereas the synergism increases the NPA, the antibacterial activity is due entirely to methylglyoxal, which is the only significant antibacterial component present in manuka honey in the testing done

Whilst the NPA rating shows the antibacterial activity of honeys as being higher or lower than each other it does not show their relative activity in direct proportion.

with hydrogen peroxide removed.

Conclusion

It is my opinion, formed from consideration of all the points made here, that it would be best by far for the rating of activity in manuka honey to be done by the whole industry as originally stated by the Ministry for Primary Industries (MPI) in their guidelines, which was that only the content of methylglyoxal be shown. This would then simply require education of consumers to have them realise that the antibacterial potency is directly proportional to the level of methylglyoxal.

Although in New Zealand and Australia there may be restrictions on marketers making reference to antibacterial activity, it could be done by non-commercial educators like myself. In other countries the Australia New Zealand Food Standards (ANZFS) Code does not apply, so there would be no restriction on such educating. Rating the content of methylglyoxal would overcome the problem of marketers using misleading rating numbers that are not actually for NPA. (The MPI guidelines will now allow numbers to mean anything the marketer defines them as meaning, which could be nothing to do

with NPA.) It would also curb the freedom of marketers to mislead consumers by giving rating numbers that are actually higher than the true equivalent to NPA ratings. Additionally, it would allow consumers to see the actual value of honey on sale rated "MGO 80" when they see it up against manuka honey on sale with methylglyoxal ratings of 800 to 1,200. Furthermore, rating the methylglyoxal content of manuka honey will let consumers see that honey rated as NPA 5 (83 mg/kg methylglyoxal) has only one tenth of the activity of honey rated NPA 20 (830 mg/kg methylglyoxal).

Acknowledgements

I would like to thank Watson & Son for providing funding to allow the employment of Stacey Meyer as a research assistant to carry out some of the experiments mentioned in this article. I would also like to thank Brenda Tahi for asking the perceptive question about blending which started off my thinking about the relationship between NPA and methylglyoxal. The skilful work of Stacey Meyer and Kerry Allen in carrying out the experimental work is gratefully acknowledged.

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REASSESSING A REASSESSMENT

Roger Bray

The Technical Committee (TC) has spent a great deal of time contributing to the 'reassessment of the reassessment' of organophosphates and carbamates. What a complicated process to correct a simple mistake!

It seems like ages ago that the EPA conducted a reassessment of organophosphates and carbamates. During that process, the EPA inadvertently removed the controls on bee non-contact periods for systemic insecticides. Systemic insecticides are applied to a plant and the plant absorbs the chemical into its sap stream, rendering the plant toxic to chewing and sucking insects. It also affects the nectar, leaving toxic nectar and pollen available for bees.

There have been many 'incidents' regarding bees where the applicators have sprayed a plant in flower with, say, dimethoate, where bee deaths can occur for some days.

The controls, for bee safety, imposed on the use of the products involved not spraying flowering plants from seven days prior to flowering until petal fall. These controls were applied in 2001 with the adoption of the Hazardous Substances and New Organisms (HSNO) Act 1996.

When EPA conducted its first reassessment (APP201045), the Authority omitted the non-contact period control that allowed these types of products to be applied to a flowering crop.

The Technical Committee (TC) spotted the error and alerted EPA of a potentially dangerous situation for bees that would arise from the omission. To correct the error, the EPA initiated a further reassessment.

The TC submitted to this reassessment and it is pleasing to note the general support from submitters, including chemical manufacturers and user groups. A hearing was held and the main opposition to the reinstatement of the non-contact controls has come from a sector whose views were expressed as part of the Market Access Solutionz/Horticulture New Zealand submission.

Part of their opposition has been as a result of their view that "NBA appears to have had undue influence on the EPA decision to reassess, despite not participating in the formal process", based on the premise that "(their) Industry does not believe that a reassessment should have been granted for any of these compounds based on a request from the NBA who chose not to participate in the original reassessment process."

EPA has been very thorough in the process and invited the TC to respond specifically to the Market Access Solutionz/Horticulture New Zealand submission and their proposed controls for bees. This involved a requirement for growers to notify, within five days, all commercial beekeepers within a two-kilometre zone around the crop to be sprayed. This proposal was found not to be practical to apply, as the two-kilometre zone was too small: even the data the submitters supplied recorded bees foraging 5.9 kilometres from the apiary.

Don MacLeod has written two responses, which the TC considers addresses all the points raised by the submitters. All details of this application can be read on the EPA website: <http://www.epa.govt.nz/search-databases/Pages/applications-details.aspx?applID=APP202142>

We look forward to EPA reinstating the original controls that were originally set for these products.

NOTIFY BEE DEATH INCIDENTS TO THE EPA

A reminder for all beekeepers that bee deaths, particularly those where chemical damage is suspected, should be notified to the Environmental Protection Authority (EPA). The EPA incident reporting form will be listed in each issue of *The New Zealand BeeKeeper* as well as on the NBA website. The form is available on the EPA website:

www.epa.govt.nz/Publications/Pollinator_incident_reporting_form_2014.pdf

ADVANCE NOTICE TO NBA BRANCH SECRETARIES 2015 Annual General Meeting Deadlines

NBA Branch AGMs should be held by 1 May 2015

		TIMING PRIOR TO AGM	COMPLETED BY
2015 ANNUAL GENERAL MEETING	THURSDAY 25 JUNE		
Ward Rep nominations	To Executive Secretary	28 days	Thursday 28 May
Notices of Motions	To CEO	30 days	Tuesday 26 May
Proposals to alter Rules	To CEO	30 days	Tuesday 26 May
Branch Financial Reports	To CEO	50 days	Wednesday 6 May

Executive Secretary: secretary@nba.org.nz and CEO: ceo@nba.org.nz

PHONE: 04 471 6254

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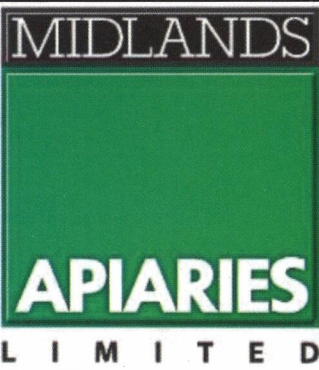
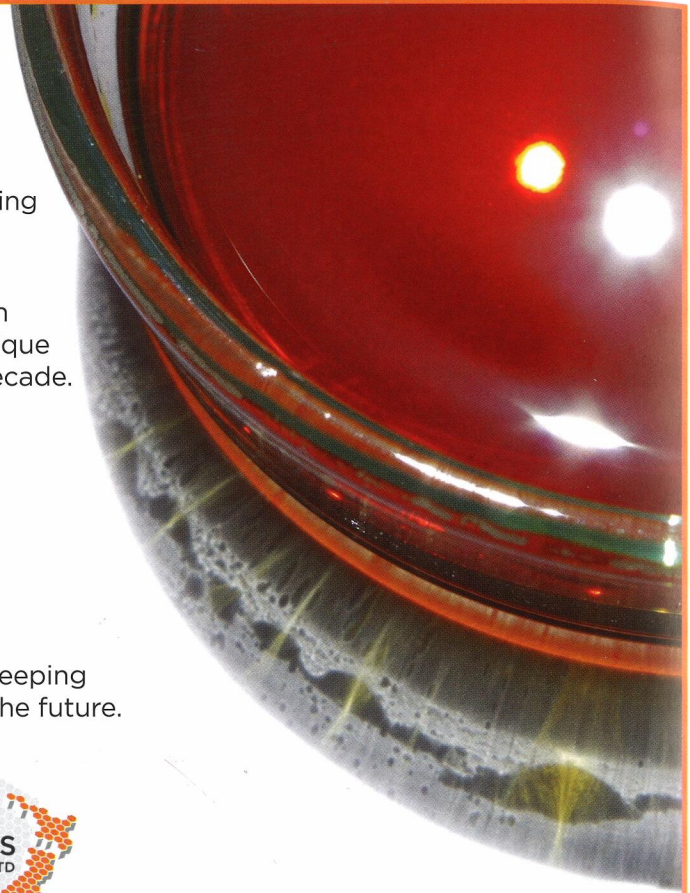
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- Skill in identifying disease, & knowledge of methods of disease control
- An understanding of bee genetics and hive manipulation & Queen raising
- A minimum of 5-10 years' experience working with bees
- Strong time management and leadership skills
- The ability to work flexible hours during peak times
- Carpentry skills for building & repairing hive boxes
- Class 2 licence

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ENVIRONMENT REPORT

GOOD THINGS TAKE TIME

Roger Bray

The March edition of the journal (p. 6) contained a brief report that the Local Government and Environment Select Committee recommendations have been tabled in Parliament. The wider beekeeping issues contained in the report date back to 2011, when representatives from the NBA briefed the Select Committee (SC) on pollinator security.

Petition 2008/135 of Sue Kedgley (former Green Party MP), on behalf of the NBA, called for the House of Representatives to:

1. Develop a Healthy Bees Strategy to improve the health of honey and wild bees
2. Undertake annual surveys of bee populations to assess whether our bee populations are declining.
3. Stop the use of pesticides that are implicated in bee deaths until an ERMA reassessment finds that they do not pose a risk to bee health. *[Editor's note: ERMA is now the Environmental Protection Authority (EPA).]*
4. Prohibit the import of honey and other bee products that could introduce further bee diseases into New Zealand.

In March 2011, the SC also heard from the Ministry of Agriculture and Forestry, the New Zealand Association for Animal Health and Crop Protection, and Dr Mark Goodwin, a scientist at the New Zealand Institute for Plant and Food Research Ltd. The SC later received a written submission from the Environmental Protection Authority, as well as updates from MPI.

More recently, in July and September 2014 the NBA gave an update to the SC on what the Association had done to promote and maintain bee health since 2011—it was an impressive list. Included in the 'list' was an indication of the activities of Branches, Conferences, Bee Aware Month, magazine articles, and of course, the work of the Technical Committee, which wrote 14 submissions and attended seven hearings or pre-hearings in connection with applications for approval of chemicals.

The SC report tabled in Parliament in mid-February 2015 is very positive toward protecting our bees and promoting their long-term sustainability. It made some specific recommendations to Government; however, we cannot sit back and expect that

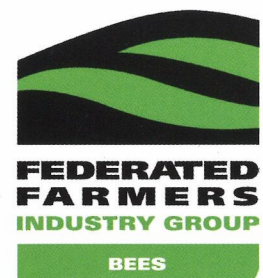
recommendations will be acted upon. The NBA still needs to work with government departments and agencies to ensure that progress is made in promoting bee health.

There have been reports and anecdotal tales of bee deaths 'caused by chemicals' for many years now, but only one 'conviction' under the provisions of the Hazardous Substances and New Organisms (HSNO) Act for bee-related issues since 1996. The SC has recommended some actions that are more specific to protecting bees from chemical issues. These relate to compounds that 'may be harmful to bees', more specifically, surfactants and neonicotinoids. Another welcome recommendation has been the call for the enforcement agencies to adequately enforce the provisions of the HSNO Act.

Some very solid foundations have been laid through the efforts of individuals acting for the NBA team. To benefit the industry, that work must continue. We have the support of a Select Committee for this work and this is testament that our aims and direction are sound.



The National Beekeepers
Association of New Zealand



NOTICE OF THE 2015 **INDUSTRY GROUP ANNUAL GENERAL MEETINGS**
to be held at Wairakei Resort, Taupo

Thursday 25 June 2015

The AGM of Federated Farmers Bee Industry Group commences: 8.00am

The AGM of the National Beekeepers Association of NZ Inc. commences: 9.30am

Chief Executive Officer

AMERICAN FOULBROOD PEST MANAGEMENT PLAN

AFB PMP REPORT

Rex Baynes, AFB NPMP Manager

Introduction and background

The Management Agency for the American Foulbrood Pest Management Plan (AFB PMP) is the NBA. The NBA has a statutory responsibility to implement the AFB PMP, which comprises a range of regulatory and educational programmes. The plan is funded using income generated from a mandatory levy on beekeepers and apiaries through the Biosecurity (American Foulbrood – Apiary and Beekeeper Levy) Order 2003.

The Management Agency

The Management Agency currently consists of the following people:

Mr Frans Laas (Chairman)	Otago
Mr Neil Mossop	Bay of Plenty
Mr John Hartnell	Christchurch
Mr Stephen Black	North Taranaki

Total reported incidents of American foulbrood

Although the number of registered beekeepers, apiaries and hives (refer below) continues to trend upwards, the reported AFB

Year	AFB Cases (Reported)	Number of Apiaries	Percentage
2003–2004	870	432	0.30%
2004–2005	778	421	0.26%
2005–2006	952	482	0.32%
2006–2007	954	540	0.30%
2007–2008	980	552	0.27%
2008–2009	1,117	557	0.32%
2009–2010	515	348	0.27%
2010–2011	1,093	579	0.28%
2011–2012	762	499	0.18%
2012–2013	1,128	582	0.25%
2013–2014	1,099	597	0.22%

Table 1: Reported AFB cases 2003–2014. Notes: Figures for the year are calculated between June and May unless stated otherwise. Percentage figures taken per apiary.

disease rate sits at 0.21% of hives and 2.05% of apiaries.

In the last 12 months, 510 apiaries (855 hives) have been reported as having AFB.

Increased compliance equates to increased reporting

It is important to recognise that with increased compliance with filing Annual

Disease Returns (ADRs) and Certificates of Inspection (COIs), there is a corresponding increase in AFB reporting, notwithstanding also beekeeper and hive increases.

Beekeeper, apiary and hive numbers

As at 7 February 2015, New Zealand has a total of 546,837 registered beehives, an approximate increase of 50,775 hives in the last 12 months.

Of note is that of the total number of beekeepers (as below), 3,592 own between zero to five hives, equating to 6,883 of registered beehives.

Annual Disease Returns (ADRs)

We are pleased to report that nearly 94% of beekeepers are complying with their ADR obligations as at February 2015.

The Management Agency has commenced a COI default inspection programme utilising their dedicated AFB auditors.

Disease Elimination Conformity Agreement (DECA)

At present, 61% of all registered beekeepers hold a DECA. This is a significant improvement to the figures for recent years. For example, although there were 2,733 fewer beekeepers in 2009 than in February 2015, only 47% of beekeepers in 2009 held a DECA.

Year	Registered Beekeepers	Number of Apiaries	Number of Beehives
2000	4,864	21,633	299,172
2001	4,550	20,993	320,113
2002	3,973	20,258	305,152
2003	3,649	20,228	300,729
2004	3,211	19,592	292,530
2005	2,911	19,281	294,886
2006	2,694	18,954	300,728
2007	2,602	19,228	313,399
2008	2,589	20,439	343,155
2009 (June)	2,663	21,593	365,709
2010 (June)	2,957	22,440	376,672
2011 (June)	3,265	23,356	391,540
2012 (June)	3,802	25,309	425,498
2013 (February)	4,127	26,263	435,619
2013 (June)	4,273	27,142	453,820
2014 (February)	4,767	29,638	496,062
2015 (February)	5,396	33,462	546,837

Table 2: Beekeeper, apiary and hive numbers, 2000–2015

Year	% ADRs Received	Registered Beekeepers
2000	85%	4,864
2001	70%	4,550
2002	75%	3,973
2003	70%	3,649
2004	79%	3,211
2005	82%	2,911
2006	84%	2,694
2007	83%	2,602
2008	91%	2,589
2009	97%	2,663
2010	93%	2,957
2011	92%	3,265
2012	92%	3,802
2013 (January)	92%	4,127
2013 (June)	94%	4,273
2014 (March)	91%	4,767
2015 (February)	94%	5396

Table 3: ADR compliance levels, 2000–2015

AFB Recognition Course training

The Management Agency continues to place a great deal of emphasis on facilitating AFB recognition Training courses on a nationwide basis: refer to Table 5.

The column headed 'No Course' means the beekeeper did not attend a course as such, but opted to study the 'Yellow Book' *Elimination of American foulbrood disease without the use of drugs*, by Mark Goodwin) and take the test as a one-off.

Year	Beekeepers	Apiaries	Hives	Compliance Rate
2004	845	1,650	14,776	13%
2005	741	1,476	14,916	14%
2006	577	1,188	11,465	18%
2007	534	1,187	12,027	22%
2008	537	1,092	11,062	30%
2009	1,090	2,559	32,081	29%
2010	1,298	2,400	23,186	64%
2011	1,286	2,353	14,205	77%
2012	1,552	2,267	15,319	70%
2013	1,771	2,772	21,017	72%
2014 (March)	1,681	-----	-----	58%
2015 (February)	1,943	-----	-----	59%

Table 4: Certificates of Inspection (COI), 2004–2015
Note: Figures are given as at June unless stated otherwise.

So if you look at the figures for 2006, there were actually 11 courses in total.

Production of DVD/video on the eradication of AFB in New Zealand

The video presentation (11 modules) has been completed and is now awaiting signoff by the Management Board.

AGMARDT has assisted in part-funding this world-first initiative.

In addition, the Management Agency has requested that a tutin management component be included in the DVD.

Development of iPhone application

This additional educational resource is nearly ready for release.

Dedicated AFB Apiary Auditors

[Editor's note: please refer to the article '29 AFB auditors inspecting apiaries near you' on page 26.]

Recent Apiary Auditor inspection activity

Poverty Bay

One of our auditors has now completed inspections of a number of apiaries in the

Calendar Year	Events (Courses)	No Course	Passes
2006	15	4	93
2007	73	29	453
2008	88	36	264
2009	112	36	357
2010	59	29	491
2011	45	14	454
2012	39	7	490
2013	47	10	580
2014	59	13	751

Table 5: AFB Recognition Courses, 2006–2014

Gisborne region (these hives were missed from the diseaseathon). No AFB was found.

Coromandel

Our auditor in the region completed a number of hive inspections in the Coromandel where a beekeeper reported finding disease. The disease appears to be linked to boxes the beekeeper bought on the Internet a year earlier from the Pinnacle Hill area, Bombay. One of our Auckland-based auditors will be checking the Pinnacle Hill area.

Hawera area

Our auditor in the area has completed inspections around Hawera, where it was thought a new beekeeper with 200 hives might have AFB problems. Eight cases of AFB in 14 apiaries were found and destroyed.

Hawke's Bay

An inspection programme has been completed in the Hawke's Bay region with no AFB being located. This inspection programme resulted from complaints received from existing beekeepers in the area about outsiders moving in and possibly spreading AFB.

I have directed that a second inspection initiative (possibly over a three-day period) be undertaken in the area north of Napier up to Wairoa.

Auckland

One of our Auckland-based auditors has recently followed up on some abandoned hives reported in Auckland. No AFB was found.

Wairarapa

A commercial beekeeper registered a large number of apiary sites following a helicopter surveillance operation. The beekeeper had his DECA cancelled.

continued...



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Naturally Sweet

A second commercial beekeeper failed to register any of his sites. He was contacted by phone and was given an extension until the end of February to become fully compliant. He, too, lost his DECA.

A beekeeper with a hive at Victoria University reported AFB through the AFB hotline recently. AsureQuality Limited contacted a local respected beekeeper who checked the hive. It was not AFB.

Nelson/Marlborough

Our Nelson-based auditor found quite a number of AFB cases in the Nelson city area when checking apiaries in the vicinity of reported AFB cases.

Our Marlborough auditor checked four apiaries belonging to a local commercial operator, after a neighbouring beekeeper reported a few cases of AFB on a single apiary site.

Technical advice has been given to a Nelson beekeeper who rents out hives. Our auditor found a few of his hives infected by AFB.

West Coast/Canterbury

AFB inspection sheets were sent to a West Coast auditor to do a full audit on a local commercial operator. The beekeeper requested the Management Agency to delay AFB inspection until the autumn.

Our West Coast auditor checked some apiaries in South of Hokitika. He also checked three apiary sites (two unregistered) of a beekeeper and found some disease.

A Canterbury-based auditor checked a couple of apiary sites of the above. One site was found to be unregistered.

Another Canterbury auditor checked four unregistered sites of the above beekeeper. This beekeeper has had his DECA cancelled.

A Canterbury auditor found the source of AFB in Okuti Valley: all hives belonging to this beekeeper were burnt.

- An unregistered apiary site of another beekeeper was confirmed by a landowner in Methven. This was the third unregistered apiary site found by the auditors or the public within the last 12 months. This beekeeper's DECA was also cancelled and his ADR was returned to him as it was incomplete.

A Christchurch hobbyist lost his DECA for failure to register his apiary.

A Canterbury auditor inspected hives in the Horotane Valley near Christchurch, chasing the source of reported AFB.

A South Canterbury auditor carried out AFB inspections in the South Ashburton and Geraldine areas: no AFB was found. He is to carry out some inspections soon in the Alexandra area and inland South Canterbury. Robbed-out AFB was reported in Christchurch recently. A 'robbed-out letter' was sent to 49 beekeepers within a five-kilometre radius.

Otago

Our Otago-based auditor inspected 14 apiary sites of a Southland beekeeper following a report from another beekeeper concerned at high AFB levels. No AFB was found. A second beekeeper had his DECA cancelled as a result of the neglected status of his beehives.

Southland

An unregistered apiary site belonging to a commercial operator was found by an auditor chasing the source of an AFB find. The landowner confirmed that hives have been on site for a couple of seasons and that more apiaries are put on site during the summer period. The beekeeper was contacted to confirm ownership of these hives. Once this was confirmed, and considering this beekeeper has a recent history of keeping beehives in unregistered sites, the DECA was cancelled.

Our Southland auditor identified a few unregistered apiary sites and notices to register them have been left on site. These sites are still unregistered and will be destroyed.

The same auditor was directed to seize and destroy all beehives (live or dead) from another beekeeper. This beekeeper purchased all hives and boxes left from a local beekeeper who was put out of business through non-compliance with the AFB PMP.

General comment

AsureQuality is presently waiting for honey supers to be removed from hives so that they can start the auditors on autumn inspections. **Please note:** *the MPI-funded Exotic Surveillance round is due to start soon. This will result in the Exotic Disease auditors checking approximately 2,000 hives, mainly in city/town areas and mainly hobbyists' hives.* Any AFB in these hives should be picked up when these inspections are taking place.

Development of health and safety policies (including fatigue)/guidelines for Apiary Auditors

The Health and Safety Reform Bill was introduced to Parliament on 10 March 2014. The Bill is currently proceeding through the parliamentary process and is expected to become law midway through 2015.

The main purpose of the Bill is to provide a balanced framework to secure the health and safety of workers by protecting workers and other persons against harm to their health, safety and welfare by eliminating or minimising risks arising from work.

The Bill is based on the principle that workers should be given the "highest level of protection" against harm to their health, safety and welfare from hazards and risks arising from work as is "reasonably practicable".

The duties under the regulatory framework will rest on those who are in the best position to control workplace health and safety risks to keep those risks as low as reasonably practicable. Those duties will fall on "persons conducting a business or undertaking" (PCBU). By comparison, under the current HSEA Act, those duties fell on a "person who controls a place of work". This is a subtle but significant change. A PCBU is defined as a person conducting a business or undertaking, whether the person conducts a business or undertaking alone or with others, and whether or not the business or undertaking is conducted for profit and gain.

A new regulator, Worksafe New Zealand, will enforce the legislation. Inspectors will be focusing on compliance prior to incidents and following incidents.

Legal advice states that the Management Agency, by virtue of retaining the services of contractors, is on that basis a PCBU. The Management Agency is responding accordingly.

Our legal advisor recommends the following steps:

1. the Management Agency to prepare/ identify a preliminary list of potential hazards an AFB auditor might be confronted with in his/her day to day inspection work
2. the Management Agency is to liaise/ consult with AFB auditors in respect of the preliminary list and ascertain what

employees are currently doing and whether what they are doing is the safest way to "eliminate or minimise" risk to health and safety, so far as is reasonably practicable

3. the Management Agency prepare policies to ensure that the hazards and risks are eliminated or minimised
4. the Management Agency to ensure "due diligence of duty". This means:
 - acquire and keep up-to-date knowledge of health and safety matters
 - gain an understanding of the risks and hazards associated with auditors' work
 - ensure the Management Agency has and uses appropriate resources and processes to eliminate and minimise risks to health and safety
 - ensure the Management Agency has appropriate resources and processes for responding to information regarding incidents, hazards and risks in a timely way
 - ensure the Management Agency has and implements processes for complying with duties under the legislation
5. the Management Agency ensures a health and safety representative is appointed and trained along with the appointment of a health and safety committee.

The Management Agency is currently in the process of working through step 2 above. In addition to the above, the Management Agency is developing an 'Apiary Auditor Fatigue' policy. The purpose is to put in place suitable guidelines and instructions to minimise fatigue risk when working, including work-related driving. The policy will include providing education and monitoring and managing hours worked, overnight accommodation and consecutive days worked.

Review of Operations Manual and development of policies

The Management Agency is currently undertaking a major overhaul of the Operations Manual, a task that has become necessary following the recent legislative changes to Section 93 of the Biosecurity Law Reform Act 2012.

The structure of the document is set to change, with greater emphasis being placed on policies confirmed by the Management Agency. These policies are being developed.

Levy defaulters

The unprecedented increase in the number of registered beekeepers has engendered

an ever-increasing number of levy defaulters requiring follow up. In early January 2015, following a substantial amount of work within this office, in excess of 400 levy defaulters were handed over to Debtworks New Zealand, a collection agency based out of Auckland.

I am pleased to report they are making good progress in collecting levies; however, this problem will worsen if current beekeeper registration trends continue at the same level. Therefore, greater time and resource will need to be allocated, at least before handing defaulters over to a collection agency.

OUR NEW LOOK

We hope you enjoy the new format and layout.

We will be tweaking it as we go along, so if you have any comments, please e-mail editor@nba.org.nz or write a letter to the editor.

29 AFB AUDITORS INSPECTING APIARIES NEAR YOU

By Rex Baynes, AFB PMP Manager

For a number of years, beekeepers nationwide have called for a return to earlier times when apicultural officers provided an inspection service and, where appropriate, an advice/educational service to the beekeeping community.

In March 2014, I reported that the Management Agency had secured the services of some 24 beekeepers nationwide, accredited by MPI, who would be called upon to assist with AFB-related inspections, under contract to the Management Agency.

I am pleased to report we now have 29 accredited auditors operating throughout the country under my direction and that of AsureQuality Limited. Beekeepers will

note the term "apiary auditor" is used. This terminology has been adopted to avoid any possible conflict or misunderstanding with the Biosecurity Act 1993, where the term "Inspector" is used.

The intention is that all AFB auditors will, where possible, undertake to inspect two to three apiaries per week during the inspection season. I accept this is not always possible given beekeeper workloads and business commitments.

The programme was first trialled in a small way two and a half years ago in the Bay of Plenty, in particular around the East Cape, Opotiki and Whakatane areas, before being broadened to all of New Zealand.

Note: AFB auditors take their instruction

either from me or their local AsureQuality Limited representative. It has been made clear to all auditors that they are not to be influenced in any way by other beekeepers. If this occurs, their contract is in serious jeopardy, and I will have no hesitation in terminating it immediately.

Please remember that the programme is a 'work in progress', with my attention and that of the Management Agency being directed towards ensuring the proper processes are put in place to meet the predicted changes in Health and Safety legislation. Legal advice is being sought in this regard.

Overall, the initiative is receiving positive feedback. Beekeepers appreciate that inspections are taking place in their areas.

AMERICAN FOULBROOD PEST MANAGEMENT PLAN

I.T. UPDATES FROM THE MANAGEMENT AGENCY

By Brice Horner and Rex Baynes

As you may be aware, the AFB Management Agency has been undertaking a series of Information Technology (IT) updates, designed to improve the level of service provided to beekeepers.

Two of these projects are about to come online and will be available for all beekeepers to access and use within the next month.

AFB Management Agency website

The AFB website has been completely overhauled with a new 'look' and the addition of a number of new capabilities. A greater emphasis has now been placed on the ease of user interaction. This has resulted in a revamped drop-down menu system, improved graphics and the addition of a significant number of training videos.

The training videos can be viewed by accessing the website (www.afb.org.nz), and going to the 'Education, Training, Videos, Resources and Policy Statements' box on the left of the screen.

Development of the website is an ongoing exercise with additional capabilities flagged for the future. These include:

- an enhanced training section
- find AFB recognition courses online
- complete online enrolment
- undertake online study or refresher training
- additional videos
- online beekeeper returns.

Anyone with feedback on the revamped site, or suggestions for improving it, can forward an e-mail via the website. The new website will go 'live' on 20 April 2015.

The AFB App

The AFB App's development started midway through 2014. It was trialled in January 2015 and will shortly be ready for downloading by



Apiculture Tutor, Brice Horner, checking brood frames with the assistance of the new AFB App. Photo courtesy of Rex Baynes, Manager, AFB Management Agency.

beekeepers. It is a smartphone app that will operate on both Android and Apple devices. It has some functionality on tablets. The AFB App was funded by the Management Agency, American Foulbrood National Pest Management Plan. It is free to all beekeepers.

The app has been designed as a field diagnostic tool to aid beekeepers in identifying and reporting AFB outbreaks. An instructional video on its use is located in the 'Video' section of the AFB website. The App will be available for download from 20 April 2015.

To download the app, simply go to the App store appropriate for your device (the 'Play Store' for Android users and the 'App Store' for iPhone users). Search for 'The AFB App', then follow the download instructions.

All beekeepers are encouraged to download the app 'just in case', as you never know when you might need it. At the very least, it

is a good tool for revising your AFB recognition skills.

Here's how it works.

When you find a suspect brood frame, grab your smartphone and go somewhere where the bees aren't bothering you too much.

1. Open up the app and press 'Get Started'.
2. The app will then give you some instructions on how to operate it.
3. Press 'Start Diagnosis'.
4. The app will then take you to the first of four symptom screens.

Compare the photo of AFB symptoms provided by the app, with the symptoms you are seeing on the brood frame. To make the photo bigger, simply touch the photo part of the screen.

If you are not sure how to check for the particular symptom, touch the 'Not sure, how

continued...



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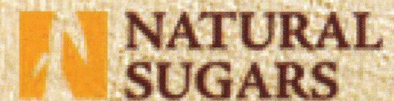
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do I check?' part of the screen. This will then take you to an 'Instructions' screen. To enlarge the text, simply touch the '+' symbol. Reduce the screen back down to size by touching the '-' symbol.

When you have finished looking at the instructions, hit the return key on your smart device to get back to the symptoms page. If the symptom is present on your brood frame, hit the 'Yes' with the tick next to it. If the symptom is not present, hit the 'No' with the cross next to it. The app will then take you to the next symptom.

Repeat the process until the app has run you through all the symptoms.

After the symptoms section, the app will inform you of some other factors that you may wish to consider, before taking you

to a results page. The results pages differ, depending on whether the app thinks you do, or do not, have an AFB infection. Both pages will give you some additional advice. If the app thinks that you do have an AFB infection, the advice will relate to what you need to do next.

The app deliberately has been kept simple to ensure that it is easy to use. It does not require an Internet connection once it has been downloaded. This should make it a useful tool for any beekeeper looking for a bit of assistance in the field.

A number of future enhancements are already planned for the app. These include:

- electronic reporting of AFB outbreaks
- electronic returns
- GPS location information from smart

devices internal GPS

- the ability to request real-time assistance from an AsureQuality Apiculture Officer
- photograph symptoms and have them viewed in real time.

Some of the feedback already received in relation to the app, has focused on the desire to see this type of technology focusing on other common diseases, including exotic diseases. AsureQuality management has been quick to recognise the potential for future development in this area and currently has a team looking at the development of an 'exotic disease' app. The intention is for this app to be downloaded from the same location as The AFB App.



The National Beekeepers
Association of New Zealand

THROW YOUR HONEY INTO THE SPOTLIGHT

ARE YOU READY TO ACCEPT THE 100% PURE
NEW ZEALAND NATIONAL HONEY COMPETITION
CHALLENGE?

Our next combined Apiculture Industry Conference is rapidly approaching in June. One of the many highlights of conference will be the 100% Pure New Zealand National Honey Competition.

So you think you have the finest honey in NZ, bring us two jars and join the anonymous lineup. Should your honey win, your name will **SHINE!** The honey competition is open to financial members of the NBA and BIG.

Main competition entries close 5 pm, 22 June at Conference venue (Wairakei Resort Taupo)

Class 17 Commercial Monofloral Honey entries close 22 May 2015

E-mail - john@airborne.co.nz or phone 03 324 3569.

Set aside your samples and maybe
some perfect frames!

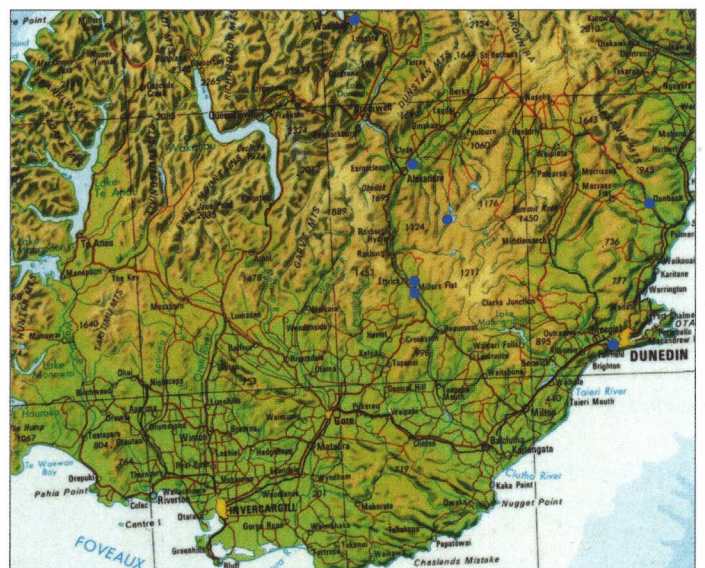
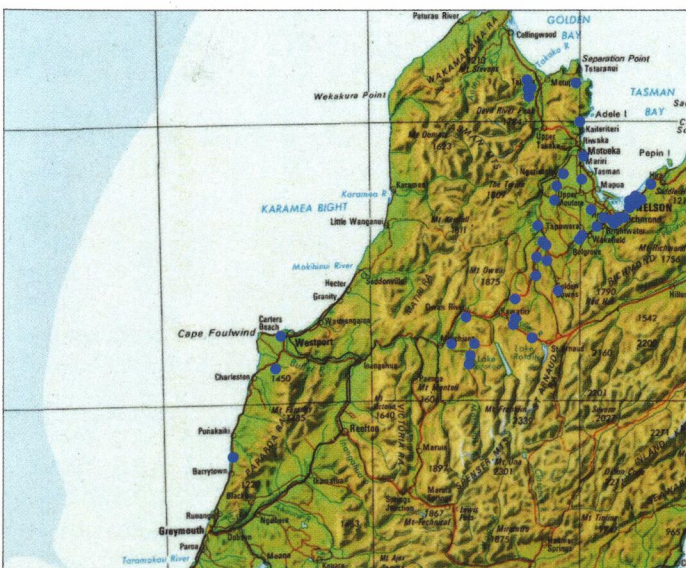
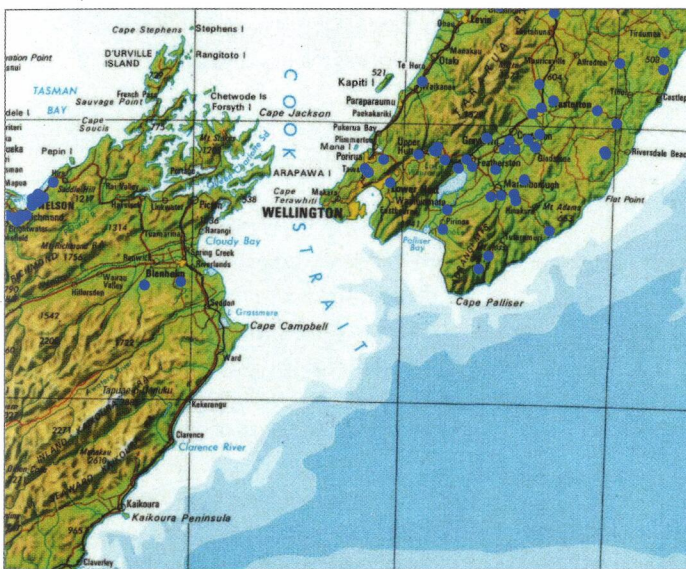
See <http://www.nba.org.nz/events/nba-national-honey-competition/>
for competition schedule, regulations and entry forms.



AFB INCIDENCE IN THE 2014–2015 SEASON TO 10 MARCH 2015



AFB INCIDENCE IN THE 2014–2015 SEASON TO 10 MARCH 2015



AMERICAN FOULBROOD PEST MANAGEMENT PLAN

NEW POLICY ON DECA APPLICATIONS

AFB PMP Management Agency

Policy Number: AFB/22/0/11 - 007

Policy Title: Disease Elimination Conformity Agreement (DECA)

Legislation: Clauses 37 and 38 of the Biosecurity (National American Foulbrood Pest Management Plan) 1998, as amended by clause 17 of the Biosecurity (National American Foulbrood Pest Management Plan) Amendment Order 2013 (SR 2013/311)

Scope: The Disease Elimination Conformity Agreement or DECA, is a formal agreement between the beekeeper and the Management Agency. The agreement sets out a 'code of beekeeping practice' to ensure the incidence of AFB in hives will reduce to the lowest possible level.

The DECA is tailored to meet each beekeeper's particular circumstances and can be reviewed as changes take place.

It is the Management Agency's goal to ensure as many beekeepers as possible hold a DECA.

Current Policy: A beekeeper, irrespective of how long he/she has been beekeeping, can take the AFB Recognition Course, sit the test and, if successful, apply for a DECA. The beekeeper can elect not to attend a course but take the test as a 'one off' by way of a proctor arrangement and, if successful, to apply for a DECA.

New Policy Statement

The beekeeper must have kept bees for a period of no less than 12 months before applying for a DECA. The beekeeper, in that 12-month period, is encouraged to attend local beekeeping club open days, and also sit and pass AFB Recognition Course/ Exam during that time.

The DECA status will allow the beekeeper to inspect his/her own hives only.

At the completion of two years of practical beekeeping, the beekeeper will be expected to sit a refresher course, thus enabling him/her to undertake COI inspections for other beekeepers' hives.

An exemption to these requirements may be granted under certain circumstances.

Effective Date: This policy will be effective from 1 June 2015.

Review Date: 31 March 2016

Explanation

The Plan rules state:

"the management agency is **satisfied**—

- (i) that the practices and procedures set out in the agreement are, if carried out, sufficient to reduce or maintain at zero the overall annual rate of American foulbrood cases in beehives owned by the beekeeper; and
- (ii) the beekeeper is likely to implement the practices and procedures set out in the agreement; and
- (iii) **the persons named in the agreement as responsible for disease**

management are sufficiently familiar with and are suitable persons to supervise or carry out the practices."

The Management Agency (MA) has enough evidence to support the fact that many new entrant beekeepers, despite passing the disease recognition exam, are not actually that confident in correct AFB diagnosis. The MA is also not confident that they have sufficient experience/skill to carry out their obligations until they have some actual field experience. Having a year's practical experience managing their own hives, plus having another person do the COI on their behalf in that first year, should ensure the person has the required skill.

Signing a COI on behalf of another beekeeper puts the onus of ethical and statutory responsibility onto that person. The MA requires that the certifying beekeeper must be sufficiently experienced to undertake this role. This is why the MA has instigated a two-year stand-down period and a refresher course to ensure that the person has sufficient knowledge and skills to sign a statutory declaration on behalf of others with integrity.

This would be analogous to the graduated driver's licence process.

CATCHING THE NBA BOAT: THINK ABOUT NOAH AND THE ARK

- 1 Don't miss the boat.
- 3 Plan ahead. It wasn't raining when Noah built the Ark.
- 2 Remember, we are all in the same boat.
- 4 Don't listen to critics—just get on with the job.
- 5 Build your future on high ground.
- 6 For safety, travel in pairs.
- 7 Speed isn't always an advantage: snails were on board with the cheetahs.
- 8 When you're stressed, float a while.
- 9 The Ark was built by amateurs, the Titanic by professionals.
- 10 No matter the storm, there's always a rainbow at the end.

- Anonymous

AMERICAN FOULBROOD PEST MANAGEMENT PLAN

AFB RECOGNITION COURSES PLANNED FOR 2015

By Rex Baynes, AFB PMP Manager

We are providing non-DECA holders with the opportunity to attend a course and take the AFB Recognition Test. This is an essential step towards becoming a DECA holder.

Please note that at the time of going to print certain arrangements still needed to be confirmed on some courses.

Coromandel and Taranaki

Arrangements have not yet been confirmed. There will be a general mailout promoting the course to beekeepers in these regions.

Gisborne: a Saturday in September
(date to be advised)

Contact: Paul Badger (06) 868 4785

Auckland: 9 May 2015 (Saturday)

Facilitator: Tony Lorimer (07) 856 9625
Registration Deadline: 22 April 2015
(Wednesday)

Auckland: 16 May 2015 (Saturday)

Contact: Carol Downer
E-mail: thefairym@xtra.co.nz Ph (09) 376 6376 or register online through Auckland Beekeepers Club website.
Registration Deadline: 1 May 2015 (Friday)

Rotorua: 5 September 2015 (Saturday)

Tutor/Facilitator: Peter Ferris
Contact: Peter Ferris: Phone (027) 646 6632
E-mail: thebeeman@xtra.co.nz
Registration Deadline: 23 August 2015
(Sunday)

Wairakei Resort Hotel (Taupo): 21 June 2015 (Sunday) and 22 June 2015 (Monday)

(two one-day courses offered as part of the 2015 Apiculture Conference)
Start: 9.00 am
Cost: \$100.00 (includes course, test, lunch, morning and afternoon tea plus access to remaining sessions at seminars on the day. Refresher course only: \$70.00 (Includes meals as above)
Facilitator: Peter Ferris
Registration Deadline: 1 June 2015 (Monday)
BRING YOUR BEESUIT: HIVES ONSITE TO INSPECT FOR DISEASE

Note: Registration is to be completed by visiting www.apicultureconference.co.nz

Palmerston North: 17 October 2015 (Saturday)

Contacts: Andrew Beach: Ph (04) 904 1634
E-mail: andrewbeach@hotmail.com or Frances Beech: Ph (06) 367 2617, 35 Whelen Road RD 1, Levin
Registration Deadline: 2 October 2015 (Friday)
Remarks: Course limited to 20 applicants

Levin: 13 June 2015 (Saturday)

Contact: Frances Beech, 35 Whelen Road, RD 1, Levin (06) 367 2617
Registration Deadline: 29 May 2015 (Friday)

Masterton: 22 August 2015 (Saturday)

Facilitator: Peter Ferris, PO Box 255, Masterton 5840
E-mail: thebeeman@xtra.co.nz
Registration deadline: 7 August 2015 (Friday)

Nelson/Richmond: 25 April 2015 (Saturday)

Facilitator: Nigel Costley Ph (03) 548 3101 or
E-mail: costleymarr@xtra.co.nz
Registration Deadline: 13 April (Monday)

Blenheim: 12 September 2015 (Saturday)

Facilitator/Contact: Will Trollope (03) 570 5633
E-mail: willfictrollope@xtra.co.nz
Registration Deadline: 9 August 2015 (Sunday)

Christchurch: 9 May 2015 (Saturday)

Tutors/Contacts: Jeff Chandler
E-mail: jchandler38@gmail.com (03) 421 1994
Lindsay Moir
E-mail: brightonmoirs@xtra.co.nz (03) 388 3313

Registration Deadlines: Course 1 May 2015 (Friday); Test Paper 24 April 2015 (Friday)
Remarks: For further details go to <http://www.chchbeekeepers.org.nz>

Timaru: 7 November 2015 (Saturday)

Contact: Phil Sutton: Ph (03) 686 1513, cell (027) 491 7243

E-mail: phil@pointer.co.nz or Gay Claridge (03) 688 7383,
E-mail: gayc@agribusiness.ac.nz
Registration Deadline: 28 October 2015 (Wednesday)

Dunedin: 23 May 2015 (Saturday)

Facilitator: Brice Horner (027) 441 0344
E-mail: b.horner@xtra.co.nz
Registration Deadline: 13 May 2015 (Wednesday)

Cromwell: 17 October 2015 (Saturday)

Contact: David Woodward (027) 418 2385 (Phone or Text)
Registration Deadline: 3 October 2015 (Saturday)

Important

If you are planning on attending an AFB Recognition Course, it is strongly recommended that you obtain a copy of the book titled *Elimination of American Foulbrood Disease without the Use of Drugs*, commonly referred to as the 'yellow book'.

This worthwhile publication can be obtained from:

- Your local beekeeping supplier
- National Beekeepers Association (Inc.)
PO Box 10792, Wellington
Phone: (04) 471 6254
Email: secretary@nba.org.nz
Cost: \$37.50 (includes GST and postage)
(If you are ordering from overseas, go to <http://nba.org.nz/publications> to download an order form appropriate to your country.)

Should beekeepers who fall outside of the regions mentioned above require a course(s) I am more than willing, given there is reasonable support to organise additional courses.

Please e-mail me at rbaynes@ihug.co.nz with your location details.

AMERICAN FOULBROOD PEST MANAGEMENT PLAN

NEW ZEALAND BEEKEEPER, APIARY AND HIVE STATISTICS BY APIARY DISTRICT AS AT 10 MARCH 2015

APIARY REGISTER LOCATION	CATEGORY 0 - 5 HIVES		
	BEEKEEPERS	APIARIES	HIVES
Blenheim	306	350	594
Canterbury	606	704	1103
Hamilton	314	342	602
Otago/Southland	369	406	787
Palmerston North	834	928	1598
Tauranga	294	333	589
Whangarei	979	1070	1859
NEW ZEALAND	3702	4133	7132

APIARY REGISTER LOCATION	CATEGORY 6 - 10 HIVES		
	BEEKEEPERS	APIARIES	HIVES
Blenheim	44	72	358
Canterbury	73	126	558
Hamilton	45	79	359
Otago/Southland	63	103	507
Palmerston North	123	200	954
Tauranga	53	87	419
Whangarei	136	194	1043
NEW ZEALAND	537	861	4198

APIARY REGISTER LOCATION	CATEGORY 11 - 50 HIVES		
	BEEKEEPERS	APIARIES	HIVES
Blenheim	37	153	998
Canterbury	55	194	1152
Hamilton	43	108	944
Otago/Southland	58	158	1262
Palmerston North	119	327	3059
Tauranga	76	195	2195
Whangarei	147	357	3154
NEW ZEALAND	535	1492	12764

APIARY REGISTER LOCATION	CATEGORY 51 - 250 HIVES		
	BEEKEEPERS	APIARIES	HIVES
Blenheim	22	501	3021
Canterbury	35	723	4608
Hamilton	32	284	4408
Otago/Southland	28	304	3146
Palmerston North	75	640	9583
Tauranga	82	513	8635
Whangarei	90	834	9617
NEW ZEALAND	364	3799	43018

APIARY REGISTER LOCATION	CATEGORY 251 - 500 HIVES		
	BEEKEEPERS	APIARIES	HIVES
Blenheim	12	270	4675
Canterbury	17	506	6749
Hamilton	8	269	5154
Otago/Southland	16	509	5636
Palmerston North	25	462	9752
Tauranga	38	647	11950
Whangarei	29	620	10710
NEW ZEALAND	145	3283	54626

APIARY REGISTER LOCATION	CATEGORY 501 - 1000 HIVES		
	BEEKEEPERS	APIARIES	HIVES
Blenheim	10	459	6852
Canterbury	19	739	12518
Hamilton	14	636	12389
Otago/Southland	18	769	12434
Palmerston North	13	598	11148
Tauranga	33	735	19189
Whangarei	18	774	13208
NEW ZEALAND	125	4710	87738

APIARY REGISTER LOCATION	CATEGORY 1000+ HIVES		
	BEEKEEPERS	APIARIES	HIVES
Blenheim	12	1139	25144
Canterbury	17	1906	38997
Hamilton	17	1887	52535
Otago/Southland	13	1306	25128
Palmerston North	28	4876	104159
Tauranga	28	2511	62341
Whangarei	20	2552	48597
NEW ZEALAND	135	16177	356901

APIARY REGISTER LOCATION	TOTAL		
	BEEKEEPERS	APIARIES	HIVES
Blenheim	443	2944	41642
Canterbury	821	4879	65147
Hamilton	473	3605	76391
Otago/Southland	565	3555	48900
Palmerston North	1216	8000	139753
Tauranga	603	5000	104818
Whangarei	1419	6401	88188
NEW ZEALAND	5540	34384	564839

BUSINESS

KIWIFRUIT POLLINATION UNDER COVERS

Zespri International Limited

Zespri is addressing the ongoing problem of declining quality in hives following pollination of Gold3 under hail-netted canopies. Zespri has been working with kiwifruit growers, beekeepers and Plant & Food Research to understand why hives are being affected and how to mitigate this.

While understanding has improved, techniques such as removing side walls only reduce hive decline, not eliminate it. Research is ongoing and will be extended as it becomes available. Beekeepers are encouraged to maintain an open dialogue when supplying hives to Gold3 orchardists.

Why hail netting?

To help protect the sensitive Gold3 variety from wind and hail damage, kiwifruit growers are increasingly installing hail covers structures in orchards with hail netting. This technology is relatively new to New Zealand but is widely used overseas for a range of crops. In the New Zealand kiwifruit industry, there are a range of configurations and sizes but in essence, three basic designs are being used: roof-only, partially-enclosed (roof plus partial sides) and fully-enclosed (roof and full sides). Netting mesh sizes are typically too small to allow bees to move through the covers.

Impact on pollination

Reports have begun to emerge that beekeepers are seeing significant colony decline in hives used to pollinate covered Gold3 crops. The symptoms described include reductions in adult bee numbers and reduced brood (eggs, larvae and pupae) areas. This is concerning beekeepers as the effects are reported to be large enough to reduce the hives' honey-producing abilities once they are removed from the orchard.

Zespri hosted two discussion groups in late October to discuss the issue. They were well attended by growers and beekeepers as well as Plant & Food Research staff. Attendees suggested a number of possible reasons for the deterioration of the hives under covers,



There is increasing use of hail netting covers to protect the sensitive Gold3 kiwifruit variety from hail and wind damage. Photo: Jamie Troughton/Dscribe Media Services.

but it was agreed there was no accurate evidence to help determine the true effect of the covers on the hives and what possible solutions could be considered.

Research results

There is limited scientific literature on the effects of covering crops on hive quality and pollination; possibly due to the wide variety of crops involved plus differing designs of covers. Zespri commissioned Plant & Food Research late last year to undertake a preliminary investigation into the effect of the three different cover designs on hives. The objective was to identify what was happening to the hives rather than leaping to range of possible solutions; i.e., seek first to understand. The hives were visually assessed when they were introduced to the orchard, and again before they were removed, to quantify the change in brood and bee numbers.

The assessors also made observations of bee behaviour and movement under the covers.

Plant & Food Research recently presented some of the initial findings to the growers and beekeepers who participated in the project. Key observations and the hives audits showed the following:

- in the three roof-only orchards there was no impact on bee numbers identified but there was a significant reduction in bee numbers in hives used on the three fully-enclosed orchards. This result, combined with bee activity monitoring observations, indicates the bees may become disorientated in fully enclosed orchards. We can only speculate on the possible reasons for this; possibly some aspect of the structure was interfering with the bees' navigation system
- the average amount of brood decreased in all 10 orchards, with the most significant impact seen in fully enclosed orchards. The reason for this is not clear but is likely to be food-source related
- there was a significant correlation between the numbers of bees in hives and the percentage lost from hives in fully enclosed covers, which suggests that younger, smaller colonies might lose fewer total bees than larger hives inside a structure
- it is important to note that hives inspected varied considerably in quality prior to introduction. Forty-one percent did not meet the kiwifruit industry standard of the equivalent of four full-depth frames of brood and 12 frames of bees recommended for pollination hives.

continued...

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Team Leader - Beekeeper

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Apitech is part of the Apitech Group and is a vertically integrated company from beehive to spoon. As a company we pride ourselves on working innovatively by providing our teams with not only the latest technology to reduce team workload but also with modern equipment and systems to reduce the physical demands of beekeeping. We value working ethically and with integrity and have a strong commitment to the environment and quality product, which we believe sets us apart from our competitors.

We have experienced strong growth and as a result we need to expand our teams. We are looking for an experienced team leader who can demonstrate previous experience in running teams, including developing and mentoring trainee beekeepers. You will be responsible for the efficient running of your team including all aspects of planning and managing apiary sites to maximise honey production.

To be considered for this position, you will:

- have a DECA qualification;
- have a clean HT licence;
- be strong fit and healthy;
- have experience in queen rearing (an advantage but not essential); and
- hold a Forklift licence (preferable but not essential)

Short term accommodation and relocation costs will be provided if you are moving into the area.

If you are an experienced Team Leader who is an energetic and enthusiastic team member looking for an opportunity to develop current skills and to continue to grow in your career, this full time position will be perfect for you.

All applicants must be a New Zealand Citizen or have Permanent Resident status as determined by New Zealand Immigration Department.

To apply, please email careers@thehoneycompany.co.nz for an Application form or call Darren on 021 249 7771.

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Continuing to work together

Zespri is commissioning more research to better understand the issues. This includes how cover design could influence bee behaviour, as well as how hive and orchard management could be altered to eliminate losses. The aim of this work is that there is no negative impact on hive quality during pollination under cover.

In the meantime, Zespri is making information available to help growers who have or are considering installing covers. For the moment, growers considering covered structures should be looking to erect roof-only covers.

If sides are required, growers should consider options to remove sides for the pollination period. Growers and beekeepers could also try to feed pollen replacements to bees under cover to determine whether it assists in brood rearing without decreasing pollen collection.

Zespri will continue to facilitate a programme of research and extension with the kiwifruit and beekeeping industry throughout 2015. Beekeepers are actively encouraged to discuss pollination plans with their growers now and seek out the latest information as it becomes available. All beekeepers are welcome to attend any Zespri event.

THE INTERNATIONAL CODE FOR MARKING QUEENS

A quick way to remember the code:

When	White	1/6
You	Yellow	2/7
Requeen	Red	3/8
Get the	Green	4/9
Best	Blue	5/0

MPI

NEW TUTIN LIMITS IN FORCE FROM 12 MARCH 2015

Jim Sim, Principal Advisor (Animal Products), Ministry for Primary Industries

Last year, Food Standards Australia New Zealand (FSANZ) consulted on a new safety limit for tutin in honey produced in New Zealand. As a result, a new safety limit of 0.7mg/kg for all honey (both extracted honey and comb honey) came into effect in New Zealand on 12 March 2015.

Tutin is a plant toxin that gets into honey when bees collect honeydew from the tutu plant. It's a problem in many parts of the North Island and top of the South Island. New Zealand has a tutin safety limit to ensure dangerous levels of tutin do not occur in honey sold in New Zealand or in honey exported overseas.

All beekeepers packing honey for retail sale or export after 12 March 2015 need to ensure honey meets the new limit. This may mean some further testing could be required, especially where composite sampling has been previously done on bulk honey to the previous limits of 2mg/kg for extracted honey and 0.1mg/kg for comb honey. Honey already packed for retail sale prior to 12 March can still meet previous limits.

The new lower limit for extracted honey, set in the Food Standards Code, is required because it was found some tutin binds to the sugars in honey and is released in the digestive process. The bound tutin cannot be detected by current test methods. The comb honey limit has been increased because other controls are in place, additional to the limit, to ensure safe product.

All beekeepers packing honey for retail sale or export after 12 March 2015 need to ensure honey meets the new limit.

Beekeepers selling honey are also required to comply with the amended Food (Tutin in Honey) Standard 2010. Further information can also be found in the tutin standard compliance guide which is available on the MPI website.

Beekeepers with risk management programmes under the Animal Products Act also need to comply with the Animal Products (Harvest Statement and Tutin Requirements for Export Bee Products) Notice 2010.

Given the drought conditions this summer and lack of floral nectar sources, it's likely that tutin levels in honey will be higher than in some recent years. Beekeepers should be extra careful this year and if in any doubt, get their honey tested.

For more information on tutin in honey, please visit www.foodsafety.govt.nz/industry/sectors/honey-bee/tutin/ or email info@mpi.govt.nz

EDUCATION

DEALING WITH OLD PLASTIC FRAMES

Neil Farrer, NBA Life Member

For the last four years I have been putting aside all plastic frames from dead-outs and any older frames that contain old, black, contaminated wax.

I have always looked for the best way to clean frames and to ensure that they are sterilised to prevent any future problems. Previously, I had just scraped frames and put them back into hives.

At the New Zealand Apiculture Industry Conference in Wanganui (2014), KC Motors from Levin demonstrated the Kränzle® range of hot water blasters with a turbo nozzle, and I purchased one. I have found that this unit cleans the frames very well. Previously I have used high-pressure cold-water blasters and hot-water blasters with moderate success, but it is a lengthy process—the turbo head is what really does the job.

So I had accumulated nearly 200 boxes of three-quarter-depth and full-depth old plastic frames, some of which I have had for many years. These are old white ones and black three-quarter-depth frames with a white bottom bar that has been stuck on when the frames were cut down.



Old frames scraped and raw.

I have been busy with my new hot-water blaster set at 80°C to get rid of the old wax, etc., and it works very well. I have scraped

some frames (about 60 boxes) but have only waterblasted others. Apart from the mess created, I think that it's quicker just to blast the frames with hot water, then spend a bit



Cleaning tank.

of extra time to ensure that the little slots around the edge of the frame are cleaned out of wax, etc., rather than scraping and waterblasting the frames.

All told, I have only had to reject three frames out of the first 100 boxes, which is pretty good. The difficulty is always with the small slots around the plastic frames, but the turbo head cleans them out very well.

After waterblasting, the box containing 10 frames is put into a sodium hypochlorite solution for 20 to 30 minutes while I am doing the next box(es). The yellow AFB book (Goodwin, 2006, pp. 62–63) mentions the use of Janola® or sodium hypochlorite at a 0.5% concentration to sterilise plastic gear,

but really does not cover the point very well. Remember that sodium hypochlorite does not penetrate wax (it only sterilises the surface), so everything needs to be 100% clean before putting frames into the solution.

I cut the tops off of two plastic 200-litre drums so that the box and frames are completely covered with the solution when the box is put in. Another 20-litre container half filled with water holds the box down in the solution.

I use the Kemsol HYPO brand of sodium hypochlorite. The container provides directions about the strength of the solution at 15% concentration. For example, 3% equals 30 millilitres to 10 litres of water, so to get 0.5%, I think that it would be five millilitres per 10 litres. I make the mixture at 1% anyhow just to make sure, followed by at least 20 minutes of soaking. I leave the box and frames to drain and dry in the sun for a few hours.

The next step is that the frames go to my waxer, where I roll on a fresh wax layer. The frames look brand-new at this stage, so I take them out and place them into my hives.



Plastic frames after cleaning.



Frames cleaned and waxed. Photos: Neil Farrer.

As an additional precaution, I also treated the boxes of wets that came from apiaries that had hives with foulbrood. (Yes, unfortunately I had a couple of apiaries affected.) This year I soaked the box and wet frames in sodium hypochlorite solution for 20 minutes, then transferred the box to another drum of clean water to dilute the chlorite. After a good shake of the frames all water is gone and

there is very little smell. (All my boxes are numbered to apiary and hive so that if AFB was found after taking honey off, the boxes from the suspect hive could be pulled out and burnt.)

Back in the apiary, the bees seemed to accept these cleaned boxes without problems. When I wrote this report, the bees were filling the frames with honey.

Overall, cleaning old plastic frames is a time-consuming job. If I costed out time, use of HYPO and the hot-water blaster, I estimate that it would be around \$1.70 per frame if I were paying staff to do the job. However, as it is frowned on to burn plastic frames or, alternatively get them buried, somehow I consider that waterblasting and reusing the frames is a preferred solution.

Reference

Goodwin, R. (2006, revised edition). *Elimination of American foulbrood disease without the use of drugs*. National Beekeepers' Association of New Zealand (Inc.)



Frank Lindsay provided this photo. Frank says, "I use the cover off a power piller after heating the plastic to seal the vent holes. All dark plastic frames are cleaned, waterblasted and put through a Clorox® bleach bath at 50 parts per litre to disinfect them in case of Nosema, viruses and possibly low levels of AFB spores. I force the frames below the surface for a couple of hours. 20 minutes is the recommended time but a bit longer doesn't hurt. Use gloves as the amount of Clorox® is quite high and will dissolve the skin on your hands."

INDUSTRY-WIDE SURVEY SUMMARY

Jane Lancaster, Catalyst® Ltd

Over the past several months, the Industry Working Group (IWG) has been working with independent agency Catalyst® Ltd on an industry-wide survey to gauge their views about the formation of a new, unified industry body. The IWG comprises members of the NBA, Federated Farmers Bee Industry Group (BIG) and other industry representatives, including hobbyists.

Catalyst® Ltd has now completed its analysis of the survey, as summarised below.

The survey notification went out to over 5400 people/companies. Response rate was about 4% from the hobby sector and 30% from the commercial sector.

Over 90% of all respondents supported the industry moving to a new, unified organisation. This level of support was from both the hobby and commercial sectors.

Everyone, including those who did not support unification, considered that the following were the main roles for any unified industry organisation:

- biosecurity, management and promotion of border protection
- research and development projects
- advocacy to government.

For funding, the consistent, strong view was for a membership fee based on

some measure of size/production. Not unexpectedly, the commercial sector expressed a slight preference for annual registration fee plus levy.

There was a consistent view that apiarists should be the main group on the board of the proposed new organisation and secondly, exporters. There was a view that all other groups should be represented, except retailers.

The full survey results can be downloaded from www.beeunified.org and www.bpsc.org.nz

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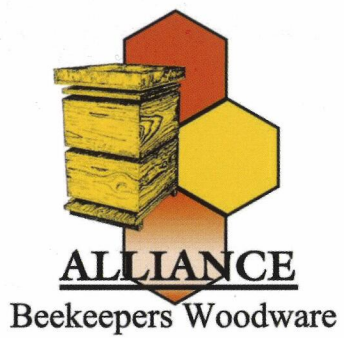
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PEST AND DISEASE CONTROL

DOC PILOTS WASP CONTROL PROGRAMME

Provided by the Department of Conservation

Beekeepers who are being plagued by wasps will be interested to hear the Department of Conservation (DOC) is piloting a targeted bait station method to control wasps this summer.

German and common wasps have no natural predators and harm our native birds and insects, as well as honey bees. Wasps cause millions of dollars of damage to our primary industries, pose a significant threat to human health and people outdoors, and their numbers are increasing.

Together with BASF, a highly experienced global pest solutions company, and a Nelson-based consultancy, DOC has developed a pilot programme to control wasps using protein bait containing the commonly used insecticide fipronil. This licence allows use of this pesticide by DOC but only on public conservation land at this stage.

This wasp control method is targeted specifically at wasps using a protein bait in a specially designed bait station. Results of trials in Nelson Lakes National Park show a significant reduction in wasp populations with minimal risk to other species. The bait has been approved by the Environmental Protection Authority (EPA).

One of DOC's scientists, Eric Edwards, is leading the wasp programme for DOC. He says the wasps take the bait back to their nests to feed their larvae, so many nests

can be destroyed from a single bait station. "Previously there has been no way to control wasps over large areas of land. The only way to deal with them was to destroy individual wasp nests where they cause problems."

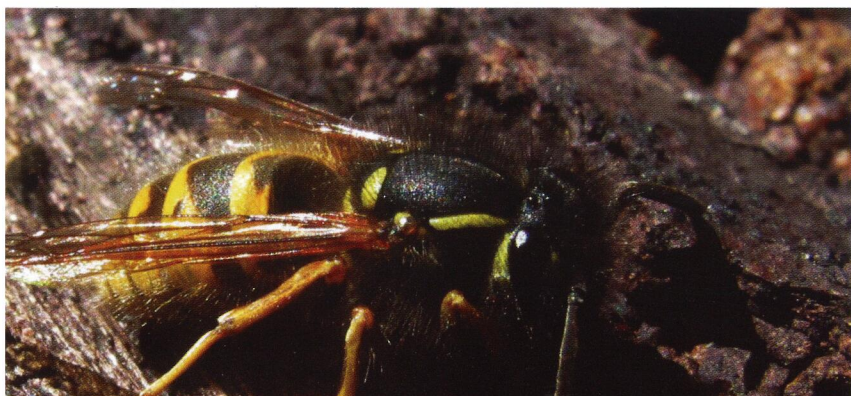
The wasp baiting method is being used by DOC supported by partners in five pilot sites this season: Rotoiti Nature Recovery Project (Nelson Lakes), Bottle Rock Peninsula (Marlborough Sounds), Pelorus Bridge (Marlborough), Falls River (Abel Tasman National Park) and Craigieburn (Arthur's Pass).

"There is demand for wasp control more widely and this pilot will help to guide decision making around this."

The Department coordinated the programme in consultation with bee industry leaders. Monitoring of the effectiveness is currently under way. Local beekeepers are also helping with beehive monitoring as part of this work.

"The limited use of bait stations in this way is a small but important step towards improving wasp control," Eric Edwards says. "There is demand for wasp control more widely and this pilot will help to guide decision making around this. The multi-agency *Wasp Tactical Group* is also at the early stages of

Wasp V. vulgaris, Lake Rotoiti. Image: E. Edwards.



Eric Edwards puts bait in station at Pelorus Bridge. Image: John Gray.

investigating a variety of other new tools; such as biological control, pheromones and insecticides; to reduce wasp populations in the long term."

DOC has offered to present the findings at the New Zealand Apiculture Conference in Taupo in June 2015 and welcomes any enquiries about this work.

Contact Beth Masser – DOC's honey industry lead (04 471 0726, bmasser@doc.govt.nz) or Eric Edwards (04 495 8593, eedwards@doc.govt.nz)



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BEE PRODUCTS STANDARDS COUNCIL

BPSC MEETING REPORT

Jim Edwards, Chairman

The Bee Products Standards Council met on Wednesday, 18 February 2015, at Federated Farmers in Wellington.

The Council received a financial report and discussed the requirements for next fiscal year. The Council noted that significant voluntary contribution enables current activity. The BPSC Constitution and future place of BPSC within a "peak industry body" was discussed.

Terms of reference and BPSC membership were discussed. The need to have better industry participation needs to be balanced with the size of the BPSC growing too large.

The BPSC agreed to request a time slot at the National Apiculture Conference to make a presentation on its work, and in particular the PA Project, which was then discussed.

Tutin testing under the new law comes into effect on 12 March. The Council noted that MPI has given plenty of notice of the impending change and acknowledged the need to go back and test product that may have already been tested.

The Council was concerned that the tutin video had been viewed fewer than 1500 times. This indicates that the majority of beekeepers have not yet seen it. The BPSC recommends that all beekeepers make sure that they have seen the video while harvesting is under way. **The video is on YouTube at: <http://youtu.be/ZO-Loed8pWw>**

MPI staff discussed the Manuka Honey Project stakeholder engagement plan:

- Manuka Honey Newsletter to keep industry stakeholders informed
- reports in *The New Zealand Beekeeper* in April and October
- industry liaison group to include BPSC members

- terms of reference are to be developed and interim guide to be reviewed
- science working group to be formed.

While MPI is not enforcing the guidelines yet, it is investigating complaints about labelling. Overseas authorities are making enquiries and looking for implementation of the guidelines.

The MPI recognised that the Manuka Type honey labelling guideline implementation effective since 1 January 2015 had raised difficulties with export verifiers and exporters. Some importers had raised concerns about information from MPI and its application by exporters.

The use of words such as "Pure" or "Genuine" may expose users to risk and may not be

under the Agreement on Sanitary and Phytosanitary Measures. This includes Australian honey importation.

There was discussion about the risks of pollen importation and the desire for the bee industry to be able to comment on such importation proposals.

The Council discussed the role of BPSC in the importation issue. MPI regards the BPSC to be a body that is representative of the industry stakeholders. MPI will also consult with other interested industry stakeholders.

The Council then discussed MPI cost recovery proposals. The Council heard that there are cost impacts in the MPI food safety functions. There are also programme improvements to

All beekeepers should watch the tutin YouTube video while harvesting is under way.

used. Manuka "type" or "blend" are accepted for use.

The Council received a report on the development of an Import Health Standard for honey imports and noted that a structured process was under way with strong emphasis on consultation. Consultation starts early March. Those Pacific Islands that will remain eligible (Pitcairn, Niue and Samoa) will need to have a competent authority, import controls and knowledge of their health status.

The longer-term process is dependent on risk analysis. MPI will treat internal and international stakeholders equitably and in accord with the international obligations

be covered. Increases also take account of CPI increases. Costs to be recovered include overheads and deficit (over last four years). MPI practice is to achieve zero balance; i.e., no deficit and no surplus.

Operational charging will begin on 1 July. A review of submissions will be published. Regulations will need to go through Cabinet and there are a number of other processes to be completed. MPI charges are reviewed annually and also consulted every three years.

The remaining BPSC meeting dates for 2015 are 20 May, 19 August and 19 November.

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BRANCH REPORTS

FROM THE COLONIES

Auckland Branch

As published in the March journal, in February we farewelled Trevor Cullen from Ceracell Beekeeping Supplies, although he will still be found there for a few months to come as he assists the new owner, Bruce Clow, to ease in to the business. Our best wishes go to Trevor, with grateful appreciation for all he has done for the branch and for New Zealand beekeepers over many years.

Spring up here turned out to be long and cold, resulting in a disappointing manuka flow for some. The trees were covered in flowers around our way, but there was not a bee to be seen working them. However, things really kicked into action in December, only to be curtailed by the drought conditions as summer progressed. We are still anxiously waiting for rain. There has been a plentiful kanuka flow to boost an average crop.

With the spectre of varroa resistance lurking, it is really important to alternate varroa treatments to keep the little varmints under control, and now we must add Argentine ants to the growing list of threats to our hives. We wish we could have more confidence in our border security, especially in the light of the recent Queensland fruit fly incursion in Auckland.

- Helen Sinnock

Waikato Branch

It is around about this time—when we are all totally knackered, tired, sore, sick of lumping heavy honey boxes around (even when we have Ezyloaders), and your workmate says, “remind me again why we put the &^%\$\$ hives here?”—that you have to ask yourself, “why did we decide to be beekeepers?”

Then you hit a beautiful sunny day. The honey is all stacked up neatly (sort of!) on the truck and you have just stopped and had a swim in the sea, and you secretly smile and think of all those suckers in offices!

BUT I did have to giggle when reading the *Listener* the other day and saw in the quotes section, “I’ll be glad when I have had enough of this”. It’s apparently a fisherman’s favourite aphorism, but could so easily be ours as well! Keep going – nearly there!

- Barbara Cahalane

Hawke’s Bay Branch

What has been a somewhat localised drought is becoming province-wide and somewhat more serious. Some areas are reporting honey dew flows from willow aphids, while other areas that had this source last autumn are showing no sign this year.

As usual wasp numbers are building quickly, including a large nest in the wall of my house. I thought I would try some fly spray (quite ineffective) so will probably have to have a go with some carbaryl. Next time I will also wear something more protective than a T-shirt and lavalava. Surprising as it may sound, this outfit offered almost no protection spraying wasps from a ladder!

- John Berry, Branch President

Southern North Island Branch

The Southern North Island Autumn Field Day will be held 19 April at Cheltenham Hall. The hall is located on the roadside just past the State Highway 56/Kimbolton Road junction at 1477 Kimbolton Road. More information on the NBA website.

This season has been different to others, starting with hot, dry weather when the honey flowed in. Then everything dried up, with no more nectar. Reports from our area are that most beekeepers enjoyed a good honey crop, but sometimes not the desired honey volume that the beekeeper was aiming for. Some Bush areas did not produce as well as expected. Manuka has been patchy: some areas gave good results; others not very good.

Wasps are now a problem, as they have done very well in the hot dry conditions. March and April are a good time to set up bait stations to eradicate wasps. Wintering down hives

can be made difficult if the bees are being hammered by wasps.

AFB Recognition Courses continue to be run on an ‘as required’ basis. If any beekeepers in our area would like to do the course, please contact either Rex Baynes, AFB PMP Manager, or any of us that are listed to run courses. With the record number of new registered beekeepers, we expect these courses will be in demand.

- Neil Farrer, NBA Life Member

Nelson Branch

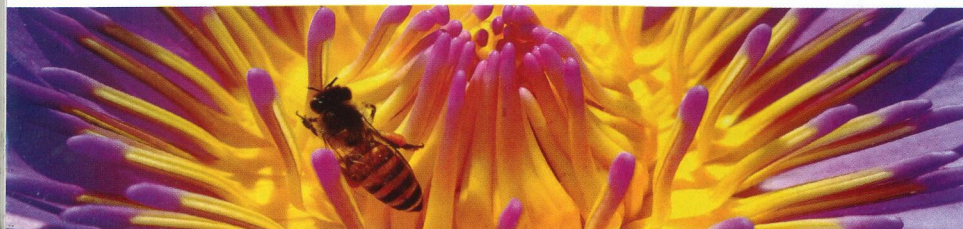
Well, what a honey season: one of the better for some time is the general consensus. Most beekeepers I have talked to have had good production from a range of types including manuka, kamahi, mahoe and other natives. Clover is probably a little down, possibly related to the dry conditions. The recent bit of rain should help with a bit more bloom and allow the bees to gather some more nectar and start building stores for the cooler months. Most hives appear reasonably healthy with low varroa. There are reports of high numbers of wasps in some regions, with some beginning to worry hives. Hopefully poisoning around apiaries should help to reduce the yellow horde.

The local Nelson NBA branch held its meeting on 10 March with a small number of attendees, which was a bit disappointing. I am unsure why fellow NBA beekeepers in the region feel that a couple of hours of their time for such meetings is not worthwhile, given every other industry I am involved in would have good attendance to a similar meeting. Despite that, we still had some good discussion on a range of topics from honey flows, varroa, AFB, nosema and tutin.

The AGM is expected to be held some time in April. A planned Ward catch-up in the scenic St Arnaud/Lake Rotoiti is also on the agenda for April. Hopefully we will see a lot more members at both meetings.

That’s about it. Hopefully the hives continue to gather some good stores for winter to replace what we have taken. I guess it’s time to think about varroa strips and normal autumn activities.

- Jason Smith



ABOUT THE APIARY

ADVICE FOR OVERWINTERING HIVES

Frank Lindsay, NBA Life Member

In the Wellington area, the last of the nectar sources are flowering, although some of the later-flowering species in suburban gardens are taking off again after a period of drought. Lancewood, korimako and *Eucalyptus ficifolia* (Scarlet Gum) are the main tree/scrub sources flowering. Clover, dandelion and some clovers are making a show after the rain, giving the bees an extra boost to stimulate them into producing winter bees. Some of these bees won't need to feed brood—the queen closes down brood rearing for winter, so these bees live long enough to take the hive through to the early spring before they expire.

Hives should now be packed down with brood in the centre bottom frames, with at least a full super of honey on top. Some commercial beekeepers will be wintering their bees in singles with a minimum of six frames of honey, but they will be feeding the hives with sugar syrup starting August/September to provide feed and to stimulate the bees into brood production.

The only problem we face in the autumn is that some of the new queens can be stimulated by these late nectar flows and take off into full brood production, which will use most of the honey stores we left on the

hives. This happens particularly in our warmer coastal areas. Hives located inland where it's cooler, as well as those down south, will just close down for winter.

If your hives go on a growth spurt, restrict the queen to the bottom super by inserting a queen excluder above the first brood super. Make sure the queen is in the bottom super by either checking physically or heavily smoking the bees from the top, driving her down.

Check a week later to see that there are no eggs in the second super and rub out any queen cells that have developed due to the absence of the queen.

If there are still plenty of drones in the hives, you could perhaps use some of the later-developing queen cells to make up a four-frame mating nuc, although in most areas it's now too late to get decent matings. But it may be easier to get queens mated now rather than trying during our often wet, cool spring.

If your queens have laid out a full box, start feeding a two-to-one sugar/water mix to fill up most of the combs with winter stores again.

Varroa treatments

Some will by now be completing their varroa treatments. In the North Island we perhaps shouldn't rely on just one treatment, as mite resistance is developing to some of the strips. I still use strips for a long, sustained treatment but also use a flash treatment monthly of 40–50 millilitres of 65% formic acid on a paper towel in the top super (two or three high) as an extra knockdown to get rid of some of the mites that may be tolerant to the acaricide in the strips.

I have also found that formic acid will help to control robbing in an apiary. Recently I was looking for a replacement queen and left some honey boxes exposed. It didn't take long before 50 or more bees were excitedly buzzing around the supers, trying to steal the honey. I should have put hive mats over them to stop the odour of exposed honey being given off, so was left with a robbing problem when closing up. A quick squirt of 10 millilitres of formic acid into each hive entrance quickly disrupted the hive's communication and changed a robbing scenario to one of the bees trying to get away from the acid fumes: it stopped the robbing dead. (In the old days we used a light spray of diluted Jeyes fluid on the hive box to do the same thing. The odour given off by the tar dissuaded the bees from robbing but this product, being a S4 poison, has been discontinued for good reason.)

Regardless of the treatment you use, don't just treat and tick it off as being done. It's essential to monitor some (if not all) of the hives in an apiary, as each seems to handle the treatment differently. Bees have to come into contact with most of the strip treatments to be effective; however, some bees just don't like the smell (or perhaps the reaction they get in contacting the strips) so will move away from them, thus nullifying part of the treatment. Apivar® is one of these products, so reposition the strips against the brood after a month to make sure the bees are in contact with the strips.



Lancewood (*Pseudopanax crassifolius*) and Scarlet Gum (*Eucalyptus ficifolia*). Both photographs were taken in suburban gardens in Wellington.

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You also need to consider that if you lost a swarm from your hives, it will be out there breeding varroa. At some time in the next two to three months it may collapse, at which time your bees will take the opportunity to rob it, bringing back more mites. Monitor mite levels going into winter, as you may need to treat again because of re-invasion.

Taking hives through the winter

All hives going into winter should be full of bees so they can thermoregulate efficiently. There must be a sufficient number of bees so that during a winter's day, those on the outside of the cluster can move into the middle and those inside move out to replace them several times. Small hives can have follower boards inserted on the outside, which give more insulation at the sides and confine the bees to some degree. Top insulation can also make a difference to honey consumption, but you need to provide a little top airflow to allow moisture given off by the bees to escape. Most of my nucs will have reflective bubble wrap under the roof for additional insulation.

Honey boxes should also be heavy, indicating they are full of winter stores. You need to know what two full honey boxes weigh. They should be hard to lift from the handhold with your arm straight standing adjacent to the end of the hive. This is called hefting. We generally go through the apiary to test that we can't easily lift the back of the hive off the stand by hefting it. Top up the light ones with more syrup, or give them frames of honey *if your hives are totally clear of AFB*.

Inside a hive of Italian bees, from July onwards, the bees will heat the centre of the cluster up to brood temperature and start raising replacement bees. This means the cluster should cover six to seven frames in the cold so they can easily access honey and pollen frames.

During warm spells, the cluster expands and moves upwards (in the case of a two-storey hive) on to more honey. Nucs are easily wintered, provided the box they are in is full of bees and honey. Nucs can also be wintered on top of production hives. Tape two together so they sit evenly on a super. Heat from the hive below makes them easier to winter.

Top-bar hives are a little different. The bees can't move up and are often reluctant to move sideways. Check these every few weeks during the winter and move capped honey

frames in so they touch the cluster. Hopefully your hive will come through healthy and strong.

Different bee species exhibit different behaviours. Carniolans, for instance, reduce their bee numbers right down to half that of Italians in the autumn, and do not start raising brood until the first spring flow when they expand like mad. The queen will often lay eggs outside the heated cluster area and if there isn't a cold snap to chill the brood, the hive will expand far quicker than Italians. Because of this late brood rearing they consume less honey during winter, but must be supered earlier to accommodate that explosion in bee numbers.

Each breed has its advantages. A cold spring could see Carniolans building up slower than Italians, making them less suited for early pollination, whereas slow and steady Italians will have eaten most of their honey reserves but will have brood and bees ready for pollination. Carniolans are good at defending against wasps, whereas Italians tend to give up the fight.

Only take good prosperous hives into winter. Poor producers (those that just didn't build-up in the spring) are unlikely to overwinter successfully so should be scrapped. Uniting two poor producers together means you still have a hive headed by a poor-producing queen. Unite a good producer on top of a poor producer using two sheets of newsprint. This provides a slow introduction mechanism—reducing the chances of the two colonies fighting—and the bees from the top colony going down will usually kill the queen below.

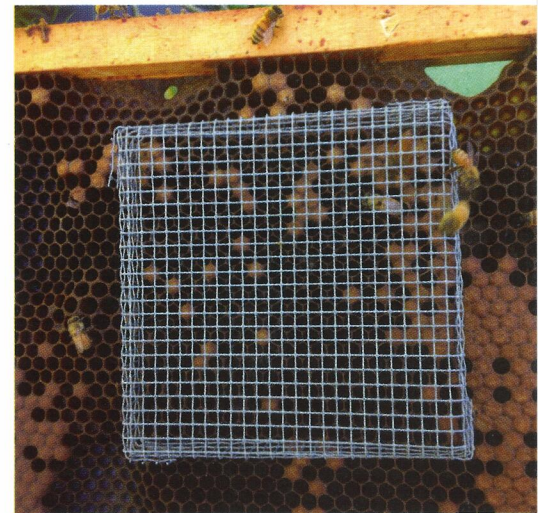
If you haven't requeened your hive(s) with cells or mated queens in the last couple of months, some will have requeened themselves by supersedure. A few will lose their way home and the hive will have become queenless. No brood and lots of drones in a hive can suggest that it's perhaps queenless. If you are not sure, mark the hive with a question mark and check in a week or so when the robbing has finished.

That final check before the first frost is important to ensure that you have disease-free hives with a queen. Drones will have been driven down on to the bottom board or chased out the front to die as soon as the last dribble of nectar stops completely. Those not

undertaking autumn requeening shouldn't be surprised if a few hives go queenless during the winter.

Tips on requeening

I purchase and read a lot of bee books. You only need one good idea from each to pay dividends. For example, quite often new queens are either killed or are superseded within a month of introduction perhaps being injured, like the bees chewing off their foot pads. Thanks to the book *Honey Farming* by R. O. B. Manley (who developed the Manley honey frame), I now requeen using a push-in cage and leave it for a week to make sure the new queen is laying before releasing her into the full colony.



A push-in cage with nothing in it. This was made from pollen screen mesh but I found the holes too big. Bees put their heads in and got stuck so I glued fly screen on the flat square to eliminate this problem.
All photos: Frank Lindsay.

I prefer to set up new queens in nucleus hives because they have a better acceptance rate, as there are no older bees in a nuc who will challenge the new queen. When the queen has matured and is laying at the same rate as an old queen, they can be swapped between hives just by putting the new queen down on the frame where the old queen was removed from a minute or so before. If the pheromone levels are the same, she will carry on searching for cells to lay in as if nothing had happened. If, however, some bees immediately climb on her and try to sting her, shake the bees from an emerging frame of bees and put the new queen under the push-in cage so the emerging bees will look after her. The queen will lay in the now-empty cells.

Once she has laid for a few days (or during the next round of inspections), remove the cage to release her into the full hive. Reducing the amount of brood available to mites makes their control easier.

Things to do this month

Winter down hives. Check feed and the effectiveness of mite treatments. Make sure top-bar hives have 10 frames with honey in them.

Carry out an AFB check. Slope bottom boards to the front so rain runs out of the hive. Fit mouse guards or reduce entrances to 400 mm x 7 mm. Replace rotten or damaged supers and bottom boards. Attend to fences, check for wasps and control grass.

During extraction, go through the honey supers and reject any old, dark frames you cannot see light through. Store frames with foundation or light frames on the outside with darker ones towards the middle. Freeze stored supers to kill wax moth eggs and larvae or store in a shed that is open, well lit and provides a good airflow through the supers. (Fit queen excluders top and bottom to prevent mouse damage.)

Those in the North Island (and perhaps top of the South) will have to watch more closely for wax moth infestation. Those in the southern parts of the South Island can smile, as they do not have wax moth problems.

Drought means possible tutin problems. If you have tutu bushes within five kilometres and high passion vine hopper (*Scolypopa australis*) numbers, test your honey, as their numbers are high this year. Any honey sold

or bartered has to be tested for tutin. Clubs can have their members' samples composite tested to save money. Send the results to MPI.

References

Lindsay, F. (2015, March). Droughts and pests. *The New Zealand BeeKeeper*, (23)2, 27–30.

Manley, R. O. B. (1946). *Honey Farming*. Faber & Faber Ltd.

In my report on the Eastern Apicultural Society Conference in the USA (see March 2015 journal, page 15), I left an important step out of the explanation in making up nucs.

- The hives are generally two high in the spring, with a queen excluder restricting the brood to the bottom super. Go through the hive and find two frames of emerging brood, one or two frames of honey and one of pollen. Take a quick look for the queen on the frames so that she can be moved if found before shaking all the bees off these frames and putting them in a new super above a queen excluder. Replace the missing frames with drawn frames after centring the brood into the middle of the bottom super.
- Leave for three to four hours (depending upon temperature) to allow the attendant bees to move back up on to the brood frames. Then split the hive, moving the lower half with the queen to a new hive site. Add a protected queen cell to the new nuc. The field bees will return to the old hive location and strengthen the nuc. I trust this now makes sense. Thanks to the beekeeper who phoned to alert me to my omission in the March journal.



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(Note: The National Beekeepers Association is a member of Apimondia. As such, all NBA members can register at lower rates than non-member countries. Full Congress entry fees are USD220 if paid by 30 June 2015 and USD 300 thereafter. Accompanying persons are USD150 if paid before 30 June 2015 and USD180 thereafter.)

APIMONDIA 2015
Daejeon, Korea
September 15 – 20, 2015

OPINION

CURRENT BEEKEEPING PRACTICES WEAKENING THE INDUSTRY

Frank Lindsay, NBA Life Member

The recent change in beekeeping practices as part of the 'gold rush' to produce manuka honey has broken down the structure of the beekeeping industry.

It used to be that beekeepers brought the hives in an area from a retiring beekeeper, and worked it out with farmers and their nearest beekeeping neighbours to continue keeping bees on the land. Farmers knew the value of bees to their land—increased clover through good pollination meant better growth rates for stock and higher butterfat returns. There were gentlemen's agreements and beekeepers assisted each other in times of difficulty. They passed on tips and often worked in together on things that mutually assisted each other. Branch meetings were talkfests where ideas and information were freely shared.

For years, beekeepers have assessed the carrying capacity of the land in terms of pollen availability and honey production and stocked apiaries accordingly. It took years to work out an area's potential, and long-term beekeepers noted changes in availability and modified their management or hive numbers accordingly.

The recent increase in hive numbers has seen a doubling of hives in apiaries. Some of the bigger boys have pushed in on existing beekeepers to secure spring sources for build-up and honey flow opportunities. Perhaps some of these areas could have been considered under-stocked, but some farm for poor springs and drought years, perhaps only increasing hive numbers in good production years. Apiary sites have never really been secure but are less secure in today's cash economy.

Now beekeepers look on each other as competitors. Tell them nothing and if they have a problem, it's their bad luck. Information is king and can be a commercial advantage to your business. Fewer people are turning up at branch meetings. This is unsustainable

if we want new entrants to come into the industry to carry on beekeeping and set up as family businesses.

Perhaps the defining of manuka honey will change all this. Word is that markers have been found to differentiate between manuka and kanuka. Soon these two honeys, although similar, won't be lumped together as manuka, which will mean that those who have established markets for kanuka as a separate floral honey will perhaps keep their market and price. Those who haven't may see a reduction in price as their honey is brought into line comparable to other specialty honeys with distinct features.

Apiary sites have never really been secure but are less secure in today's cash economy.

In gold rushes there are winners, but mostly losers. Those supplying goods or marketing make the money. Those who got in early have had a good run and those producing a pure manuka product will continue to benefit, but others with big mortgages based on manuka/kanuka returns may be put under stress.

There's a good rule in beekeeping: only increase on last year's profits. Mostly we are dependent on a six-week window for production unless we have the ability to move hives to greener pastures, provided they are available. Winter losses could increase as *Nosema ceranae* spreads. It used to be we could pick out a hive/apiary with nosema and treat it. Pollen substitutes are only sustainable with high honey prices, or are these now

essential with the removal of willows from our rivers?

There is a definite advantage to the farmer having hives on the land year round. It's mostly unseen unless the farmer has eyes to the ground during clover pollination.

Chemical fertilisers like urea give quick growth when farmers want it but there's a trade-off; they suppress clovers and with continued use will gradually decrease the overall herbage returns of the land. Check with some of the long-term hay contractors and they will tell you there's been a gradual loss in grass production.

Clover weevil is under control in most of the North Island and clover is making a comeback. We are now seeing paddocks of clover where hardly a flower persisted a few years back. There is a worldwide shortage of honey. Hopefully when the gold rush subsides, we will go back to a more sustainable, bee-friendly industry. Or am I just long in the tooth, perhaps wishing for something whose time is passing? But then again, things go in cycles. You just have to live long enough to see them.

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Stolen from North Taranaki on 20/3/2015: 20 hives' worth of honey and bees

Mix of full-depth and 3/4-depth boxes marked with either H3924 or BEESRUS

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Kiwi Bee is one of the largest beekeeping operations in New Zealand and we have developed the most up to date technology for apiairy use. We're searching for hard working people to join our constantly growing Beekeeping teams.

We have a number of operations throughout the North Island including Kerikeri, Waikato, Whanganui, Wairarapa, Hawkes Bay, and the East Coast. Beekeeping allows you to work outdoors in a variety of environments. You will be fit as heavy lifting and physically demanding tasks will happen on a day-to-day basis. You will ensure that all hive management and maintenance tasks are completed.

We're looking for both experienced beekeepers and trainee beekeepers. Comvita has their own in-house training programme which is NZQA Accredited. This covers the NZ Certificate in Apiculture through to Business Management courses. We encourage people to upskill and make a career out of Beekeeping and provide opportunities to those who want to progress.

If you have a passion for the outdoors and a desire to work with nature, then this could be a career for you. The hours of work for Beekeeping can vary and sometimes be irregular so flexibility over our peak summer season (September to April) around working hours is important.

If you have a genuine interest in beekeeping and enjoy working in the outdoors then send us your CV today.

Please send enquires to careers@comvita.com with the reference 'beekeeping'.

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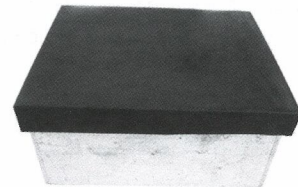
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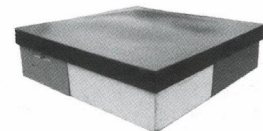


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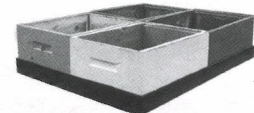
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LETTERS TO THE EDITOR

WORKING TOGETHER FOR THE GREATER GOOD

Chris Gill

I started beekeeping around 17 years ago. I worked for a commercial beekeeper for a season before going out on my own thinking I knew it all! I made a lot of mistakes at this time and I did things I now regret. Pollination was relatively new to the Canterbury area then, and I moved hives into other beekeepers' areas which, understandably, did ruffle quite a few feathers. I put up with a lot of abuse at this time from supposed 'elders' in the beekeeping community.

Around 2001 I had an outbreak of AFB within my apiaries. Beekeepers were only too happy to help me burn my hives, but no one—not one single person—was actually prepared to help me with solutions so I could manage the problem.

Over the years, I have gotten over this major setback and I now run a successful commercial operation.

There is no support for anyone needing help or those in trouble in this industry, but there are plenty of people there to put knives in your back.

Now 17 years have passed, and I am having my hives moved, stolen and poisoned from sites I have had for over six years.

Beekeepers are approaching farmers where I have sites, bad-mouthing me and telling farmers my hives are riddled with disease, basically laundering the beekeepers' dirty (and very old) laundry in the public eye.

This conduct is totally unprofessional, especially from so-called 'elders' of our beekeeping community.

"It would be so much better if we could be like the bees and work together for the greater good."

How can anyone start up in beekeeping and forge their way through with all this nonsense?

After the theft of some of my hives from longstanding sites, on 16 December I wrote a letter to two people who represent beekeepers in New Zealand, and to date have had no written response. Whilst I have

spoken verbally to one, there has been no acknowledgement at all from the other.

Before New Zealand beekeepers can even contemplate unification, should not the individual districts at least be on the same page? This is certainly not the case at the moment.

It appears to me that all these committees and sub-committees are just 'jobs for the boys' and they only do things that benefit themselves or their friends within the industry. The average beekeeper sees very little benefit.

There are enough hurdles to jump in beekeeping these days with varroa, etc., without having all this infighting, slander and backstabbing.

It would be so much better if we could be like the bees and work together for the greater good.

THE GENEROSITY OF BEEKEEPERS

Russell and Murray Poole, Elms Apiaries, Alexandra

Following the disastrous fire in our honey house in January 2015, we have been overwhelmed by the generous reactions of beekeepers.

First, Mike Vercoe gave us his Mazda truck with Kelley-type loader, then came a Honda generator from Neil Andrew, followed by 300 supers with drawn combs from Walter Adamson.

Replacing our car, Bruce Johnson, a local car dealer, dropped the price on a KIA Optima V6 by \$1,000. Offers of help came from

Reece Adamson and John Graham to do our extracting. Then from Stuart Ecroyd, 800 Bayvarol strips and hat and veil, a further 800 Bayvarol strips from Jacques Barnard of Bayer NZ and 864 plastic FD frames from Beetek Ltd, all free-of-charge gifts. So many offers of assistance with hive work were offered that we have not been able to use all the offers.

We have accepted a quote for a rebuild and expect to be in a replacement building before the winter. It has been comforting to find such helpful generosity from so many people.



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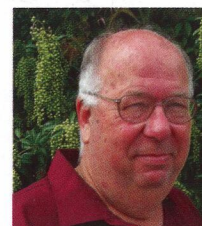
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For more information please contact Russell Berry

Tel: 07 3666 111
Fax: 07 3666 999
Email: russell@arataki-honey-rotorua.co.nz
Address: Waiotapu 2488 State Highway 5,
 RD3, Rotorua, 3073, New Zealand



THE MANAGEMENT AGENCY BIOSECURITY
(NATIONAL AMERICAN FOULBROOD PEST
MANAGEMENT STRATEGY) ORDER 1998
**SPECIAL PURPOSE FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31ST MAY 2014**

INDEPENDENT AUDITOR'S REPORT TO THE MINISTER OF AGRICULTURE

Report on the Special Purpose Financial Statements

We have audited the special purpose financial statements of The Management Agency Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998 on pages 3 to 7, which comprise the special purpose statement of financial position as at 31 May 2014, the special purpose statement of changes in equity and special purpose statement of comprehensive income for the year then ended and a summary of significant accounting policies and other explanatory information.

The special purpose financial statements have been prepared based on the financial reporting provisions of the Rules within the Management Agency Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998.

Executive Committee Responsibility for the Financial Statements

The Executive Committee is responsible for the preparation of the special purpose financial statements in accordance with the provisions of the Rules of the Management Agency Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998 and for such internal control as the members of the Committee determine is necessary to enable the preparation of special purpose financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing (New Zealand). Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Other than in our capacity as auditor we have no relationship with, or interests in, the Management Agency Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998.

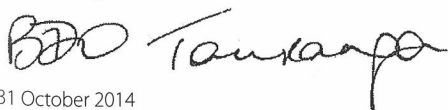
Opinion

In our opinion, the special purpose financial statements on pages 3 to 7 are prepared, in all material respects, in accordance with the provisions of the Rules of the Management Agency Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998.

Basis of Accounting and Restriction on Distribution and Use

Without modifying our opinion, we draw your attention to Note 1 to the special purpose financial statements, which describe the basis of accounting. The special purpose financial statements are prepared to comply with the financial reporting provisions of the Management Agency Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998 rules. As a result, the special purpose financial statements may not be suitable for any other purpose. Our report is intended solely for the Management Agency Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998 members and should not be distributed to or used by parties other than the Management Agency Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998.

BDO Tauranga



31 October 2014
525 Cameron Road
Tauranga, New Zealand

THE MANAGEMENT AGENCY BIOSECURITY
(NATIONAL AMERICAN FOULBROOD PEST
MANAGEMENT STRATEGY) ORDER 1998
**STATEMENT OF FINANCIAL PERFORMANCE
FOR THE YEAR ENDED 31ST MAY 2014**

	Note	2014 \$	2013 \$
INCOME			
Penalty on Levy		7,528	8,335
PMS Bio Security Levy		429,486	399,822
Bad Debts Recovered		362	0
Interest Received		10,031	5,114
Grants Received		10,870	0
		<u>458,276</u>	<u>413,271</u>
Levies- Charged Next Year to 31 May	1 (b)	500,260	447,948
Less Income in Advance		(500,260)	(447,948)
Total Income		<u>458,276</u>	<u>413,271</u>
LESS EXPENSES			
Accounting & Reporting		6,651	3,511
Aerial Surveillance		6,189	905
ADR Admin		14,374	11,374
ADR (AsureQuality)		43,162	40,472
AFB Recognition Courses		12,564	11,268
AFB Counselling (AsureQuality)		5,223	4,500
AFB Counselling & Audit Admin		5,120	2,675
AFB Videos (DVD)		6,250	0
AFB Audit Inspec (AsureQuality)		27,151	19,341
AFB Hive Inspection Industry		121,470	73,854
AP2 Recruitment & Training		4,648	7,411
Apiary database upgrade		686	1,005
Audit Fees		5,840	5,523
Bad Debts written off		6,321	19,198
Bank Fees		44	11
Beekeeper Communication		205	1,490
Beekeeper Education		210	940
Biosecurity NZ		2,438	2,059
Chargeable Surveillance		483	0
COI Admin		5,456	5,694
COI (AsureQuality)		20,885	15,269
Apiary Levy (AsureQuality)		4,064	2,216
COI Default Inspections		5,993	5,448
Compliance Costs		0	260
Conference Attendance		357	911
Debt Collection Expenses		15,027	11,840
DECA (AsureQuality)		13,234	12,151
DECA Scheme Admin		3,270	5,310
Honoraria		14,941	3,350
Plant & Food Research		14,918	11,968
Suspect substance test		0	605

NOTE: This statement is to be read in conjunction with the Notes to the Financial Statements.

THE MANAGEMENT AGENCY BIOSECURITY
(NATIONAL AMERICAN FOULBROOD PEST
MANAGEMENT STRATEGY) ORDER 1998

STATEMENT OF FINANCIAL PERFORMANCE FOR THE YEAR ENDED 31ST MAY 2014

	Note	2014 \$	2013 \$
Insurance		826	826
Legal Expenses		93	2,819
Magazine Expenditure		7,397	6,192
Management Agency Appointments		0	318
Manager Regional Visits		5,000	8,534
Official Info Act Requests		2,691	0
Operations Manual		95	0
Management Agency Meeting Exps		8,601	10,766
Postage Printing & Stationery		21,491	14,853
Reporting Government		1,578	1,106
Telephone		3,363	4,702
Travel & Accommodation		3,775	5,340
Website		14,711	600
Total Expenses		436,796	336,617
NET SURPLUS		<u>21,481</u>	<u>76,654</u>

THE MANAGEMENT AGENCY BIOSECURITY
(NATIONAL AMERICAN FOULBROOD PEST
MANAGEMENT STRATEGY) ORDER 1998

STATEMENT OF MOVEMENTS IN EQUITY FOR THE YEAR ENDED 31ST MAY 2014

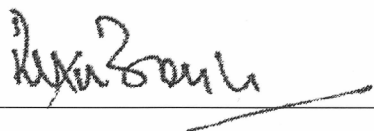
	Note	2014 \$	2013 \$
EQUITY AT START OF PERIOD		83,524	6,870
SURPLUS & REVALUATIONS			
Net Surplus(Deficit) After Tax		<u>21,481</u>	<u>76,654</u>
Total Recognised Revenues & Expenses		21,481	76,654
OTHER MOVEMENTS		-	-
EQUITY AT END OF PERIOD		<u>105,004</u>	<u>83,524</u>

NOTE: This statement is to be read in conjunction with the Notes to the Financial Statements.

THE MANAGEMENT AGENCY BIOSECURITY
(NATIONAL AMERICAN FOULBROOD PEST
MANAGEMENT STRATEGY) ORDER 1998
**STATEMENT OF FINANCIAL POSITION
FOR THE YEAR ENDED 31ST MAY 2014**

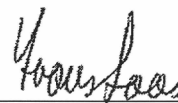
	Note	2014 \$	2013 \$
CURRENT ASSETS			
Cash at Bank		140,205	175,580
Term Deposits		335,000	260,915
Interest Accrued		1,860	0
Accounts Receivable	1 (b)	187,728	156,785
Prepayments		67	370
Total Current Assets		664,860	593,651
TOTAL ASSETS		<u>664,860</u>	<u>593,651</u>
CURRENT LIABILITIES			
GST Payable	1(c)	40,736	42,750
Accounts Payable		18,859	19,429
Income in Advance		500,260	447,948
Total Current Liabilities		<u>559,856</u>	<u>510,127</u>
TOTAL LIABILITIES		<u>559,856</u>	<u>510,127</u>
NET ASSETS		<u>105,004</u>	<u>83,524</u>
Represented by:			
EQUITY			
Funds Settled		(52,064)	(52,064)
Retained Earnings		157,069	135,588
TOTAL EQUITY		<u>105,004</u>	<u>83,524</u>

Treasurer



Date: 31/10/2014

Chairperson



Date: 30/10/2014

THE MANAGEMENT AGENCY BIOSECURITY (NATIONAL AMERICAN FOULBROOD PEST MANAGEMENT STRATEGY) ORDER 1998

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31ST MAY 2014

1. REPORTING BASIS AND NATURE OF BUSINESS

The National Beekeepers Association is a non-profit organisation that acts for and facilitates on industry matters for the benefit of its members.

Further to this it has been appointed as the Management Agency for the AFB NPMS. The duties relating to this appointment are set out in the Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998. Levies used to pay for the running of the AFB NPMS are collected through the Biosecurity (American Foulbrood-Apiary & Beekeeper Levy) Order 2003. Pursuant to the Biosecurity Act 1993 the Management Agency must provide transparent financial records with respect to the management of the AFB NPMS Levy Order and this is what is reported in these statements.

The Management Agency; Biosecurity National American Foulbrood Management Strategy is a non-profit organisation.

The accounting principles recognised as appropriate for the measurement and reporting of earnings and financial position on an historical cost basis have been used, with the exception of certain items for which specific accounting policies have been identified.

a. Changes in Accounting Policies

There have been no changes in accounting policies. All policies have been applied on bases consistent with those used in previous years.

b. Receivables

Receivables are stated at their estimated realisable value. Bad debts are written off in the year in which they are identified.

Member levies for the year ended 31 May 2015 have been charged prior to 31 May 2014. The amounts unpaid at 31 May 2014 are included in the Accounts Receivable balance. An adjustment for levies charged in advance is shown in the Statement of Financial Performance.

c. Goods & Services Tax

These financial statements have been prepared on a GST exclusive basis with the exception of Accounts Receivable and Accounts Payable which are shown inclusive of GST.

4. AUDIT

These financial statements have been subject to audit; please refer to Independent Auditor's Report.

5. CONTINGENT LIABILITIES

At balance date there are no known contingent liabilities (2013:\$0).

6. SECURITIES AND GUARANTEES

There was no secured overdraft as at balance date nor was any facility arranged. The Management Agency Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998 has not granted any securities or guarantees in respect of liabilities payable by any other party whatsoever.

CLUB CONTACTS AND BEEKEEPING SPECIALTY GROUPS

AUCKLAND BEEKEEPERS CLUB

www.aucklandbeekeepersclub.org.nz
Meets second Saturday monthly at Unitec, Pt Chevalier, Auckland

Kim Kneijber

P: +64 9 418 1302
E: kimk_bees@hotmail.com

Carol Downer

P: +64 9 376 6376
E: thefairy@xtra.co.nz

Please send all correspondence to:
PO Box 44-427, Pt Chevalier 124, Auckland 1022

FRANKLIN BEEKEEPERS CLUB

www.franklinbees.co.nz
Meets second Sunday each month at 733 Paerata Rd, near Pukekohe. 10am start, for cuppa and discussion, and open the hives at 11:30. Visitors welcome.

Graham Dyche, President

P: +64 9 238 9854
E: president@franklinbees.co.nz

Joan Leitch, Secretary

M: 021 226 2135
E: secretary@franklinbees.co.nz
Correspondence to PO Box 1082 Pukekohe 2340

WAIKATO DOMESTIC BEEKEEPERS CLUB

www.waikatobeekeepers.org.nz
Meets every third Thursday (except January) at 7.30 pm.
For prospective members: please contact the Secretary for venue meeting place.

Peter Gray, President

P: +64 7 855 0290
E: president@waikatobeekeepers.org.nz

Maryanne Partridge, Secretary

P: +64 7 825 2691
E: secretary@waikatobeekeepers.org.nz

ROTORUA HONEY BEE CLUB

Meets monthly
Kim Poynter, President
374B Hamurana Rd, RD7, Rotorua 3907
P: +64 21 926 937
E: birchwoodfarm@xtra.co.nz

Ruth Thomas, Secretary

25 Uta St, Utuhina, Rotorua 3015
P: +64 21 180 3970
E: rotoruahoneybeeclub@gmail.com

Website under construction: expected to be complete before the start of April 2015
http://www.rotoruahoneybeeclub.co.nz

WANGANUI BEEKEEPERS CLUB

Meets every second Wednesday each month (except Jan), at 7.30pm, at Canaan Apiaries, Mosston Road, Wanganui.

Neil Farrer

P: +64 6 343 6248
E: nfarrier@xtra.co.nz

MANAWATU BEEKEEPERS CLUB

Meets every fourth Thursday in the month at 7.30 pm
Newbury Hall, SH3, Palmerston North

Matthew Telfer, Chairman & Media Liaison

M: 021 0273 2875
E: matt@manawatubeeclub.org.nz

Georgina Morrison, Secretary

E: secretary@manawatubeeclub.org.nz

(NB: Preferred address for email correspondence)
Mailing address: PO Box 4103, Manawatu Mail Centre, Palmerston North 4442

THE BUZZ CLUB OTAKI

Meets every third Wednesday of the month at 7pm at the Waitohu School Hall, Te Manuao Road, Otaki.

Sarah Bayliss, Chairperson

P: +64 6 364 0555
Ken Wells, Secretary
P: +64 6 364 5966
E: thebuzzclubotaki@gmail.com

WELLINGTON BEEKEEPERS ASSOCIATION

www.beehive.org.nz
Meets first Wednesday of the month (except Jan) in the Johnsonville Community Centre, Main Hall, Moorefield Road, Johnsonville. 7 pm Beginners' session, 7.30 pm main meeting.

Richard Braczek, President

5 Tyndall St, Waiwhetu, Lower Hutt 5010
P: +64 4 973 3028
E: ibraczek@paradise.net.nz

Lou Gallagher, Secretary

P: 021 1755 452
E: lou.m.gallagher@gmail.com

MARLBOROUGH BEEKEEPERS ASSOCIATION

www.marlboroughbeekeepers.co.nz
Meets the first Saturday of the month at 10 am at the Blenheim community gardens off Budge Street.

Philip Vercoe, President

P: +64 3 929 3127

Renee DeLuca, Secretary

P: +64 21 473 633

NELSON BEEKEEPERS CLUB

www.nelsonbeekeepers.org.nz
Meets first Wednesday Mar-Dec inclusive, 7-9 pm
Waimera Lounge, Richmond A&P Showgrounds
Lower Queen Street, Richmond.

Ian Henbrey, Secretary

P: 03 548 6220
M: 027 546 8283
E: tasmanbees@gmail.com

CHRISTCHURCH HOBBYIST BEEKEEPERS' CLUB

www.chchbeekeepers.org.nz
Meets on the first Saturday of each month, August to May, except January for which it is the second Saturday, at 681 Cashmere Road, commencing at 1.30pm.

Peter Saunders, President

Myrtle Davey, Secretary
E: chch.beekeepers@gmail.com

NBA BRANCHES

Refer to Branch contacts (page 54) to request details of Branch meetings.

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www.umf.org.nz
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John Rawcliffe, General Manager

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NZ HONEY BEE POLLINATION ASSOCIATION

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NZ QUEEN PRODUCERS ASSOCIATION

Russell Berry
P: +64 7 366 6111

NZ COMB PRODUCERS ASSOCIATION

John Wright
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NZ HONEY PACKERS AND EXPORTERS ASSOCIATION INC

Contact: Allen McCaw
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Mary-Anne Thomason

P: +64 6 855 8038

BEE PRODUCTS STANDARDS COUNCIL

Dr Jim Edwards, Chairman
P: +64 6 362 6301

IS YOUR GROUP OR BRANCH MISSING FROM HERE? OR HAVE YOUR DETAILS CHANGED?

Contact secretary@nba.org.nz. Please also send any changes or additions to: editor@nba.org.nz

NB: listings on this page are limited to clubs and groups that are financial members of the NBA.

NATIONAL BEEKEEPERS' ASSN OF NZ (INC.) EXECUTIVE COUNCIL

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NBA BRANCHES: First named is President/Chairperson. The second named is Secretary.

NORTHLAND

Interested parties wishing to start this branch up again,
please contact Kim Singleton 09 536 6516 or
beewise2005@gmail.com

AUCKLAND

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Jane Lorimer

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SOUTHLAND

Branch President to be advised

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NBA LIBRARIANS

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APIMONDIA OCEANIA COMMISSION

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**IF YOUR
DETAILS HAVE
CHANGED...**

...please email editor@nba.org.nz and
secretary@nba.org.nz so that we can
update your details in the journal and on
the NBA website www.nba.org.nz.



360ml Round Pot



500gm Round Jar



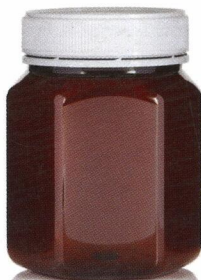
340gm Round Jar
(coming soon)



250gm Round Jar



2kg Hex Jar



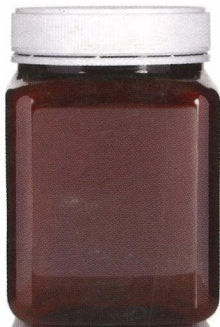
1kg Hex Jar



500gm Hex Jar



250gm Hex Jar



2kg Square Jar



1kg Square Jar



500gm Square Jar



250gm Square Jar

NEW ZEALAND'S MOST EXTENSIVE RANGE OF HONEY PACKAGING

Pharmapac's range of export quality packaging for honey has now expanded to contain square, hex & round jars. Sizes range from 250gm - 2kg.

Pharmapac is a New Zealand owned company, with more than 30 years in the business of designing, manufacturing and producing plastic packaging solutions for not only local, but an ever growing list of international clients.

All of our products are manufactured in our ISO9001-2008 accredited facility in Auckland, New Zealand.

No supply contracts are required.

Pharmapac follows well defined parameters of quality, conforming to various national and international standards. As these standards change, we work with our suppliers to continue to meet these requirements.

For more information or product samples please contact us at:

Pharmapac Limited
88 Wairau Road
Glenfield
Auckland 0627

+ 64 9 444 9631
sales@pharmapac.co.nz



Quality
ISO 9001

* Our stock jar colours are amber & clear. Stock closure colours are white, blue, gold, green & black. For your own custom coloured closures, a minimum order of 5000 units will apply.

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