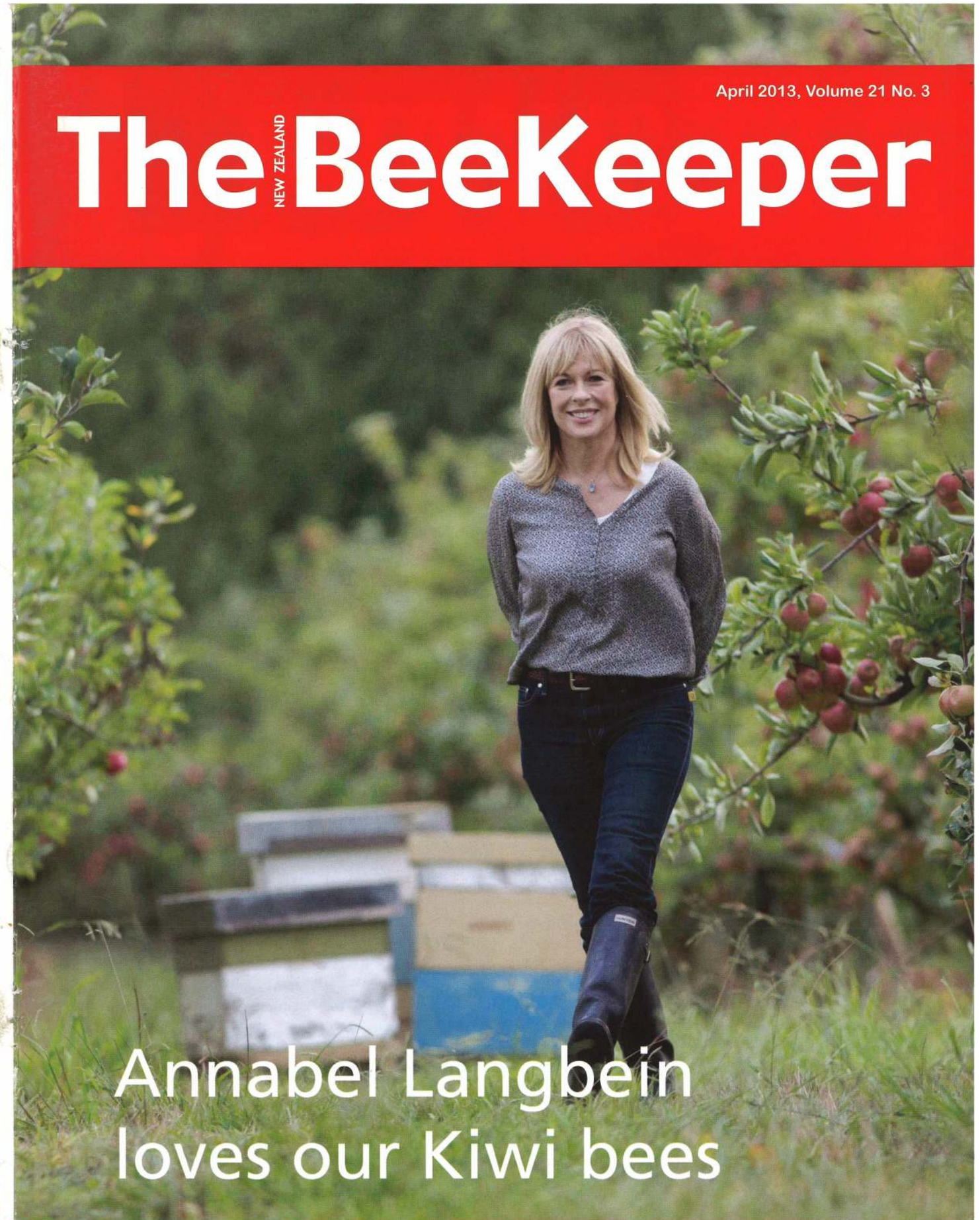
April 2013, Volume 21 No. 3

The NEW ZEALAND BeeKeeper

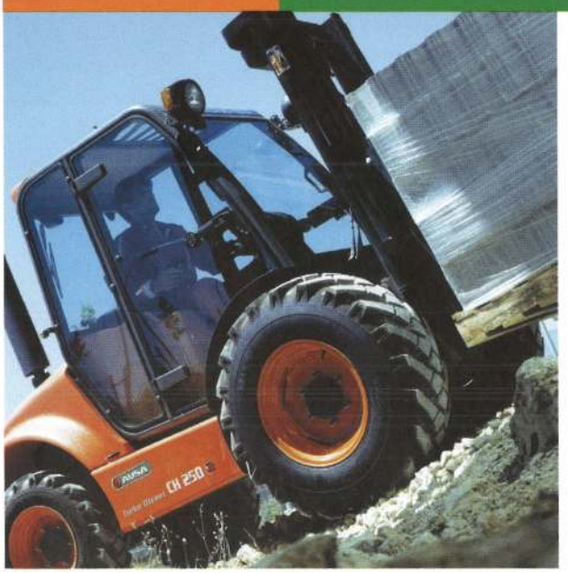


Annabel Langbein loves our Kiwi bees

Celebrating 100 Years SINCE 1913 NATIONAL BEEKEEPERS ASSOCIATION

- Threats to bees (& us)
- Conference information

BEE SMARTER



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NBA website: www.nba.org.nz

CHIEF EXECUTIVE OFFICER:
Daniel Paul
PO Box 10792
Wellington 6143
Ph: 04 471 6254
Fax: 04 499 0876
Email: ceo@nba.org.nz

EXECUTIVE SECRETARY
(including NBA Membership & Journal Subscriptions)
Miriam Nicholson
PO Box 10792
Wellington 6143
Ph: 04 471 6254
Fax: 04 499 0876
Email: secretary@nba.org.nz

EXECUTIVE COUNCIL:
Barry Foster (President/East Coast)
Neil Stuckey (Northern/Vice President)
Stephen Black (Waikato)
Dennis Crowley (Bay of Plenty)
Mary-Ann Lindsay (Southern North Island)
Ricki Leahy (Upper South Island)
Roger Bray (Central South Island)
Russell Berry (Lower South Island)

EDITORIAL/PUBLICATION:
Nancy Fithian
8A Awa Road, Miramar
Wellington 6022
Ph: 04 380 8801 Fax: 04 380 7197
Mobile: 027 238 2915
Email: editor@nba.org.nz

PUBLICATIONS COMMITTEE:
Frank Lindsay
26 Cunliffe Street
Johnsonville
Wellington 6037
Ph: 04 478 3367
Email: lindsays.apiaries@clear.net.nz

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CONTACTS TO THE NEW ZEALAND BEEKEEPING INDUSTRY:
Rex Baynes, AFB NPMP Manager
PO Box 44282, Lower Hutt 5040
Email: rbaynes@ihug.co.nz
Phone: 04 566 0773

American Foulbrood Management Plan
www.afb.org.nz

AsureQuality Limited
Ph: 0508 00 11 22
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Contents

Front cover: Annabel Langbein has joined forces with the NBA to work on projects that help promote and protect our Kiwi bees. Cover photo courtesy of Christopher Loufte.

What we do

By Barry Foster, NBA President

It's our 100th year as an organisation. Time to celebrate the fact and look at what we do and stand for in the past, present and future.

This month I've reviewed what we have done over the past year, and in particular the last six months since the journal went out to every registered beekeeper.

For the benefit of those who haven't seen it, I've included once again the table entitled Increasing Threats to Bees in New Zealand that was printed in the December journal [see page 9 in this journal]. It's a timeline of increasing threats to our bees based around four major impacts that have arisen since the late 1990s: varroa, diseases, pesticides and nutrition, and the efforts being made to mitigate these impacts. What is important to note is the trend line towards increasing threats to our bee health and in particular, the combination of these four impacts acting together.

We are receiving anecdotal (and in a few cases substantiated) reports of increasing winter losses. Queen breeders are being asked to supply more overwintered queens than in previous years, even while our hive numbers nationally continue to increase. Could this be the start of increasing percentages of winter losses as experienced by other countries after a decade or more of varroa?[1] We simply don't know for sure until some independent analysis of winter losses and other trends is done. Until then we will only have anecdotal evidence (and in the worst case, media hype) over one or more particular populist threats such as pesticides that fail to encompass the broader picture.

Without substantiated evidence, we cannot build a case with Government and stakeholders for increased research and efforts at mitigating future adverse trends in our bee health. As I write this, John Hartnell from Federated Farmers Bee Industry Group and I are arranging a meeting with the Minister of Primary Industries to put our case for an MPI-initiated bee loss survey. However, this is only a small part of the NBA's continued efforts in lobbying on bee health issues, which covers everything from media stories to our opposition to honey imports and making submissions to select committees.

In December we submitted an entry to the National Science Challenge[2] under the title of 'Security of New Zealand's ability to export high quality agricultural products with special reference to the health of New Zealand's honey bees, our major pollinators and only honey gatherers.' Out of over 100 challenges submitted, the final 10 will be selected in April following input from the public, experts and science users. These will be issues considered most worthy of research through the funding allocated to the Ministry of Business, Innovation and Employment (MBIE) for the National Science Challenge.

This month will also see the first of two Trees for Bees conferences to be held at Eastwoodhill Arboretum just outside Gisborne in 2013 and 2014.[3] This 2013 conference is shaping up to be a landmark event for the collaboration between a great diversity of people from a variety of land users, scientists, Iwi, honey-exporting companies, Federated Farmers, including the Bee Industry Group and the NBA. It is a forerunner to a larger Trees for Bees conference in 2014 that will cater for a greater number of participants.

The trade names Sulfoxaflor, Quickbayt and Yates Super Shield Advanced may not mean much to the average reader, but over the past twelve months our NBA Technical and Submissions Committee has submitted on each of them, opposing their registration because of their likely impact on bee health. This committee has done outstanding work in making submissions and following them up with the EPA. Further submissions and communications have led to altered conditions of registration for Quickbayt and Yates Super Shield Advanced, and for the moment has halted registration of Sulfoxaflor. We also put in an application to the EPA to reassess the currently approved timing of application of the systemic insecticide Movento (now at pre-flowering), changing it to petal fall or later, thereby eliminating its likely impact on brood development when picked up in pollen by foraging bees. In October the EPA accepted that there were grounds for a reassessment. This now requires money to be spent on it in order to be done. The question is who will do that. We have also made submissions on surfactants for their impact on bees. Neonicotinoids get all the hype and media attention, but no one else is doing the work that I have just mentioned.

In February I spent two days in Wellington at a meeting on GIA (Government Industry Agreements). These agreements have been loosely called 'user-pays biosecurity' and indeed we are all users of biosecurity and pay our taxes as such. The Government has decided that some of us are more dependent on biosecurity than others; hence it seeks partnerships and contributions from all agricultural industries under GIA. Whether we sign up to GIA or not, we will in the future be paying as users. At the heart of any industry agreement will be its operational agreement. Andrew Coleman (MPI Deputy Director General Compliance and Response) said at the meeting, "An operational agreement can go where you want it to go". There is much more to say about GIA whether we sign up or not; not the least of which is a mandate to proceed or not. GIA offers opportunities as well as risks.

One of the most important roles we have is with the work of the American Foulbrood National Pest Management Plan (AFB NPMP) and the Bee Products Standards Council. These are independent pan-industry bodies governed by volunteers from all sectors of our industry, including hobbyists, that do a huge amount of vital work on our behalf. The NBA is the management agency for the AFB NPMP under the governing legislation from which the AFB NPMP functions. The legislation

Continued on page 6

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Continued from page 4

directs the NBA to have a governance role, which is quite separate from the daily management of the AFB NPMP. Both of these bodies could not exist without our help.

We have a network of branches that run field days, conferences and diseaseathons for the benefit of all. *The New Zealand BeeKeeper* journal has huge input from volunteers in its production and is the only journal of its type for New Zealand beekeeping. We have joint CEOs and secretariat based in offices in Wellington that give our organisation the presence and professionalism in order to run effectively and with credibility.

In order to do the things I have mentioned, we need your help, support and—above all—your membership in order to do the things we do.

Endnotes

[1]A good read on this is *The Beekeeper's Lament* by Hannah Nordhaus http://www.hannahnordhaus.com/book/
[2]National Science Challenge http://www.msi.govt.nz/update-me/major-projects/national-science-challenges/
[3]For details & registration see http://www.eastwoodhill.org.nz/trees-for-bees-conference/

The National Beekeepers Association of New Zealand

Notice of 2013 Annual General Meeting

The AGM of the NBA will be held at the

Hotel Ashburton
Racecourse Road
Ashburton

Thursday 20 June 2013
commencing at 9.00 am

Chief Executive Officer

NEW BEE AMBASSADOR

Annabel loves our Kiwi bees

New Zealand's famous Free Range Cook, Annabel Langbein, has joined forces with the NBA to work on projects that help promote and protect our Kiwi bees.

Annabel has agreed to become an 'ambassador' for our bees, working officially with the NBA to help spread the message to high-profile and influential audiences that bees are vitally important and that they need our help to survive.

"My father was a beekeeper and we've always had hives in our family so I've grown up with bees," says Annabel, who is a foundation member of the Sustainability Council of New Zealand.

> **"The more public awareness and support the NBA has, the more we will be listened to by officials and others who help to set policy affecting our industry."**

"And as a free range cook who values nature as my pantry, I thoroughly appreciate the importance of bees and the hugely critical role they play in our everyday lives—not to mention the value they add to our economy through pollination.

"This is my chance to give something back—to do what I can to help the NBA ensure our bees get the recognition and prominence they deserve."

NBA President, Barry Foster, is delighted Annabel has come on board.

"Part of the NBA's role is to make sure the public and the policymakers understand the issues our members—and our bees—face, and Annabel will give us a high-profile voice when it comes to generating awareness."

Barry says the New Zealand public have become much more aware of bees in recent times, a position that's been helped hugely by the NBA's annual Bee Week.

"This year, Bee Week will morph into a whole month's worth of publicity, awareness and advocacy projects and Annabel will play a key role in some of that work.

"The more public awareness and support the NBA has, the more we will be listened to by officials and others who help to set policy affecting our industry."

Key issues the NBA is tackling include efforts to stop the importation of Australian honey because of the increased danger of pests and diseases entering the country.

The Association is also working with MPI to develop a national bee health survey to properly benchmark for the first time the scale of losses that beekeepers are suffering, what's causing them and whether we have specific problems in that area. This will enable the Association to start work on possible mitigation actions to help beekeepers in future.

A third major issue is our work around the Government Industry Agreements (GIA) that will set post-border biosecurity readiness and response plans in place. This is critical because it will prepare us to deal effectively with an incursion if one does occur.

"There's a lot to do in a short time and having Annabel on board will enable us to get useful public and media traction while we

"I thoroughly appreciate the importance of bees..."

do the equally important behind-the-scenes work with officials," Barry said.

Readers can find out more about Annabel from her website www.annabel-langbein.com.

Annabel Langbein joins forces with the NBA and becomes 'ambassador' for bees. Photo supplied.

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Increasing threats to bees

Chronology	Varroa	Other diseases	Pesticides	Bee Nutrition
1990s	Pre-varroa	American foulbrood disease	Use of Carbonates and Organophosphates mainly	Generally good
2000	Varroa found in North Island		Change from surface to systemic pesticides. Increasing toxicity	Weed-free farming increasingly adopted.
2001	Some beekeepers leaving strips in too long and not alternating treatments		Poor pesticide control and regulations. No regulation on surfactants.	Dairy farm intensification. Bee forage eliminated
2006	Varroa found in South Island	Greater impact from bee viruses vectored by varroa	Regulations not keeping up with evolution of new pesticides	Large areas of gorse, broom and thistle control from the air.
2008	Varroa spreads through the South Island	Spikes in reports of AFB as varroa moves through both Islands.	New pesticide approvals tested on adult bees only & not other stages of a bee life cycle.	Lack of replacement of lost bee forage plants.
2010	Beginning of varroa resistance in North Island	*Nosema ceranae* found in New Zealand.	No systematic testing of the levels of systemic insecticides in pollen collected during pollination.	Willow removal from river banks in some regions.
2012	Anecdotal reports of some large North Island hive losses to varroa.	"No attention being paid to *Nosema apis* and *N. ceranae*. Infected bees could be using up in the order of 25% of the honey coming into a hive." Mark Goodwin, August 2012.	Increasing toxicity of new-generation pesticides to bees.	

Combined, these established threats will lead to greater hive losses with the potential for there being insufficient bees for pollination services.

European foulbrood	Small hive beetle	Asian honey bee	
More virulent viruses	Israel acute paralysis virus	*Tropilaelaps clareae*	

The future with no bees?

Efforts being made to prevent this happening

Work by Biosecurity New Zealand and beekeepers aimed at preventing incursions of exotic pests

The development of VSH queens & stronger bee genetics. Better international collaboration on this with the science network through COLOSS.	Development of molecular methods of pathogen detection involving molecular genetics and proteomics.	Better assessment of the impact of surfactants and fungicides on bee health.	2010 research on protein content of pollen-bearing plants started by the Trees for Bees project. By 2012, 70 species measured for the protein content in their pollen, with another 50 to be measured from work done at Eastwoodhill Arboretum.

All of the programmes above need better funding and support. The problems are not in any way solved and the serious threats to our bees remain.

Eradicating American foulbrood from NZ

By Dr Mark Goodwin, Team Leader Pollination and Agriculture, Plant and Food Research, Ruakura Research Centre. Email: mgoodwin@plantandfood.co.nz

New Zealand beekeepers are currently trying to eradicate American foulbrood disease (AFB)—a disease of honey bees.

Although this is something that no other significant beekeeping country has ever tried to do, New Zealand has a history of eradicating diseases; e.g., hydatids. Interestingly, the idea of eradicating AFB is not new to New Zealand beekeepers.

This from Volume 1 of the *New Zealand Beekeeper* 1939:

> *the disease can and should be eradicated completely. Under the present system which has had many years' trial elimination of disease from all apiaries in New Zealand seems to be as far away as ever and it certainly high time that something more definite was done about it.*

Why is the goal to eradicate AFB from New Zealand desirable?

1) Once eradication is achieved there is no need to invest in AFB control.
2) By looking for AFB and burning infected colonies, New Zealand beekeepers have an eradication policy for their own hives. It therefore makes sense for the New Zealand beekeeping industry to have the same strategy.
3) Feeding antibiotics to control AFB is not sustainable long term. Many countries are currently finding that AFB is becoming resistant to the antibiotics being used.

Why is eradication possible?

1) AFB is difficult to spread. Large numbers of bacteria (500 million spores/litre) need to be fed to a colony to cause an infection. It is therefore not necessary to eradicate the bacteria itself, which is probably impossible, but just to reduce the number of bacteria to a point that the infection of new colonies is unlikely to happen.
2) Many beekeepers have eradicated AFB from their own outfits. If some beekeepers can do this, then it is possible for all beekeepers to do so.
3) One problem for eradication is that the feral bee population cannot be inspected for AFB. However, every cloud has a silver lining. Thanks to varroa, the feral honey bee population is being eliminated.
4) Another benefit of varroa is that it is changing beekeeping practices. Those beekeepers not really interested in keeping bees have lost or sold their hives. Also, many beekeepers managing large numbers of hives per labour unit are reducing their hive numbers to better control varroa, which also means they have more time to control AFB.
5) New Zealand is an island, therefore not subject to continual re-invasion once AFB has been eradicated.
6) Most AFB is spread by beekeepers, so changes in the way beekeepers manage hives can have a dramatic effect on AFB levels.

So how can eradication be achieved?

Eradication can be achieved through a combination of two approaches:

1) the traditional approach of trying to find and burn AFB hives faster than beekeepers can infect new hives. The approach taken is to have every hive inspected each year by someone capable of recognising AFB. This is achieved by a combination of training beekeepers, approved beekeepers carrying out the inspections and compulsory inspections. Assuring that all hives are thoroughly inspected each year at an appropriate time of year could, by itself, result in eradication.
2) educating beekeepers to reduce the rate with which new hives are infected.

As long as more AFB hives are found and burnt than are infected each year, eradication will happen: the only question is how quickly. The trick is to get the right balance between search-and-destroy and prevention of infection.

What could stop eradication being achieved?

There are a number of threats to eradicating AFB:

1) as far as we can determine, we do not have European foulbrood (EFB) in New Zealand. When we get EFB, we will need to feed antibiotics to control it. The use of antibiotics can, at times, make it more difficult to diagnose AFB
2) politics are also a threat. When everyone was part of the same beekeeping organisation, whether they wanted to be or not, there was little incentive for beekeepers to use the eradication programme for political gain. However, now that the beekeeping industry is splintered into a number of organisations competing for beekeeper members, there is a larger risk that the programme will be damaged by beekeepers seeking political advantage
3) if the eradication programme is not well managed and objectives of the programme are not met, beekeepers will lose their enthusiasm for carrying it out
4) if the participants in the eradication programme forget that reducing the spread of AFB is at least as important as trying to find infected colonies, eradication will not be achieved.

The final eradication may be difficult. It will certainly need a new approach. Once AFB has been isolated to some small areas, strategies like extensive inspections and investigations into hive movements can be used to track down the last infected colonies.

In the end, eradication can only be achieved by beekeepers, both commercial and hobbyist. Most AFB is found and destroyed by beekeepers and most AFB is spread by beekeepers. No outside agency can do it for

beekeepers; it can only assist them. For this reason, AFB eradication is about changing beekeepers' beekeeping behaviour.

[Editor's note: This is the eleventh article of a series that has been written for the Management Agency for the American Foulbrood National Pest Management Plan. These articles were first published beginning in 2003, and have been reviewed and updated where necessary. The original title was 'Eradicating American foulbrood from New Zealand'.

We will run the last of the twelve articles in an upcoming issue. The articles cover a range of aspects of American foulbrood control, including how to inspect for and identify diseased colonies, the management of colonies to prevent American foulbrood and a beekeeper's legal obligation with regard to American foulbrood.]

AMERICAN FOULBROOD NATIONAL PEST MANAGEMENT PLAN

ADR, COI and AFB statistics

By Rex Baynes, AFB NPMP Manager

Annual Disease Return (ADRs)

Compliance levels

Year	Registered beekeepers	% ADRs received
2000	4,864	85.0%
2001	4,550	70.0%
2002	3,973	75.0%
2003	3,649	70.0%
2004	3,211	79.0%
2005	2,911	82.0%
2006	2,694	84.0%
2007	2,602	83.0%
2008	2,589	91.0%
2009	2,663	96.7%
2010	2,957	93.3%
2011	3,265	92.4%
2012	3,802	92.3%
2013 (Jan)	4,127	92.0%

Comment: Despite an increase of some 1,500 new beekeepers since 2008, the Management Agency has managed to maintain compliance levels above 90%.

Increased compliance equates to increased reporting

It is important to recognise that with increases in Annual Disease Return and Certificate of Inspection compliance, there is a counterreaction in terms of increased AFB reporting, notwithstanding also that beekeeper and hives increase.

Certificate of Inspection (COI)

Compliance levels

Year (as at June)	Beekeepers	Compliance rate
2004	845	13%
2005	741	14%
2006	577	18%
2007	534	22%
2008	537	30%
2009	1090	29%
2010	1298	64%
2011	1286	77%
2012	1552	70%
2013 (As at Feb)	1494	55%

Reported incidents of AFB

Year (June to May)	Reported AFB cases	Number of apiaries	Percentage
2003–2004	870	422	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	1117	557	0.32%
2009–2010	515	348	0.16%
2010–2011(Jun to Mar)	722	321	0.19%
2011 (Jun)	1093	579	0.28%
2012 (May)	762	499	0.18%
2013 (Feb)	961(*)	505	0.21%

Notes: Percentage figures taken per hive.

(*) 140 of this total relates to one beekeeper.

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AFB Recognition Courses planned for 2013

By Rex Baynes, AFB NPMP Manager

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Contact Kevin Wallace: President@whangareibeeclub.co.nz
Ph (09) 423 8642
Cut-off date: 15 April

Auckland: 25 May
Contact Carol Downer: thefairy@xtra.co.nz
Ph (09) 376 6376
Cut-off date: 1 May

Franklin Bee Club: 11 May
[see ad page 40].

Katikati: 27 April
Contact Gerrit Hyink: Hyink@slingshot.co.nz
Ph 07 549 1223
or Shirley Martelli: ace@katikatiresource.co.nz
Ph 07 549 0399
Cut-off date: 10 April

Rotorua: 28 April
Contact Kim Poynter: birchwoodfarm@xtra.co.nz
Ph (021) 926 937
Cut-off date: 12 April

Bay of Plenty: 24 August
Contact Ross Carroll: robo@kol.co.nz
Ph (07) 552 4585
Cut-off date: 8 August 2013

Wanganui: 18 May
Contact Mary-Ann Lindsay: lindsays.apiaries@clear.net.nz
Ph (04) 478 3367
Cut-off date: 3 May

Manawatu Bee Club: 19 October
Contact Andrew Beach: andrewbeach@hotmail.com
Ph (04) 904 1634 or
Frances Beech: frances@compassnet.co.nz
Ph (06) 367 2617
Cut-off date: 4 October

Levin Otaki Buzz Group: 15 June
Contact Andrew Beach: andrewbeach@hotmail.com
Ph (04) 904 1634
or Frances Beech: frances@compassnet.co.nz
Ph (06) 367 2617
Cut-off date: 31 May

Wellington Bee Club: 8 June
Contact John Burnet: johnburnet@xtra.co.nz
Ph (04) 232 7863
Cut-off date: 31 May

Blenheim: 7 September
Contact Will Trollope: willflictrollope@xtra.co.nz
Ph (03) 570 5633
Cut-off date: 23 August

Christchurch Hobby Club: 11 May
Contact Lindsay Moir: brightonmoir@xtra.co.nz Ph (03) 388 3313
or Jeff Chandler: jchandler38@gmail.com
Ph (03) 741 1994
Cut-off date: 27 April

Timaru: Agribusiness Training, 10 November
Contact Phil Sutton: phil@pointer.co.nz
Ph (03) 686 1513
Cut-off date: 25 October

Oamaru: Management Agency, 19 October
Contact: TBA

Cromwell: Central Otago Beekeeping Club 26 October
Contact: TBA

Important

The course information highlighted above is what is planned to date at time of going to print. Certain arrangements still needed to be confirmed on some courses.

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 email me at rbaynes@ihug.co.nz with your location details.

If you are planning on attending an AFB Recognition Course, it is strongly recommended that you obtain a copy of the booklet 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:

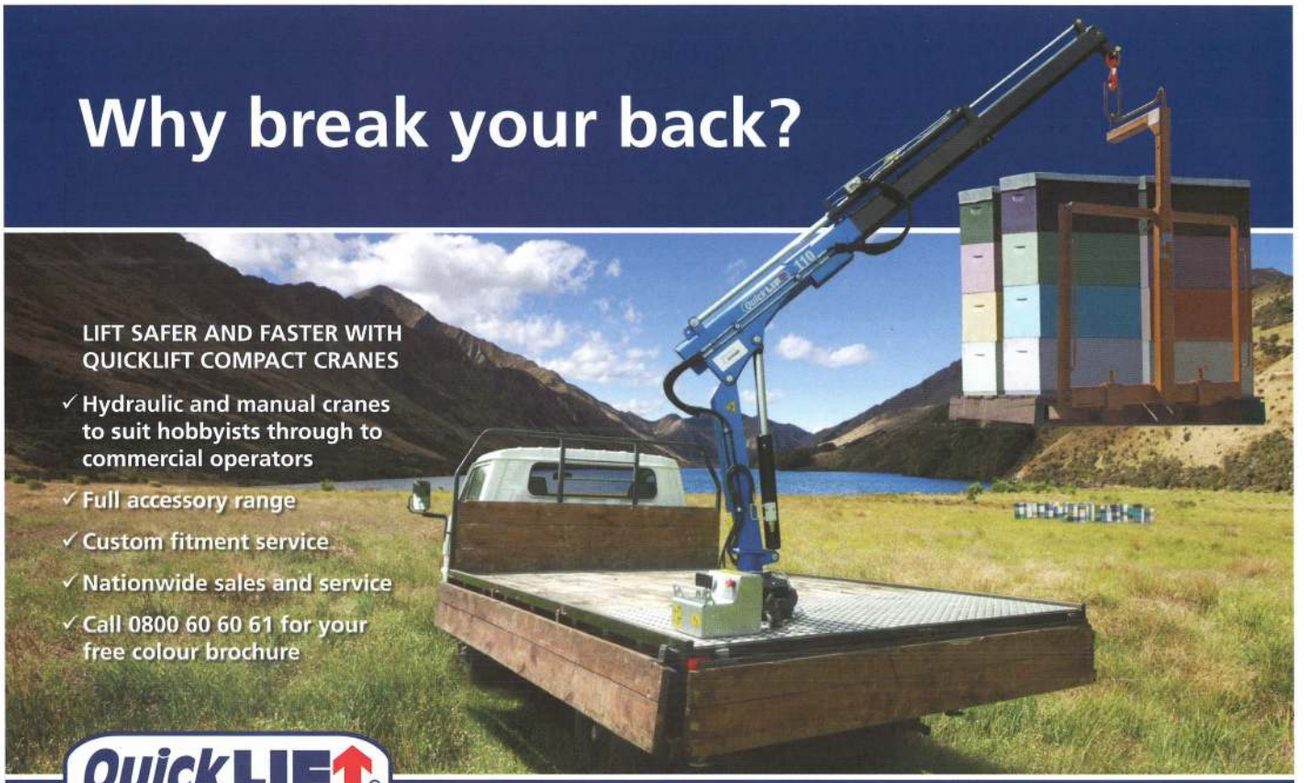
- Your local beekeeping supplier
- National Beekeepers' Association (Inc.)
  PO Box 10792, Wellington
  Phone: (04) 471 6254
  Email: secretary@nba.org.nz
  Cost: $37.50 (includes $1.50 postage)

Important information for all beekeepers!

Last month we published an article by Marco Gonzalez entitled 'Differential field diagnosis of exotics'. This article describes the "main exotic bee pests and diseases that we need to be able to recognise in the field in New Zealand", and provides information about what to do if you think you've found an exotic disease or pest in your hives.

We encourage all beekeepers to read and familiarise yourselves with the material in this article. It can be found on the NBA website http://nba.org.nz/about-bees/pests-and-diseases/pest-and-disease-controls

Why break your back?



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Registered beekeeper statistics

By Rex Baynes, AFB NPMP Manager

Year	Registered beekeepers	Number of apiaries	Number of beehives
2000	4,864	21,633	299,712
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 (Jun)	2,663	21,593	365,709
2010 (Jun)	2,957	22,440	376,672
2011 (Jun)	3,265	23,356	391,540
2012 (Jun)	3,802	25,309	425,498
2013 (Feb)	4,127	25,126	420,916

At a glance

Since 2006 beekeeper registrations have increased by 53.2%.
Since 2006 apiary numbers have increased by 32.6%.
Since 2006 beehive numbers have increased by 40%.
Since 2006 registered beekeepers have increased by 1,433.

As a result of recent amendments to the Biosecurity Act, the American Foulbrood Pest Management Strategy is now referred to as American Foulbrood Pest Management Plan.

AFB recognition competency courses and tests

Registered trainers

Given the continuing upward trend in beekeeper numbers over the last four years, the Management Agency has continued in its efforts to ensure there are adequate courses available. We now have an excellent training structure in place whereby courses are advertised well in advance.

The Management Agency has 56 registered trainers in place.

Courses conducted and passes

Year	Passes	Events (Courses)
1 Nov–31 Dec 1999	73	11
2000	1004	123
2001	138	26
2002	73	19
2003	87	10
2004	79	9
2005	128	18
2006	93	15
2007	453	73
2008	264	88
2009	357	112
2010	491	59
2011	454	45
2012	490	39

Since the commencement of 2006 we have achieved 2602 passes.

DECA accreditation

60.4% of registered beekeepers are DECA holders. This compares to 47% in 2007.

The goal of the New Zealand AFB programme is to eliminate AFB from New Zealand. **Source**: *Elimination of American Foulbrood Disease without the use of Drugs: A practical manual for beekeepers (revised edition)*, by Mark Goodwin, page 6.

Manuka honey exports investigated

By Sophie Parra d'Andert, New Zealand Trade and Enterprise

The international success of manuka honey and the premium it attracts drives the growth of the entire New Zealand honey sector.

The manuka honey industry may have significant further growth potential based on New Zealand's competitive advantage.

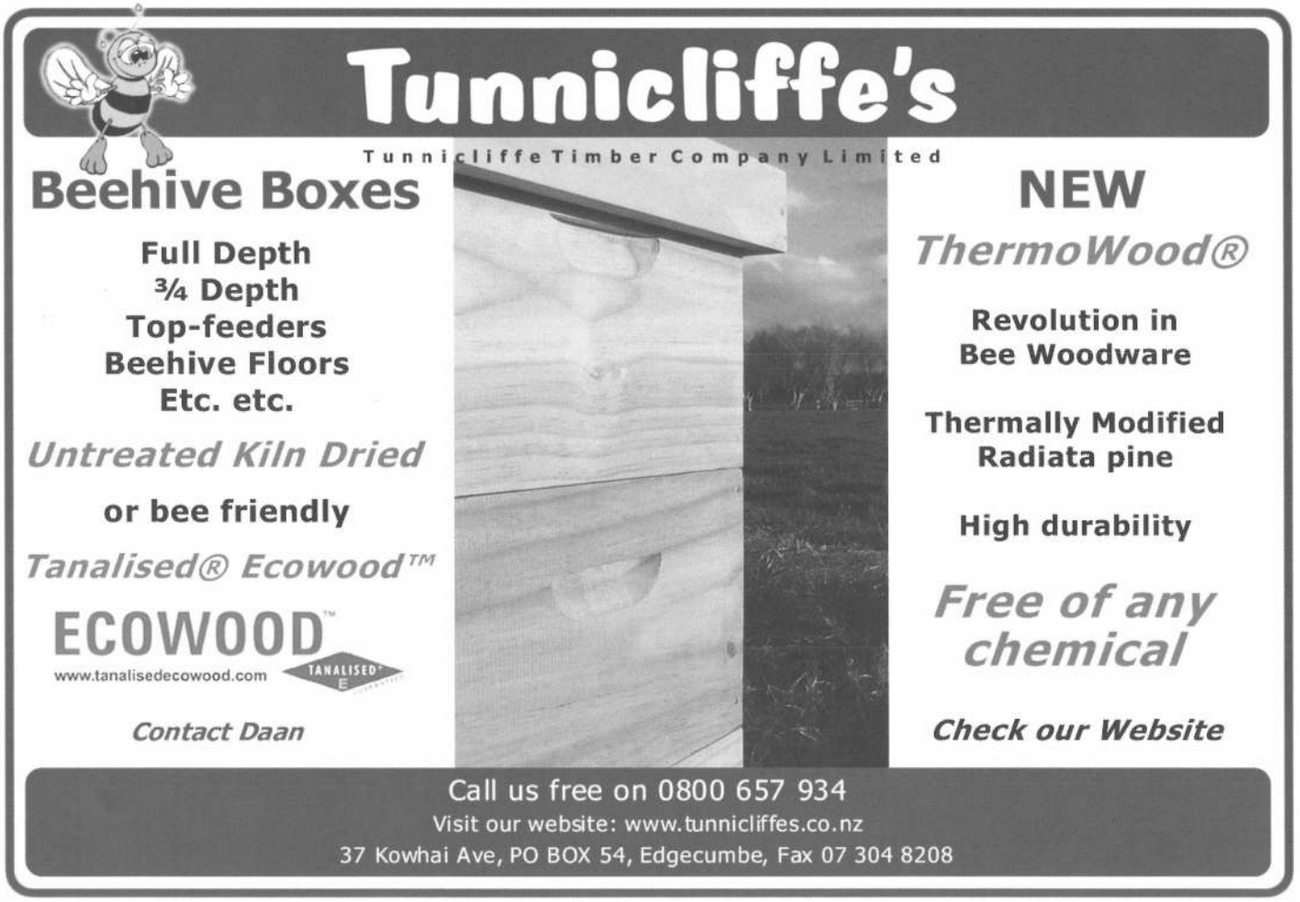
As part of the Business Growth Agenda (BGA), the New Zealand Government is considering how to increase food and beverage exports, including honey.
In support of the BGA, a Government interagency working group is being formed. This group will investigate whether it would be effective and/or appropriate for the Government to help the industry to achieve its export growth potential and how this might be done.

The group will include representatives of the Ministry for Primary Industries (MPI), Ministry of Business, Innovation and Employment (MBIE), Ministry of Foreign Affairs and Trade (MFAT) and New Zealand Trade and Enterprise (NZTE).

The working group will initially scope the current landscape through a review of existing information and through engaging with industry. This initial work will help to clearly identify any barriers to sector growth and explore ways to overcome them.

> "Manuka honey producers and other key stakeholders will be consulted..."

Manuka honey producers and other key stakeholders will be consulted during a three-month scoping phase, which will begin in February 2013.



Report of February meeting

By Dr Jim Edwards ONZM, Chairman

The Bee Products Standards Council met in Wellington on Wednesday, 27 February 2013.

C4 sugars

Dr Karyne Rogers provided an update of the C4 project and talked about a honey research consortium about to apply for Government support. Karyne's project is coming to an end and there was a shortage of funds available to complete the current project. This was attributable to the time and costs of extension work that Karyne has done to ensure that the industry was being well informed.

As a result of Karyne's work, the AOAC has received a recommendation for change to the test methodology, which it has yet to formally adopt.

PA project

Jane Lancaster and Malcolm Garnham reported progress with the pyrrolizidine alkaloids (PA) project(s). The current MSI project (the Ministry of Science and Innovation, now known as the Ministry of Business, Innovation and Employment) will conclude in July while the Sustainable Farming Fund (SFF) project will continue.

Malcolm presented a report on the mapping component of the project. The next step is to hold a workshop in Christchurch for industry members. There is an opportunity for self-reporting using mobile phones with camera and GPS capability.

Tutin

Jim Sim (Ministry of Primary Industries) reported progress with current reporting. Option 3 requires that the verifier needs to be convinced that the ground survey has been done properly.

A letter is going out to all Risk Management Programme (RMP) operators. General information to beekeepers is going out in the April edition of *The New Zealand BeeKeeper*. The NBA sent a tutin warning to all members in February. There was discussion with concern about whether "at-risk" industry members are being effectively informed. The Council noted that the risk of toxicity will never be eliminated completely and that producers are responsible for food safety.

Verification Services

Chris Kebbell, Director of MPI Verification Services, told the Council about the work of Verification Services in the new MPI environment. They are considering how to support the MPI initiatives 'Export Double' and 'Innovation'. Verification Services' revenue is based on cost recovery and not for profit.

Interdepartmental Working Group

The Council received a briefing on the current scoping project that will run for three months from 1 February, involving a number of Government departments that are reviewing manuka honey and its export potential. The working group has a focus on the basic standard for manuka honey. What science, if any, should be funded; who should develop standards? There was discussion about standard versus branding.

The Council advised that the Codex standard for honey should be the basis, followed by the monofloral definition and then after that, specific qualities and claims.

Limited exemption request

The Council discussed the problems associated with disruption to the transportation of product from premises to premises. Being held between different trucks poses a problem. The Council will work with MPI to find solutions.

[Editor's note: see related articles on pages 21 (C4 sugars), 25 (tutin) and 16 (manuka honey exports).]

Are you going to Apimondia?

Apimondia Ukraine 2013

Discover the European Honeyland

Apimondia's 2013 International Apicultural Congress, a biennial event, takes place this year in Kyiv (Kiev), Ukraine, 29 September to 4 October.

According to the organisers, "This Congress is going to be the biggest global beekeeping event in the history of the Apimondia International Federation of Beekeepers' Associations". The Congress sees over 10,000 attendees and over 1,000 scientific papers presented.

Beekeeping is big business in the Ukraine: history records one thousand years of bee products trading.

If you are planning to go to the Congress, please contact Maureen Maxwell on maureen@wildforage.co.nz. It would be wonderful to have a New Zealand contingent there. The NBA is interested in your feedback from the Congress.

For Apimondia Congress registration information, go to http://nba.org.nz/news-events/events/international-apicultural-congress. If you register before June 1 you will save up to 30%.

The decade 1933–1943

By Apiarius Antiquary

In writing of the events of the decade 1933–1943, I looked at the minutes of the 1933 AGM held in Wellington.

The Minister of Agriculture opened the conference. He commented on the growth of the industry and expressed hope that a solution would be found for the various problems confronting beekeepers.

A motion of sympathy was passed for the late Mr R Gibb (former apiary inspector and NBA President) with members standing in silence. The annual report and balance sheet were presented and the seriousness of the financial position was discussed. Mr W Nelson (President) noted the Secretary's salary would not be assured if things became worse. Mr A Ecroyd (Secretary) said that in view of the work done by scores of other beekeepers for no remuneration, he would have no hesitation in giving his services for nothing if it were necessary. (His statement drew applause.)

The AGM had some rather interesting remits:

- to prepare a plan for making honey available for unemployed people to *"avert the threatened collapse of the honey producing industry and at the same time make available to our most needy fellow citizens the finest food for human beings"*
- *"That Conference be asked to discuss the under-cutting going on in the selling price of honey by people holding Government positions… This remit was moved by Mr Watson who said that men who were known to be Government employees were selling honey at very low prices. He considered that persons drawing public money should not be allowed to do that sort of thing."*
- *"That this association expresses dissatisfaction with the present monetary system, and we recommend that our executive co-operate with other organisations on behalf of readjustment."*

A report was given on the work of the Cawthron Institute about the work that they were doing to find *"a suitable treatment for strong flavours and objectionable colours in honey"*. Definite results had been obtained but would not warrant the cost of setting up a treatment plant to treat honey.

Honey competitions were part of annual conferences with Mr W Nelson, (Otorohanga) Mr B F Cloake (St Andrews) and Miss Barrett (Feilding) gaining awards.

The Honey Producers' Association had previously placed itself in voluntary liquidation and beekeepers were still supportive of a co-operative marketing organisation to stabilise prices and return a fair reward for the beekeepers' effort. A new company—New Zealand Honey Ltd, aka NZ Honey Ltd—was formed and there were hopes that the new company would overcome some of the issues of the past.

Whilst NZ Honey Ltd exported much of the honey crop the local market was still in disarray, with price cutting the main issue. There were poor honey crops for the 1935 and 1936 seasons and stocks of honey were becoming depleted. Following another bad honey season in 1937, NZ Honey Ltd found themselves short of honey to maintain their commitments, so it was decided to import 100 tons of Australian honey to meet the shortfall. Mr P A Hillary, who was involved with both NZ Honey Ltd and the Honey Control Board, went to Sydney to arrange the purchase; however, it would appear that not all New Zealand beekeepers supported the purchase of Aussie honey.

NZ Honey Ltd did bring some stability to the market; although it could be argued that the supply/demand situation with low crops could have also led to the honey payout increasing 4½d (four and a half pence) per pound to 6d (sixpence) per pound. There was still some price cutting on the local market. In 1938 the government passed the Primary Producers Marketing Act, which provided for an organisation (the Internal Marketing Division, or IMD) to take over from NZ Honey Ltd as well as the Honey Control Board. The IMD embarked on an advertising campaign to promote the use of honey. As some beekeepers would receive benefit from market promotion but sold their crop independently, the board of IMD felt those beekeepers should contribute to the 'collective' promotion of honey.

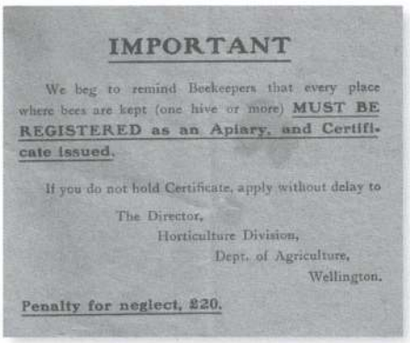
Seals levy

The New Zealand Beekeeper resumed publication in January 1939 and there appeared to be support amongst beekeepers for a magazine dedicated to beekeeping and industry matters. The most significant event was the 'Levy' on honey produced in New Zealand.

Honey seals were important during the 1930s. The stamp that was affixed to the honeypot was the receipt proving that the levy was paid on that pound of honey, just like postage stamps.

"The marketing organisation set up by the Internal Marketing Division is the result of producers' urgent requests for the establishment of a marketing organisation that would give the producer a reliable return for his honey. The action taken to carry out the producers' requests has been to consolidate the selling of the whole of the Dominion's honey on both the local and overseas markets, to make a considerable first advance on honey when graded and to make changes in the handling of the honey, giving further benefits to the producer.

The changes made in the previous system of marketing have been the pooling of the whole of the honey sent in to the division, whether sold locally or overseas, and the institution of a levy of ½d per lb. on all honey sold, except honey that is sold at the apiary that is not advertised for sale. The institution



IMPORTANT

We beg to remind Beekeepers that every place where bees are kept (one hive or more) **MUST BE REGISTERED as an Apiary, and Certificate issued.**

If you do not hold Certificate, apply without delay to

The Director,
Horticulture Division,
Dept. of Agriculture,
Wellington.

Penalty for neglect, £20.

As is the case today, hive registration was the law. This notice was published in 1930–1931.

of a levy of ½d per lb. on all honey sold, puts the whole of the selling of honey on a co-operative basis, while giving free scope to the producer to sell his own honey, if he so desires. The equity of the stamp levy is based on the principle that in co-operation all share alike in the benefits and share alike in the costs.

The selling organisation undertakes to remove the surplus honey from the local market; this providing a sound market unburdened with surplus, and also maintains a payable market level. The money provided by the stamp levy is, therefore, a fair contribution towards part of the cost of the organisation, the cost of the advertising of honey in the United Kingdom to provide a market for the disposal of surplus over and above the Dominion's requirements, and so expanding the market for New Zealand honey in the Dominion and elsewhere to absorb the increasing production."

National Beekeepers' Association of N.Z.
(Branches throughout the Dominion)

for Better Bee-keeping
and Better Marketing

Are you a Member ? ***If not, why not ?***

Arrangements are being made for the adoption of an Official Organ, which will contain matter of interest to the beginner in bee-keeping, as well as the large honey-producer.

The Association has a Public Liability Policy, whereby its members may cover themselves at a fractional cost against claims for damage to stock by their bees; and there are many other benefits to be derived from membership.

Join the nearest Branch and attend Field Days and Meetings—it will be well worth your while.

JOIN UP !

Full particulars from the General Secretary :
G. S. KIRKER,
PUNGAREHU,
TARANAKI.

Issued by the General Executive of the National Beekeepers' Associations of N.Z., by courtesy of The Alliance Bee Supplies Co. Ltd.

This notice appeared around 1938–1939, and strongly encouraged beekeepers to join the NBA.

The war years

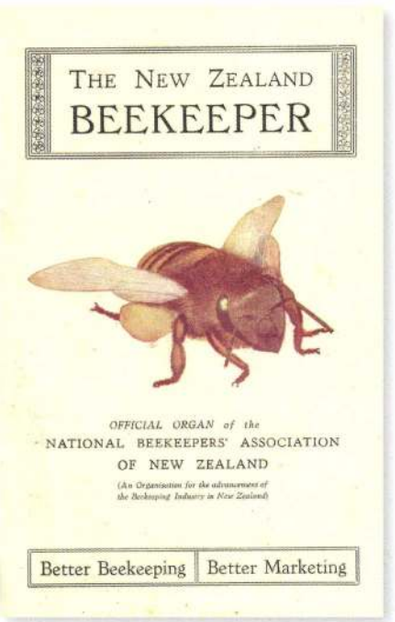
The war years (1939–1945) must have been a difficult time for beekeeping. It is noted in the magazines that beekeepers were serving with the armed forces; also reports of those missing in action or taken prisoner. Shortages of supplies such as frame wire and honey tins, as well as the petrol for vehicles, created difficulties. In December 1941, the beekeeping industry came to a standstill because of a cancellation of fuel supplies to beekeepers. The President (Mr E Field) and Secretary (Mr G Kirker) responded to the many letters and telegrams of complaints from beekeepers by pressing the government to reinstate fuel supplies to beekeepers as essential suppliers. Beekeepers at the time were required to 'provide' 70% of their crop to the war effort under a control programme. The remaining 30% could be sold by the beekeeper but prices were 'set' to avoid profiteering. It is interesting to note how a fair rationing of honey was perceived by the government:

"Producers this year may only sell 5lbs at one time to a consumer; this has been necessary as numbers of producers last year sold 60lb, tins to consumers and thus deprived many people from obtaining their share". "The Department rationed their supplies on the population basis at 1lb to 1½lb per head per year."

One would have to wonder at how thinly honey would have to be spread on toast for less than a kilogram to last a year—but then I guess bread and butter was also rationed so one ran out of bread, butter and honey very early in the year!

Sources

National Beekeepers' Association minute book 1933–1935
The New Zealand Beekeeper 1939–1943
The N.Z. Honeybee 1937–1939



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OFFICIAL ORGAN of the
NATIONAL BEEKEEPERS' ASSOCIATION
OF NEW ZEALAND
(An Organisation for the advancement of the Beekeeping Industry in New Zealand)

Better Beekeeping | Better Marketing

The front cover of The New Zealand Beekeeper journal from 1939. This version of the journal continued through the 1940s. All photos from Alliance Bee Supplies Ltd.

Recipes for success

We are calling for your best recipes using honey.

We want to use the recipes to help raise money for bee research. We wish to collate the best of these recipes and put them onto a special website that we will promote as part of Bee Aware Month in August. To access and download these recipes, people will have to make a small donation that will go to specially chosen bee research projects.

So ask your friends, family and businesses to submit a recipe or two for an entrée, main, dessert and baking, along with a creative photo (JPEG) of the finished product.

Please send your recipes and photos to secretary@nba.org.nz by the end of May.

If you prefer not to cut this page from the journal, photocopy the form or download it from http://nba.org.nz/uploads/1-REVISED-2013-Membership-Subscription-Form.pdf

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Commercial Level 2	401 - 800	7	1	$920	
Commercial Level 3	801-1200	10	2	$1150	
Commercial Level 4	1201-1500	13	2	$1265	
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B) NZ Beekeeping Clubs 11+ members. Base rate plus $5 per club member – incl. 2 journals. ***Plse request Club subs form***				B) $279 (Base rate)	

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Rest of World	$176	

Membership or Journal subscription	$
Contribution	$
International T/T Fee (NZD25 for recovery of bank fees) **NOTE:** ***Please add for overseas transactions only***	$
TOTAL PAYABLE TO THE NBA	**$**

Sweet win for the honey industry

By Dr Karyne Rogers, Senior Scientist, GNS Science National Isotope Centre

Changes to AOAC C4 sugar testing are coming.

Dr Karyne Rogers has been working for several years to understand and resolve a flawed C4 sugar method where genuine honey was not able to pass the internationally applied test for 'apparent' C4 sugar adulteration.

The AOAC 998.12 C4 sugar method was developed by White and Winters (1989) to detect added cane or corn syrups to honey or excess sugar syrups fed to bees. The AOAC 998.12 method compares a honey with its extracted protein, using carbon isotope discrimination to indicate if it is derived from totally or partially from C3 plants or C4 sugars, and determines a level of 'apparent' C4 sugar addition. The present AOAC method sets criteria so that all honey must contain C4 sugars lower than 7% in order to pass.

Karyne's research programme, funded in the past nine months by AGMARDT, the Ministry for Primary Industries (MPI) and industry groups, was in response to six international shipments with false positive C4 sugar fails worth around $6 million in 2011/12, which threatened to close market access into USA and China. Although the honeys were genuine, they had not been tested for C4 sugars in New Zealand before shipment, so their false positive results were not picked up before reaching overseas testing agencies, which assumed the fails were from sugar adulteration. Unfortunately the test can also be affected by changes to the protein isotope values that are completely unrelated to any C4 sugar addition, resulting in a false positive result.

Prior to 2010, New Zealand had only two international C4 sugar fails detected—one shipment to Canada in 2002, and the other to Japan in 2004—and both had false positive fails. These shipments were eventually accepted based on New Zealand's competitive advantage around, and the purity of, our agricultural systems and after confirmation by GNS Science that they were genuine manuka honey that had a tendency to fail. Typically, New Zealand honey products were never routinely tested on arrival in the destination country. However, in 2010, a significant increase in honey fraud was originating from Asia, and increasingly being routed through other countries, so overseas border agencies introduced mandatory testing for all imported honey from any country.

> "The softening of the AOAC 998.12 method criteria may allow acceptance of false positive manuka samples as genuine..."

In 2012, Karyne led an international ring test on C4 sugar testing, where genuine, adulterated and false positive honeys were investigated in 10 key international government testing labs (including the United States Food and Drug Administration, Canada, China, France, Italy and Germany). Outcomes of the ring test study, and Karyne's AGMARDT-funded research, contributed to recommendations that were submitted in January 2013 to the AOAC Official Methods Board in the USA to modify the C4 sugar method. These recommendations have now been accepted. The method modification will continue to recognise that ***the C4 sugar limit should be below 7%*** (to avoid adulteration levels being raised for honey not prone to failure). The key change to this method is "***but in some atypical honey, limits can be slightly higher, as long as the carbon isotope value of the honey is not more positive than -24%.***"

The softening of the AOAC 998.12 method criteria may allow acceptance of false positive manuka samples as genuine by importing countries, as they all have carbon isotopes within the -24% criteria. Karyne's research found that higher non-peroxide activity of manuka, ling and tawari honeys were most prone to false positive tests,

Dr Karyne Rogers (second from right) visited China in December 2012 as part of her ongoing collaborative research with Chinese government honey scientists on C4 sugar testing.

while the multifloral, clover and most other monofloral honeys fell within the apparent C4 sugar limits of 7%.

Karyne estimates she rejected more than 30% of all the manuka honey routinely tested at GNS Science in the past 12 months due to false positive results. The upcoming AOAC changes will allow this false positive honey to become acceptable for international markets, provided importing countries accept that manuka is an "atypical" honey.

It is important to note that these new changes to the AOAC method will only be applied when the recommendations have been officially published and circulated to testing labs later this year. When this occurs, MPI will advise RMP operators. Until then, beekeepers can either choose to hold onto their honey or blend honey to bring down apparent C4 sugar levels, as all C4 sugar testing continues to be tested on the 7% criteria limit only.

Contact Dr Karyne Rogers, GNS Science, tel 04 570 4636 or k.rogers@gns.cri.nz

Reference

White, J. W., & Winters, K. (1989). Honey protein as internal standard for stable carbon isotope ratio detection of adulteration of honey. Journal of Official Agricultural Chemists, 72, 907–911.

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SEALB247BMg

AQ Food Safety Courses return

Information provided by AsureQuality Limited

AsureQuality has been running a number of successful 'Food Safety & RMP Awareness' courses over the past few years and plans to run similar courses this winter to meet demand.

These courses have been developed to provide critical 'must-know' information to Risk Management Programmes (RMP) operators and staff. The courses help to remove a number of major headaches by guiding RMP operators through the minefield of regulations.

The previous courses have been very well received, with a number of beekeepers doing the course a second time as a refresher and to keep up-to-date with the latest requirements.

The courses have been modified and improved over the years to best suit beekeepers' needs and are very 'beekeeper-friendly'. Beekeepers and staff will find the courses very informative in a welcoming, non-threatening, learning environment with minimum reading and writing required.

These courses will meet the training requirements in the RMP Code of Practice and enable beekeeping operations to be far more effective in meeting their legal obligations under their RMP.

An AsureQuality 'Certificate of Food Safety and RMP Awareness in the Honey Industry' will be issued to attendees at the completion of this one-day course.

Who can attend this course?

The course is open to anyone who has an interest in producing and selling bee products. However, beekeepers who have an existing RMP or are thinking of setting one up in the future will find the course most useful. The course will also be very beneficial to beekeepers' staff because they will receive the necessary training to be competent in handling bee products.

What will be the cost?

The cost is $305.00 per person + GST. This includes comprehensive resource material which covers all RMP operator legislation, an AsureQuality attendance certificate, and full catering (morning and afternoon tea and lunch).

What will be covered?

The course provides the theory behind food safety and how this ties in with the RMP regime. It then relates this to RMP legislation and how it affects day-to-day practice, explaining the key requirements for a number of important issues such as tutin and eligibility declarations (E-certs). The pre-RMP and post-RMP requirements which can affect the RMP operator are also covered.

Who will run the courses?

Tony Roper, Marco Gonzalez and Byron Taylor, all of whom are Apicultural Officers and RMP verifiers from AsureQuality Limited, will deliver the courses. The training services team will arrange registrations and course co-ordination.

Where and when will the courses be held?

- Christchurch: Tuesday, 16 July 2013
- Gore: Wednesday, 17 July 2013
- Nelson: Friday, 19 July 2013
- Tauranga: Tuesday, 23 July 2013
- Hamilton: Wednesday, 31 July 2013

What to do if you are interested?

Please contact AsureQuality Training Services (email training@asurequality.com or freephone 0508 00 11 22) as soon as possible to confirm your attendance, as spaces are limited. If you require further information about the course content, please contact Tony Roper (email tony.roper@asurequality.com or freephone 0508 00 11 22).

Important membership information

Members of the NBA are asked to renew their annual subscriptions by 1 January each year. Members who do not renew by 31 March will be deemed to have a lapse in their membership.

Members who renew after 1 January are entitled to receive back copies of the journal, if they are available.

Please keep an eye out for membership renewal forms that will be sent out each year from October onwards, printed in the journal and emailed to members. Renewal forms are also available on the NBA website, and on page 20 of this journal.

If you prefer not to cut the form from the journal, photocopy the form or download it from http://nba.org.nz/uploads/1-REVISED-2013-Membership-Subscription-Form.pdf

- NBA Executive Council

Get snapping

Autumn is now upon us, so it's time to start taking some photos to enter in the fifth annual Ecroyd/NBA photography competition, to be held as part of the NBA Conference, Ashburton, 16–20 June 2013.

Entries will be accepted in the following categories:

Class A. Close-up print. Subject must relate to beekeeping.
Class B. Scenic print. Apiary subject such as flowers, hives etc.
Class C. Portrait print. Person, beekeeping procedure, honey, hive by-product processing in appropriate setting, commercial frontage or beekeeping base.
Class D. Essay prints. A set of from 4 to 7 pictures depicting a beekeeping story.

The photo contest is open to all registered NBA members.

As an added inducement, winning photographs will be published in *The New Zealand BeeKeeper*, perhaps even on the front cover if taken in portrait format.

For more information, contact Mary-Ann Lindsay, lindsays.apiaries@clear.net.nz

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Tutin update

By Jim Sim, Principal Advisor (Animal Products), Animal and Animal Products Directorate, Standards Branch

As the long dry summer continues, drought conditions in some parts of the country appear more likely to lead to high levels of tutin in honey than in the past few years.

All beekeepers selling honey are reminded that they need to ensure they are fully compliant with the Food (Tutin in Honey) Standard 2010. www.foodsafety.govt.nz/industry/sectors/honey-bee/tutin/index.htm

If in any doubt as to the safety of honey, a beekeeper's safest option is always to have it tested.

Tutin standard(s) review

The Ministry for Primary Industries (MPI) has been working closely with Food Standards Australia New Zealand (FSANZ) in their review of the tutin limits in the Food Standards Code (the Code). Limits in the Code have been temporarily extended until 31 March 2015. Further information on this extension is available at www.foodstandards.gov.au.

The tutin limits should be able to be finalised once current toxicological investigations funded by MPI are completed. If the toxicological studies show a need to make changes to the limit or substances tested, FSANZ will carry out full public consultation on proposed changes. This is likely to occur in 2014.

Because of the ongoing uncertainty over the permanent tutin limit, MPI's review of the Food (Tutin in Honey) Standard 2010 is progressing more slowly than previously indicated. This is because the effectiveness of some of the options currently available may be compromised if either the limit or substances tested for have to change. As a result, MPI's review will continue until 2014 and MPI would consult on any changes to the standard concurrently with the FSANZ consultation on the permanent tutin limits.

Tutin results submission

Beekeepers are reminded that they are required to submit all tutin testing results along with information on harvest location where known, batch size, etc. to MPI for samples tested since 1 January 2011. This is required by the Food (Tutin in Honey) Standard 2010.

To make this more straightforward, MPI—in consultation with industry representatives—has developed a new tutin results recording form in excel spreadsheet format. This form is linked to from the tutin page on MPI's website at www.foodsafety.govt.nz/industry/sectors/honey-bee/tutin/index.htm. The page also has instructions on how to complete and submit the recording form.

This form should be used to submit sample results to MPI for tutin tests undertaken from now on, as well as for any test results from past seasons that have not yet been submitted. Results, along with any queries regarding the form, should be emailed to: Tutin.monitoring@mpi.govt.nz.

Submission of tutin testing results is important to both the FSANZ and MPI reviews for three reasons:

1. it may allow areas where tutin is definitely not a problem to be identified and excluded from regulatory requirements under the Food (Tutin in Honey) Standard.
2. if the limits, test methods or management measures need to change, the impact of that on the industry needs to be assessed. In order to carry out a robust assessment, it's important to have information on batch sizes and test results, irrespective of harvest area.
3. the information is important to assist in determining what options should be available in the future to ensure honey meets the tutin limits.

Provided all beekeepers get all their results (both positive and negative results) submitted by June 2013, including this year's results to date, MPI should have sufficient data to make a determination on reducing the areas subject to the provisions of the Standard.

Use of option three—holding records that demonstrate absence of tutu

Some beekeepers relying on this option do not have adequate documentation to show they have thoroughly surveyed the areas around their apiary sites. The onus is on the beekeeper to be able to demonstrate they have done a sufficiently thorough survey to be confident there is no significant tutu within the predictable foraging area of their bees.

Realistically this requires the use of a topographical map or maps, drawing a line around areas the bees won't go; for example, because of a mountain range, the sea or some other geographical feature that will definitely stop them. The rest of the area, out to at least five kilometres from the apiary site, then needs to be included in the survey area. All likely areas of tutu habitat within that predictable foraging area need to be identified, physically inspected and the number of tutu bushes recorded. Identifying suitable habitat (bush margins, watercourses where there is bush margin, road cuttings, slips, and areas of regenerating native bush) may be possible from Google Earth or topographical maps to focus the search area.

Areas checked should be marked on a topographical map so it's clear what areas were checked and what was found. Where private property is included within the area to be surveyed, the beekeeper may obtain a signed and dated statement from the landowner to the effect that there is no tutu on their property (or if there is tutu there, a statement as to how much).

If it is not possible to do a sufficiently thorough survey due to land access issues or topography, beekeepers cannot use this option for demonstrating compliance.

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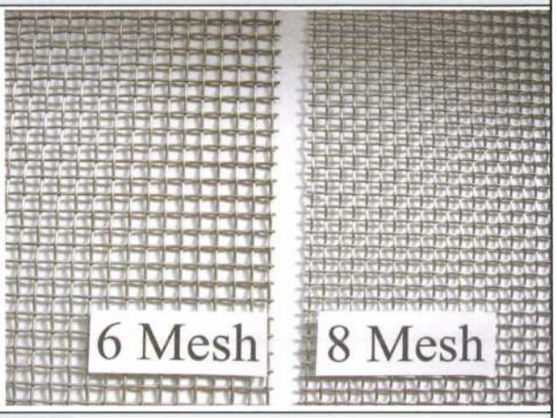

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Who do you call?

Recently the Secretariat has been receiving a lot of calls regarding hive registration and pest management issues, most of which we are unable to answer as those issues are dealt with by other entities. So, to make it easier for you to know who to call for what we thought we would give you an easy reference guide.

AFB RECOGNITION COURSES

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www.afb.org.nz
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Email: rbaynes@ihug.co.nz
or info@afb.org.nz

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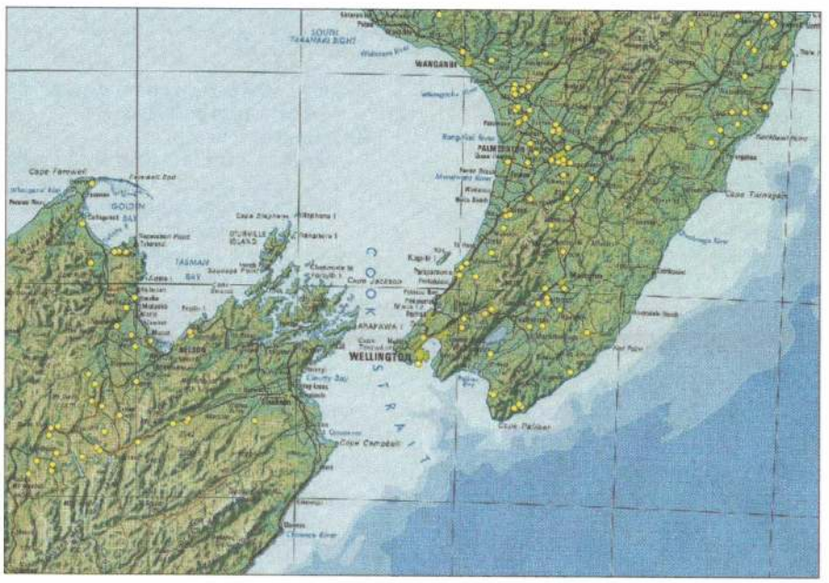
AFB incidence in the 12 months to 13 March 2013



Celebrating 100 Years SINCE 1913 NATIONAL BEEKEEPERS ASSOCIATION

Invitation

National Beekeepers Association of NZ (Inc)
Seminars & Conference 2013

Hotel Ashburton - ASHBURTON

June 16-20, 2013

Sunday June 16

9.30am – 1.30pm: Small and Hobby Beekeepers Practical Session (includes lunch)
2.00pm: Celebrating 100 years of the NBA – ***Once in a Lifetime***

Monday June 17

9.00am: Specialty Group Meetings
9.30am – 4.30pm: Essential Skills Workshop for Younger Beekeepers

NEW

Tuesday June 18

8.00am – 5.00pm: Seminar Presentations
6.00pm: Sponsors' Evening and Presentation

Wednesday June 19

8.00am – 4.30pm: Seminar Presentations
6.00pm: Conference Dinner

Thursday June 20

9.00am: NBA Annual General Meeting

Tuesday - Wednesday

- Trade Displays
- National Honey Show
- Ecroyd / NBA Photo Competition

PLUS: Reminisce and enjoy memorabilia on display each day

Canterbury welcomes ALL interested persons

Linda – Conference Secretary: Phone/fax 03 308 4964 birdsnbees@xtra.co.nz
Stuart – Sponsors: stuart@beehealthy.co.nz
Updates: www.nba.org.nz

The National Beekeepers Association Seminars and Conference presents:

Small & Hobby Beekeepers Practical Session

- Runaway Bees
- From a Plank to a Box
- Top-Bar Hives
- Beeswax on a Smaller Scale

Celebrating 100 Years SINCE 1913 NATIONAL BEEKEEPERS ASSOCIATION

Join us to Celebrate 100 years of the National Beekeepers Association.
Lots of fun and laughter from the 'hive' and days gone by.

Plant a Tree for Bees – Memorabilia to see

Guest Speaker – Te Radar – Comedian and Historian

An Evening Meal to be enjoyed & reminisce the night away

Essential Skills Workshop for Younger Beekeepers

Inaugural Workshop designed to show younger beekeepers essential skills required away from the hive, and create an environment to meet their peers to help develop contacts for the future.

Registration required – Suitable for Beekeepers aged under 30 – Limited Numbers

- Practical First Aid in a remote area – What will I do?
- Small Motor Skills – When it stops, make it go again.
- Welding – joining metal without glue; let's have a go!

and More!

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Queens in a Hurry
Where to with 'Neonics'
Location, Location, Location
Honey around the world
Marketing Overseas
International Verification of Manuka Honey
Threats to your Nectar Sources
Whys and Wherefores of Research
Global Technology of Honey Identification

Specialty Group Meetings

- NZ Honey Bee Pollination Association
- NZ Queen Breeders Association
- NZ Honey Packers & Exporters Assn
- UMF® Honey Association - Open Meeting

Programme Updates at www.nba.org.nz

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Trevor Weatherhead – Australia
Acting Executive Director for the Australian Honey Bee Industry Council (AHBIC),
Experienced Queen Breeder and Industry supporter
Actively involved in Australia's Border Protection, Incursion and Quarantine Issues

Grace Pundyk – Australia
Well known author of 'The Honey Trail' and 'The Honey Spinner'. World traveller in search of the truth about vanishing bees, and the fascinating roles of beekeeping and honey in different cultures.

Sue Kedgley
Advocate for Bees, Food, Health and Environment.
Currently a writer, columnist, media and communications consultant

Together with:

Dr Mark Goodwin – Scientist, Pollination & Apiculture Team, Plant & Food Research
Sophie Parra d'Andert – Project Manager, NZ Trade and Enterprise
Dr C.B. Phillips – Senior Scientist, AgResearch
Rennie Davidson – CEO Food & Solutions, ANZCO Foods Ltd
John Rawcliffe - General Manager, UMF® Honey Association

More to BEE added – updates at www.nba.org.nz

Book Now

Accommodation

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Ashburton Motor Lodge www.ashburtonmotorlodge.co.nz • Phone 0800 427 428

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Regency Motel www.regencyashburton.co.nz • Phone 0800 553 223
Commodore Motor Lodge www.commodoreashburton.co.nz • Phone 0800 108 006
Academy Lodge www.academylodgemotel.co.nz • Phone 0800 107 699
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Please contact the Conference Secretary if you need assistance with accommodation
We look forward to welcoming you to Ashburton

Celebrating 100 Years SINCE 1913 NATIONAL BEEKEEPERS ASSOCIATION

Seminars & Conference

2013 Registration Form

Names 1_____ 2_____

Business Name (or Employer)_____

Postal Address _____

Phone _____ _____

NBA Membership No_____ **Email**_____**Date** _____

Dietary Requests 1. _____ **2.**_____

CONFERENCE REGISTRATION FEES (GST inclusive)	**1**	**2**	**NBA Member**	**Non-Member**	**Total**
Sunday June 16 **Small & Hobby Beekeepers Practical Session** (includes lunch)			$55.00	$70.00	
Sunday June 16 *Celebrating 100 Years of the NBA*			$90.00	$90.00	
Monday June 17 **Essential Skills Workshop** (includes lunch)			$55.00	$70.00	
Monday June 17 **Specialty Group Meetings**			Meals Available by Arrangement		
Tuesday June 18 **Seminar Day 1** (includes lunch)			$80.00	$110.00	
Tuesday June 18 **Sponsors' Evening & Presentations**			Seminar Attendees No Charge		
Wednesday June 19 **Seminar Day 2** (includes lunch)			$80.00	$110.00	
Wednesday June 19 **Conference Dinner**			$75.00	$95.00	
Thursday June 20 **NBA Annual General Meeting – No Charge** **Lunch at Venue – per person**			$20.00	$20.00	
Registrations after May 31, 2013 will incur an extra fee			$30.00	$30.00	
			TOTAL PAYMENT (GST INCLUDED):		

Direct ☐ To **BNZ 02 0733 0057338 02** Reference on payment_____(Member No)

*Note: Special Conference Account - please **don't** use normal NBA account*

Cheque ☐ Make payable to "National Beekeepers Assn Conference" and post as below

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NZ's toxic honey history revealed

By Dr Oksana Borowik, Scientist and commercial beekeeper in Coromandel

In March 1839, Miss Mary Bumby, the sister of a Wesleyan missionary, introduced the first honey bee colonies to New Zealand.

This, and subsequent importations over the next 20 years, established apiculture in New Zealand and offered New Zealanders the first opportunity to taste their own native honey crop. Unfortunately, the honey also produced some unexpected effects.

In his recent publication *A New Zealand History of Toxic Honey*, eminent New Zealand honey bee scientist Dr Mark Goodwin presents a chronological account of the New Zealand toxic honey problem. The story unfolds much like a 'murder mystery' novel where, for almost 90 years from the first reported poisoning, beekeepers, doctors, and scientists struggled to find the cause of toxic honey and to eliminate the problem.

Dr Goodwin lets the stories speak for themselves, using reports from newspaper articles and journals from over 150 years ago to the present day. This gives readers a first-hand account of the poisoning incidents, the investigations, and reveals the human cost and suffering.

It did not take long after the introduction of honey bees to New Zealand when the *Daily Southern Cross* published a letter to the editor dated February 20, 1857, regarding the first report of toxic honey poisoning:

> *Sir,- You would be conferring a great public benefit by saying, whether any deaths by poison from eating honey in small quantities, have been known to occur in England, or in any other part of the world. The reason for making this enquiry is this – that within the last few weeks, we have had several Native cases, five of which were fatal, within a very few hours, all belonging to one little village. (p. 24)*

Though this was the first published account of a poisoning incident, the surviving villagers reported that they had seen similar poisonings before. Sadly, there were many more poisoning incidents to come.

Toxic honey has affected the lives of New Zealand beekeepers and consumers of honey for over 150 years. Since the introduction of honey bees to New Zealand, published accounts show 95 separate poisoning incidents affecting more than 425 people. Dr Goodwin points out that the poisoning statistics on record may only be the tip of the iceberg:

> *This is likely to be a small percentage of the total number of poisonings. Many people who are poisoned probably do not connect their illness with honey, especially if the symptoms are not bad enough to require hospitalisation. Even when people are hospitalised they are probably not correctly diagnosed, especially if there is only a single person poisoned or a group of people are poisoned but report to different hospitals. This occurred in the last poisoning [note: in the year 2008] where two people were incorrectly diagnosed after being poisoned. There could be easily one hundred times the number of people that have been poisoned than that recorded and probably many other deaths early on. (p. 145)*

In the early years, before the 1920s, there were 30 reported deaths due to toxic honey. This account from Morrinsville in 1902 describes the cruel nature of a poisoning incident of eight men who participated in a search party for a local man:

> *Last Friday he was missed and eight stalwart Maori men started to search for him. Having been unable to find him they retired in the evening to his whare, and in their hunger regaled themselves with honey from one of his hives. They were soon taken very ill, and recognised that they had eaten honey gathered by bees from poisonous tree blossoms. Five of them are dead, and the other three have recovered after fearful sufferings. One of them has his tongue badly mangled as the result of convulsions. A constable has been instructed to destroy the remainder of the honey except a sample for analysis. (p. 66)*

Throughout the history of the investigations into the source of toxic honey, many different ideas and methodologies arose. Some experimentation on toxic honey is the stuff of legend. Dr Goodwin gives an account of an interesting method to test toxic honey published in the *Colonist* on February 4, 1895:

> *At one time of the year the wild bees near Lake Taupo collect poisonous honey from a certain native tree and several deaths have occurred through using it. The symptoms of honey poisoning are great thirst, with vomiting, cramps etc... About 15 years ago when I was on a survey in the Waikato some Maoris had robbed a wild bee's hive, and had taken about 2cwt of honey. It had a peculiar look which they considered suspicious. Under such circumstances it is usual to try it first on a dog, but [as] the dogs in this settlement happened to be all valuable for wild pig hunting, this way of testing the honey seems too risky. That evening, however, a swagman came tramping down the road, and it was decided to use him for purpose of experiment. A young half-cast [sic] stopped him with – "Are you fond of honey mate? If you are, come here and have a feed." "Oney?" said the swagger, "I ain't had a good blow-out of 'oney since I left the Old*

Distribution of passion vine hopper and poisonings.

Continued on page 33

Neville Marr

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Continued from page 31

> *Country." He ate about 4 lb of it, and was then invited to stay all night. He did so, and had some more honey for his supper. As he was alive in the morning, the honey was then distributed round. If he hadn't been alive there would have been an unobtrusive funeral. (p. 113-114)*

Until the 1940s the cause of toxic honey was still a mystery, with ongoing poisoning incidents and investigations. Confusing the issue, some investigators claimed the cause was not honey and others claimed that the toxin in the honey was volatile and evaporated over time. Many plants were suspected including deadly nightshade, rangiora, karo, whauriki (waoriki), wharangi, and clematis. In 1905, Dr Aubin of Thames suggested that tutu was the cause, as the symptoms were similar to patients suffering from tutu poisoning. Maori had also noticed this 45 years previously, and treated people suffering from toxic honey poisoning the same way they treated stock with tutu poisoning. Unfortunately, the suggestion that tutu might be the cause of toxic honey passed unnoticed, most likely because honey bees were not observed to visit tutu flowers.

Finally, there was a breakthrough.

Roy Paterson.

On January 12, 1946, government apiary inspector Roy Paterson was collecting tutu berries as part of an investigation into toxic honey. He noticed that the tutu plants *Coriara arborea* were covered in honeydew excreted by the sap-sucking passion vine hopper *Scolypopa australis*. This identified a new direction and scientists Dr Sutherland and Dr Palmer-Jones identified a link to the toxin tutin in the honey dew. At last, researchers had found the source of toxic honey.

Both tutu and passion vine hoppers need to be present to produce toxic honey. The adult passion vine hopper feeds on the sap of the tutu plant and then produces honeydew that drips onto the vegetation. Some of the tutin toxin from the sap of the tutu plant passes through the insect and into the honey dew.

Honey bees are not normally attracted to this honeydew; however, if the season is dry they collect the toxic honeydew in the late summer months. In wet conditions, the honeydew is washed away.

Dr Goodwin covers the history of the attempts to eliminate toxic honey poisonings after researchers identified tutin as the culprit. Today, the commercial beekeeping industry has mitigated the problem. Beekeepers intending to sell honey must show that the honey was either harvested before January 1, that the honey was collected where tutu is not present, or demonstrate through lab tests that there is less than 2 mg of tutin per kilogram of honey (2 parts per million).

However, as shown with the most recent toxic honey poisoning in New Zealand in 2008, concerns remain. Dr Goodwin writes about the dangers of comb honey and tutin:

> *Comb honey is honey that remains in the wax combs when it is consumed. It has always held the largest risk of producing dangerous levels of tutin because the toxic honey packed into cells will likely be in close proximity to other cells containing toxic honey. This honey will not be diluted through extraction with other honey that is not toxic.*
>
> *For this reason all the deaths associated with toxic honey and many of the poisonings have been associated with comb honey. The current restrictions around production and testing of comb honey will likely mitigate most of the risk. (p. 144)*

Hobby beekeepers need to be especially vigilant, seen in the light that as little as half a teaspoon of honey to sweeten your tea has resulted in poisonings. Many hobby beekeepers have only a few hives and thus the toxic honey is not diluted with non-toxic honey. Dr Goodwin writes:

Adult (large wings) and juvenile passion vine hoppers on a tutu plant. All photos courtesy of Dr Mark Goodwin.

> *It is likely that there will be further poisonings in New Zealand however. They are likely to be related to hobby beekeepers rather than the commercial beekeeping industry. Because honey may be given away to large numbers of friends and family the next poisoning may still affect a number of people. (p 146)*

Dr Goodwin's book *A New Zealand History of Toxic Honey* makes an important contribution to New Zealand beekeeping. By highlighting this serious issue, it will hopefully prevent further poisoning incidents. I encourage all New Zealand beekeepers to get a copy.

A New Zealand History of Toxic Honey is available at http://www.lulu.com/spotlight/MarkGoodwin

> You should never eat honey from feral ('wild') bee colonies in [tutin] risk areas. Source: *Practical Beekeeping in New Zealand, 4th edition*, by Andrew Matheson and Murray Reid, page 240.

Effects of environmental change

By Dr Shelley Hoover, Apiculture Research Scientist, Alberta Agriculture and Rural Development, Lethbridge Research Centre, Lethbridge Alberta, Canada. Email: shelley.hoover@gov.ab.ca

Changes to the environment are occurring at a rapid pace worldwide.

These changes will not only alter how bees and plants interact, but will substantially modify the critical role that bees play in the pollination of plants in natural and managed ecosystems.

Plant pollination by insects, primarily bees, is not only vital for maintaining plant diversity, but also provides an essential service to agriculture by pollinating approximately 75% of global food crops. Recent studies have shown that individual drivers of environmental change can alter plant-pollinator interactions and pollinator health. This has raised the concern that a suite of environmental changes acting simultaneously could intensify changes to plant-pollinator relationships and alter plant characteristics. In turn, these changes could dramatically alter pollinator health, abundance, and plant-pollinator relationships.

Increased soil nitrogen, climate warming, and increasing atmospheric carbon dioxide (CO_2) are three environmental changes that are increasingly affecting regions across the world. These changes could act together to disrupt crucial plant-pollinator relationships by altering plant characteristics, such as those that determine floral attractiveness and nutritional rewards for pollinators.

Our recent research at the University of Canterbury, New Zealand (Hoover et al., 2012) investigated interactions between plants (pumpkin; *Cucurbita maxima* Var. Little Cutie) and pollinators (bumble bees, *Bombus terrestris*). We found that the combined effects of these three environmental variables on this plant-pollinator relationship were complex and interrelated. Flower size, the timing of flowering, flower sex ratios, and nectar chemistry (sugar and amino acids) were all affected, thereby altering the attractiveness of nectar to bumble bee pollinators and reducing worker longevity.

At the University of Canterbury we grew pumpkin plants under eight different conditions to examine the interactive effects of CO_2 enrichment, soil nitrogen level and increased temperature on pollination of pumpkin plants by bumble bees. By growing pumpkin plants at ambient and elevated levels of CO_2 (360 vs. 700 ppm), nitrogen (0.19 vs. 0.57 g nitrogen added to soil per pot), and temperature (19 vs. 23°C) in a factorial manner, we tested all eight possible combinations of the treatments. We recorded the time it took the plants to produce their first flower, the size and sex (male or female) of all flowers produced, the total mass of flowers produced, and the volume, sugar content, and amino acid content of the nectar.

Once we had determined the sugar and amino acid content of the nectars produced by the pumpkin plants grown under the different environmental conditions,

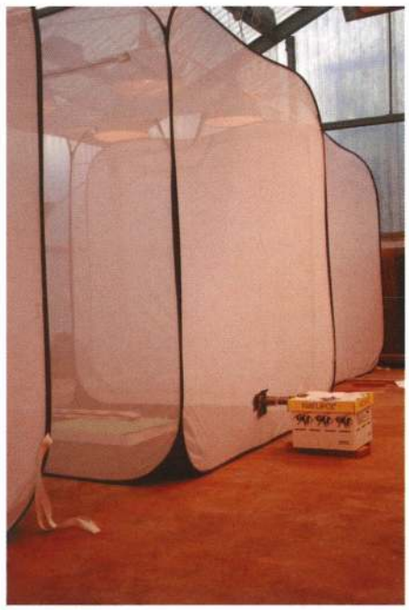

Figure 1. Flight cage used to test bumble bee preference for experimental nectar treatments in the glasshouses at the University of Canterbury. The commercially reared bumblebee colony is visible on the right, and connected to the flight cage by a gated access tunnel. Visible on the floor of the cage are the arrays of artificial 'flowers'.

Figure 2. Close-up photograph of an experimental array of artificial 'flowers' made from narrow plastic tubes. These arrays of flowers were used to determine which experimental nectar treatments the bumble bees preferred. Typically, a bee would visit many flowers, and then choose one to enter and consume nectar. Note the extended tongue of the bee on the left; she is filling her crop with the experimental 'nectar'.

we produced artificial 'nectar' solutions mimicking the sugar and amino acid content of the nectar from the pumpkin plants grown under the different treatments. We used artificial nectar because we wanted to be sure that any effects on bees were caused by changes to nectar chemistry, rather than any other changes to flowers that we may not have noticed. We fed caged bumble bees these 'nectar' treatments to determine the effects of changes to nectar on bee longevity. In addition, we used flight cages to determine which nectar treatment the bees preferred (Figure 1). Bumble bees were allowed access to the flight cages, which contained arrays of artificial 'flowers' containing all eight nectar treatments (Figure 2). We recorded the number of bee visits to each flower as well as the volume of nectar consumed from each flower.

Results

Our results showed that responses of plants to changes in environmental conditions can directly and indirectly affect bees in a number of different ways. The three environmental change drivers studied—temperature, nitrogen deposition, and CO_2 enrichment—all had significant, interrelated impacts on both plants and the plant-bee interactions. There were notable changes in the reproductive traits of the plants, with resulting impacts on bee nectar preferences, nectar consumption, and bee longevity.

Flower growth

The three environmental change drivers each affected the timing of flowering. Elevated nitrogen and temperature both accelerated the onset of flowering (by an average of 15.8 and 7.5 days respectively), whereas elevated CO_2 delayed the onset of flowering by an average of 10.8 days. Timing mismatches between plants and pollinators, where the timing of plant flowering and pollinator abundance are no longer coordinated, are a commonly predicted result of climate warming. Timing mismatches have the potential to drive pollen limitation in those plant species that flower early. Our results suggest that other drivers of environmental change (namely CO_2 enrichment and nitrogen deposition) may also disturb the timing of flowering.

The simulated environmental changes also significantly influenced flower production and flower size, albeit in a complex fashion. Elevated CO_2 and temperature produced smaller pumpkin flowers, whereas nitrogen addition increased flower diameter. Elevated temperature also caused a decrease in the number of female (fruit-producing) flowers relative to male flowers. The number of flowers produced by each plant increased with increasing nitrogen and temperature, and decreased with increasing CO_2. However, elevated temperatures reduced the negative effect of CO_2 on the number of flowers produced.

Nectar composition

The simulated environmental changes also affected nectar chemistry. While the relative *composition* of amino acids did not change significantly under any of the environmental change treatments, the *concentration* of amino acids was affected by combinations of the environmental variables. There was a net effect of CO_2 on nectar sugar composition, but when the concentrations of specific sugars were analysed individually, there was no effect of any drivers on sucrose (the largest sugar constituent in nectar). However, elevated CO_2 led to increased concentrations of other sugars (glucose and fructose) in the nectar; this effect was reduced by elevated temperature. Both nitrogen and temperature increases reduced the ratio of glucose to fructose. In contrast, increased CO_2 reduced the ratio of sucrose to hexose (glucose + fructose). Thus CO_2, nitrogen, and temperature all affected the ratios of the three primary sugars found in the pumpkin nectar.

Nectar sugar composition is known to influence the type, number, and diversity of pollinator species attracted to a particular plant, as well as the duration of pollinator visits to flowers. In our study we found that the concentration of both glucose and fructose were increased by CO_2 and nitrogen, reducing the ratio of sucrose to hexoses. This change in composition reduced the attractiveness of the nectar to bumble bees. The ratio of glucose to fructose in nectar also affects the crystallisation rate of honeys produced from that nectar.

Nectar volume, another factor important in both pollinator foraging and honey production, was greater under elevated temperatures, but lower under elevated CO_2. However, the positive effect of elevated temperature on nectar volume was far greater at ambient nitrogen levels than elevated nitrogen levels (Figure 3), suggesting that any positive effect of warming on nectar volume would be minimised by additional nitrogen inputs.

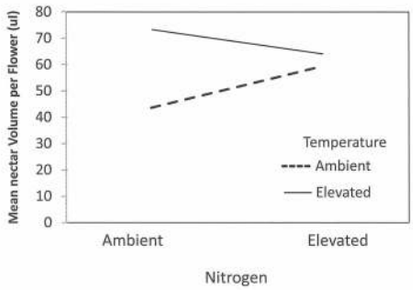

Figure 3. Effect of nitrogen and temperature on flower nectar volume. Elevated temperatures caused increases in nectar volume in this study; however, these effects were greater at lower nitrogen levels than elevated nitrogen levels.

Bumble bee preferences and longevity

The nectar that was most frequently visited by bumble bees, and consumed in the greatest quantity, was that from the elevated nitrogen treatments. The nectar from the elevated nitrogen treatment had higher sucrose to hexose (fructose and glucose) ratios, which can be more attractive to bees. Bees consumed less nectar as the concentration of sugars and amino acids increased; consumption was also affected by the ratios of the individual sugars.

Despite the higher visitation and consumption rates, nectar from the elevated nitrogen treatment reduced worker bee survival; bees in this treatment died an average of eight days earlier than bees in other treatments. The nectar from elevated CO_2 treatments also had a negative effect on bee longevity, although this effect almost disappeared when elevated CO_2 was combined with elevated temperature. Finally, increasing total sugar concentration had a negative effect on bee longevity. Thus, altered preference for nectar under rapidly changing environmental conditions may lead pollinators to select less nutritious floral resources, potentially reducing the number of days each bee can forage and negatively influencing colony productivity.

The total economic value of crop pollination worldwide is estimated to be over €153 billion (~$240 billion New Zealand dollars) globally annually, and ~77% of agricultural crops depend on pollinators. There is growing concern about global decline in many pollinator species, and our results highlight new mechanisms through which human changes to the environment may alter plant-pollinator relationships. The effects of the three environmental change drivers we examined were highly interrelated, indicating that the environmental changes our planet is currently experiencing will not only have manifold effects on pollination services, but that these effects will be difficult to predict. Because the interactions among drivers may be as important as the effects of the individual drivers, studies of multiple drivers of environmental change will continue to reveal complex and unanticipated outcomes on pollinators.

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[Editor's note: Dr Shelley Hoover was a postdoctoral researcher at the University of Canterbury, where this research was carried out.]

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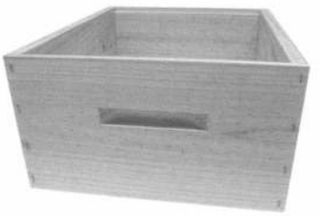

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Chelifers for potential varroa control

By S. Read[1], K. Goessel[3], B.J. Donovan[2], R.F. van Toor[1], W.R. Nelson[1] and B.G. Howlett[1]

Varroa mites, the largest threat to honeybees, are now widespread throughout New Zealand (Stevenson, 2013).

Apiarists are still heavily reliant on synthetic chemicals for their control, but resistance to these chemicals is developing rapidly. A new, sustainable method of control is required to reduce the impact of varroa on honey bees over the long term.

Chelifers, also known as pseudoscorpions, have sometimes been found in honeybee hives in Europe, Asia, Africa and New Zealand (Donovan & Paul, 2006), where they are thought to predate upon small hive creatures such as mites and wax moth larvae (Fagan et al., 2012). Two New Zealand native species found in hives, *Nesochernes gracilis* and *Heterochernes novaezealandiae,* have been shown to attack and consume varroa mites (Fagan et al., 2012). A short video is available at http://tinyurl.com/aupa92l

Chelifer consuming a varroa mite. The pincers are used to hold the prey and bring it towards the sucking mouthparts. (Photo: S. Read)

In previous work, chelifers have been recorded preying on up to three varroa mites over a two-hour period, even removing mites from bee pupae (Fagan et al., 2012). Chelifers therefore show potential to help control varroa mites. Currently, chelifers have been recorded in low numbers in some hives

Chelifer in nucleus hive, where they are often seen around the top edges under the lid. (Photo: S. Read)

in the Bay of Plenty, New Zealand. This makes it difficult to find the numbers needed to conduct large studies.

To overcome this difficulty, and to develop populations adequate for hive use, Plant and Food Research, with funding support from AGMARDT, has been working to establish and maintain breeding colonies in the laboratory. Rearing of these species has never been attempted before.

Eggs are carried underneath the chelifer. Photo: S. Read.

In October and November 2012 both species, *Nesochernes gracilis* and *Heterochernes novaezealandiae,* were collected from the Katikati region in the Bay of Plenty. Some chelifers were collected from nucleus hives and others from leaf litter and bark nearby.

Less than a month after collection, female chelifers of *Nesochernes gracilis*

Chelifer inside nest constructed with silk and sand. Photo: R. Lamberts.

were observed to enclose themselves in a raised nest shaped in a half circle and made from silk and other materials. Nests were formed under bark, on the side of the container or under filter paper. About two to three months after initial collection, nymphs became visible in the containers. Cannibalism has been noted previously, so nymphs are removed for rearing separate from the adults. To date, at least 1000 nymphs have been produced from around 250 adults previously collected.

Chelifer nymphs are a very much smaller version of the adult, measuring around 1.5–2.2mm. Photo: S. Read.

These nymphs will be maintained to observe behaviour differences as they grow, to get an estimate of losses during this stage.

Further trials, especially practical trials in beehives, will become possible with more chelifers available for testing. Previous estimates suggest that up to 25 chelifers per hive should be able to maintain varroa numbers below the economic threshold requiring chemical treatment, but this remains to be tested.

If you have observed chelifers in your hives, please contact Sam Read (sam.read@plantandfood.co.nz).

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[1]The New Zealand Institute of Plant and Food Research Limited, Private Bag 4704, Christchurch 8140, New Zealand
[2]Donovan Scientific Insect Research, Private Bag 4704, Christchurch 8140, New Zealand
[3]Department of Zoology, Institute of Biology, Faculty 1 of Natural Science, Martin Luther University Halle–Wittenberg, 06110 Halle, Germany

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FROM THE COLONIES

Waikato Branch

What a difference a month makes, and what a difference having no rain makes. The Waikato is very, very dry; according to older beekeepers, we're having some of the driest pasture they have seen for 20 years. Because of this the honey crop is looking to be above average, but not a bumper crop as initially thought.

The field day at Thames on 23 February was well attended. I did not listen to all the speakers but the ones I did were fascinating.

Randy Oliver proved entertaining, while at the same time reminding us to not become complacent on checking for varroa. He spoke of using alcohol washing every time he visited his sites and urged us to take varroa checking seriously. Randy asked for a show of hands as to how many of us regularly check our hives for mites: not many! Now is time when the levels will be rising. Randy suggested we rotate treatments, oxalic (winter) thymol (autumn, after honey supers are off), formic acid (while honey supers are on) and Apivar® in spring—phew!

Hermann Pechhacker talked of an international Carniolan bee breeding programme with the aim of breeding for better productivity, lower swarming and varroa tolerance. *[Editor's note: he was in New Zealand to help David Yanke of Daykel Apiaries to set up a breeding programme.]*

Dr Jerry Bromenshenk spoke about training bees and also discussed leafcutter bees (*Megachile rotundata*), which I had never heard of and must look up.

Russell Berry spoke on keeping bee diseases out of New Zealand, and CFUs (colony-forming units) in honey, including what they are and why we need to know about them.

Dr Karyne Rogers gave an update on her work with C4 sugars, a test done on all honey going overseas. Manuka honey is the primary problem and she is trying to find out why. *[Editor's note: see article on page 21]*

Back at home, the bees are looking bonny; pennyroyal and dandelions still are flowering and hopefully, soon, we will have some rain.

- Barb Cahalane

Poverty Bay Branch

Autumn has arrived with the focus on getting hives ready for winter and another honey season next summer. Requeening is now over and mating should have been good with the warm dry weather.

Most hives are still full of bees and heavy with stored honey. Hopefully only a little autumn sugar feeding will be needed. Varroa levels have been low going into autumn.

The East Coast did dry out, but our situation is not as bad as most other districts around us. We have been getting small amounts of rain.

Trees for Bees project

When a decent amount of rain replenishes soil moisture levels, we will look at replanting our dry bank.

- Paul Badger, Branch President

Hawke's Bay Branch

I stubbed my toe on a large cowpat the other day; it had set like concrete in the big dry we are having. Moisture levels are very low in most parts of Hawke's Bay. Rivers are drying up and in the worst affected areas, sea levels have gone down by several metres. Despite the big dry, pasture production has been average to above average, and those with bees in normally wet areas have had a bumper season.

I am getting reports of people using non-approved varroa treatments. Please remember that if you want to sell your honey, you generally have to fill in a harvest declaration. This harvest declaration will not be accepted if you have used non-approved treatments, no matter how safe you think they are. Please remember that honey packers are audited annually and must comply with the regulations. It is an offence to falsify a harvest declaration.

- John Berry, Branch President

Southern North Island Branch

This year beekeepers in our area report good honey flows and extraction is in full swing. Boxes seem to be extra-heavy with honey, which is making up for the last two poor seasons. This long extended dry spell is also great when taking honey off. The downside is that the flows stopped earlier than expected, but still a good harvest.

Last month I commented on beekeepers from outside of Wanganui parking trucks with a load of honey in the main street overnight, which caused a problem for people walking around where the trucks were parked in the early evening.

Another incident has just occurred. A truck loaded with hives stopped at a BP station in town to fill up with diesel. The driver and others got out to start filling, when the manager of the BP station roared out and told them in no uncertain terms to take themselves, truck and all the bees that were flying as far away as possible. The driver said that he had a BP card and wanted to fill up, but was told to get the **** out of there. The result was the BP station had to close for several hours, and a local beekeeper (no, not me this time) was called to try and kill or get rid of all the bees that were flying around the station. The BP staff had to redirect everyone wanting fuel to another fuel station over this time.

Unfortunately the BP manager, in the heat of the moment, omitted to get the registration number of the truck; otherwise there would have been further consequences to the beekeeper. Now all Wanganui-area BP fuel station managers have decided to automatically ban from their forecourts any truck carrying bees or honey that arrives with bees on or flying around it. I'm advised they have also talked to other service stations in Wanganui.

So once again this sort of action is causing difficulties, especially for the local beekeepers. All beekeeping firms must instruct their staff to ensure that they fill up the fuel tanks on vehicles before they start loading hives or honey, and not to stop or park in towns with bees flying around the truck. Often there are hobbyist beekeepers nearby with hives, and at this time of the year a smell of honey causes any bee in the neighbourhood to aim for the truck. A little engaging of brain can save a lot of hassle.

- Neil Farrer, NBA Life Member

Continued on page 41

AFB RECOGNITION & COMPETENCY COURSE

The Franklin Beekeepers Club will be hosting a Test / Refresher on Saturday 11th May 2013 to be held at Ramarama, South Auckland.

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Graham Wheeler on 09 239 1177
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Upon receipt of the registration and payment, a detailed agenda and map with the venue details will be mailed out.

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SOUTHERN SUN QUEEN BEES

Gary Milne
Southern Sun Holdings Ltd
8 Spring Street, Foxton
Phone 027 248 9419
Email: gary@southernsun.co.nz

Continued from page 39

Nelson Branch

We've had a mixed crop throughout the district but generally large volumes of honey. There's been lots of kamahi and rata honey due to the good weather. However, the long flowering of the kamahi and inclement weather at the time of the manuka flowering has led to a disappointing manuka crop in some circumstances.

Mite levels seem low with no signs of resistance this autumn, but we must stay vigilant and keep the treatment and monitoring regimes on track.

Autumn queen matings are fantastic with the settled weather continuing, with honey still coming in for winter stores. Wasps are becoming a problem in parts as the dry weather continues, reminding us that there is never nothing to do!

- Ricki Leahy, Ward representative

Canterbury Branch

The big dry continues in Canterbury and while it is still hot during the day, the trees are starting to turn and the drones are starting to get kicked out. A sure sign that winter is just around the corner.

Along with about 60 other beekeepers, I took the opportunity to attend the afternoon seminar put on by Plant and Food Research, Lincoln. Dr Jerry Bromenshenk spoke about his research and work for the military on land mines, primarily about training bees for specific tasks. It was a very interesting presentation.

Because colony collapse disorder (CCD) and associated problems (i.e., falling bee numbers and lack of pollination) have such a high profile in the global press, I get the feeling that more research dollars are available throughout the world for research into bees and pollination.

Has the hobbyhorse called global warming been flogged to death and been bled dry by the world's scientific community, and is the above topic going to replace it? I don't want to be negative, but not all research into bees and pollination is going to be beneficial to OUR industry. We are going to need to be very vigilant about defining the projects that we as an industry want advanced. More thoughts on this to come.

Personally, I can't wait for research into alternate pollination species to get under way (e.g., butterflies, midges, flies, etc) and become a commercial option. This can only advance the case for honey bee pollination. The people who promote these 'alternatives' still have no concept as to how much honey gathering subsidises pollination, either directly through the crop being pollinated or averaged across a beekeeping operation. When an 'alternate pollinator' in a commercial setting needs to charge his clients enough to run his business, provide a business premises to run from, make enough money to sustain himself long term with varying seasonal demands for his products, make enough to buy a house and provide for his family without government subsidies, it can only mean that pollination prices for honey bees will go up significantly.

Anyway there will be more on this at conference. If you are coming—and I certainly hope you are—please book accommodation asap as it is going fast. Alternatively, please contact branch secretary Linda Bray and she will help (sorry Linda, another job!)

- Brian Lancaster, Branch President

We want your memorabilia!

The Conference committee is seeking 'memorabilia' to include in a 100-year display, which will only be as good as the memorabilia we receive. Anything and everything considered.

Email Linda at birdsnbees@xtra.co.nz or phone 03 308 4964.

LETTER TO THE EDITOR

Will you join the NBA?

By Colin McLean, Great Barrier Island

Will you become a member of the NBA?

An organisation that supports all beekeepers and is an industry representative to government and other organisations.

As being a member is voluntary, it raises an ethical or moral choice. Do I pay for something where the benefits are maybe not direct and tangible? As a cost to running my business, being a member of the NBA isn't a lot; even my vehicle costs are 10 times that [amount].

There are aspects of the NBA I don't agree with; that is normal, especially in any large organisation. It's hard enough to get three beekeepers to agree on anything!

So this letter is only about the ethical or moral choice you make to join the National Beekeepers' Association, for beekeepers now and in the future: maybe your bees depend on it? Maybe it's a choice you should make to join.

[Editor's note: the more things change... see page 19 for an notice from the late 1930s that asks a similar question.]

PURCHASING HONEY

The Co-op has an increasing requirement for all types of honey.
Strong balance sheet, good cashflows, leading brands.

Last year the NZ Honey Co-op handled over 2000 tonnes of honey. Beekeepers were paid in full by 16 December 2012. We are interested in purchasing all types of honey.

Please consider our track record. The Co-op has a history of payment integrity that is second to none. To discuss your options please contact our honey buyer.

Ian Gebbie
ph 03 614 7130
or 027 629 4280

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www.haddrells.co.nz

Prepare to winter down

By Frank Lindsay, NBA Life Member

It's April and although the season has wound down for hobby beekeepers, most big commercial beekeepers are still flat out extracting honey.

Morning dew and warm, still days are keeping catsear and pennyroyal flowering; while in the bush fringe, lacebark and scarlet rata are flowering. Some hives on farmland near the bush have stored quite a lot of new nectar around the brood nest. I was quite surprised that kohekohe and five finger are already putting out bracelets of flowering buds. These two normally flower in the winter but might flower a lot earlier this year.

Priority tasks

The most important things to do this month are to winter down hives and check that your mite treatment has been successful. Fork out the last of the drone brood, or do either a sugar shake or an alcohol wash of a couple of hundred bees to determine your mite levels. Even one percent means you have 300 mites in a two-high hive: this rate is too high for coastal hives. Most will have a little brood in them through the winter, allowing the mites to continue breeding and weakening bees that emerge in early spring.

At the same time, do a brood inspection. Check that your bees have not been robbing a diseased hive nearby. Look in the areas of emerging brood for those cells that haven't emerged. Flick off cappings with the tip of the hive tool and look at the developing larvae underneath. Hopefully all will have healthy pupae, but check quite a few to be certain.

Make sure each hive has adequate honey stored to keep them going when brood rearing revs up again in early spring (August). A two-high hive should have at least a super of honey. Any less means you need to feed either now or early in the spring. It's far better to do this now while bee numbers are high, but don't spill any syrup on the ground or on the hives as this will induce robbing.

Close entrances down to 100 millimetres by 8 millimetres, or narrower if the hive is small. Mice getting into a hive will use everything to winter over and raise a new family. They can do considerable damage to the wax in wooden frames and they will eat most of the stored honey, consigning the hive to an early death by starvation.

Provide some upper ventilation. I use a split (crown) board with a 25-millimetre entrance, but a few matchsticks around the crown board will lift it sufficiently to provide adequate ventilation, allowing the moisture given off by the bees to escape. Hives with open mesh floors shouldn't require any upper ventilation. Open mesh floors also have the advantage of causing brood rearing to finish early, making mite control easier. I'm also providing some insulation under the roofs of nuc hives to assist them to keep warm.

> "...winter down hives and check that your mite treatment has been successful."

You also have to be realistic at this time of the year. Hives that aren't covering most of the frames with bees have a greater chance of dying during the winter. You can winter bees in a four-half-frame mating nuc, provided it has two frames of honey and is packed full of bees. There must be enough bees to maintain a cluster that is in contact with frames of honey. Unite a strong hive on top of a weak hive rather than try and take the weak hive through winter. A strong hive can easily be split again in the spring when queens become available.

Make sure the hives will get sun at some time during the day through winter and protect them from prevailing winds. Facing a hive sideways to the prevailing wind will cause less draft in the hive.

The odd wax moth can be seen on the outside of the hive waiting to enter the hive after dark. They will also seek out your stored supers and if they get established, will produce their own heat to keep breeding, thus damaging frames during the winter. Protect your honey super frames. Turn supers up on end and leave them in a sunny, open shed until it really gets cold. If you already have wax moth in some frames, freeze them or stack the supers up and seal the top and bottom with paper, then give the stack a dose of formic acid (approximately 15 millilitres per super). It's best to do this task in the open air, as formic acid will cause metallic objects to rust.

I store my supers in an open, old dairy shed on pallets to allow airflow through them, with a queen excluder on both the top and bottom to prevent rats and mice from getting in.

The big dry

The drought has hit farmers hard—a lot hadn't prepared for it. I saw only a few farms with lucerne and red clover crops. These were stocked with a lot more sheep than on neighbouring farms. This new generation of farmers has forgotten that you can cut down willows and tree lucerne to provide stock with food in an emergency, as well as providing nectar and pollen for bees and shelter for stock when it's hot.

Plan this autumn to take cuttings and plant them into pots, ready to give away to farmers once they have established a good root mass. They might now see the value in these so-called weed species to their farming and our bees.

The drought has also affected some beehives. The dribble of nectar coming

Continued on page 45

BEEKEEPER & QUEEN BREEDER

Apitech NZ Ltd is looking to fill two positions starting August 2013.

We currently have 3000 hives throughout the Marlborough Sounds region, from the tip of the Marlborough sounds to the Awatere High Country. Marlborough is located at the top of the South Island, and is New Zealand's largest grape and wine producing region. Year-round sunshine, a spectacular coastline (including the Marlborough Sounds) it is a mecca for the outdoors enthusiasts.

Position 1: Queen Breeder

This position is seasonal from August 2013 – May 2014, however after one season this could be offered as a permanent position.

The person we require will have sound knowledge and experience in the field of Queen Breeding. You must display knowledge and understanding of breeding genetics, hive manipulation for Queen Raising, Raising cells, drone production and catching & caging of queens.

Applicants must hold a DECA certificate.

For a full job description please email careers@apitech.co.nz

Position 2: Beekeeper

This position is a Fixed Term Seasonal Role commencing at the beginning of August 2013 until May 2014.

The person we require will communicate well with fellow staff and management and display sound knowledge of beekeeping practices. Applicants must be DECA certified, have had at least 3 years' experience in the field of beekeeping & display knowledge and expertise in all aspects of beekeeping. Heavy Trade & Forklift Licences would be preferred but not essential.

For a full job description please email careers@apitech.co.nz

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Continued from page 43

in has stimulated some hives to produce brood from their winter honey stores. These hives will need sugar feeding to restore their winter stores.

Hawthorn berries are now red and ripe. These trees provided valuable pollen and nectar in the spring and you can now harvest the berries. They make a very nice sweet-and-sour sauce that goes with any red or game meat dish, especially duck, and it's good for your heart. I gathered two kilograms of berries last year and regretted we hadn't collected more. Google 'haw-sin sauce' (also known as hoisin sauce) for recipes.

Things to do this month

Winter down hives. Check feed and the effectiveness of mite treatments. Make sure that top-bar hives have 10 frames with honey in them. Do an AFB check. Slope bottom boards and fit mouse guards. Replace rotten or damaged supers and bottom boards. Attend to fences, check for wasps and control grass. 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 to the middle. Freeze stored honey frames to kill wax moth eggs and larvae, or store in a shed that is open and has good airflow through the supers. Those in the North Island (and perhaps the top of the South Island) 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 tutin within five kilometres of your hives and high passion vine hopper (*Scolypopa australis*) numbers, test your honey before selling it. Clubs can have their members' samples tested as a composite.

Don't contaminate sample bottles!

Those of us who recently received sample bottles for AFB spore testing should also keep contamination in mind. A finger put into the honey sample can contaminate it, making it virtually impossible to test for AFB spores. When filling sample jars, be very careful not to contaminate them. Send your jars back for analysis: in the long run, these results can help you. Knowledge is power.

Keep honey houses clean

Vacuum up any bees brought in with the honey boxes. This makes working in the plant a lot more pleasant, reduces the occasional sting when handling frames and reduces the need to constantly clean walls of bee faeces, which also helps to keep contamination of the extracting plant to a minimum.

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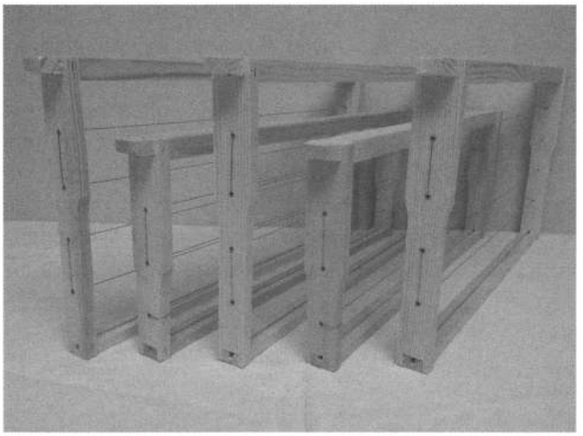
- 3/4D: 3 Wires



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Safety management: cover known hazards!

By Neil Percival, Health and Safety Consultant, northeastsafety@gmail.com

Many beekeeping businesses have struggled with the Health and Safety legislation.

Don't despair, you are not alone. Most other farmers also have the same problem!

The law requires you to control all identified safety hazards and also not to create hazards that could affect other people. The Health and Safety laws are not to be confused with the Food Safety laws. Both must be complied with.

In December 2012, Cambridge Bee Products Ltd was fined after an accident where an employee lost the tip of a finger on a saw when making new hives. After the accident the company did their legal duty and reported the accident to the then-Department of Labour. Their investigation resulted in the prosecution. Besides the injury and distress to the employee, the case inevitably caused huge stress and subsequent financial penalty to the company.

We can speculate but cannot question the judgement against Cambridge Bee Products. The law is the law and judges make decisions based on that, and also on precedents set in earlier cases.

This then brings the question: how far do you have to go to avoid such a situation? Do you need to identify and control every possible hazard in the business? Consider these points before deciding how far you need to go with safety management.

All farms have multiple and diverse hazards

Beekeepers have many safety hazards to control. You can probably add to the list below:

- weight of full hives
- access to remote sites: slippery tracks, roads, bridges, etc
- trips and falls on uneven ground
- keeping access tracks clear
- hive work at night, when vision is limited
- operating truck-mounted cranes
- road traffic hazards (operating on narrow country roads; long distances to service hives)
- allergic reactions to bee stings
- operating the honey presses: high-speed moving parts, steam, cleaning chemicals, slippery floors, hot working temperatures
- shifting and storing heavy drums of honey
- packing honey into consumer packaging, moving belts, noise, labelling equipment
- handling boxes of product
- maintaining used hives
- making new hives and/or pallets
- fatigue and stress from extended work hours over the busy season
- saw benches; woodworking machinery.

> "You must make sure that all hazards are covered in your plans."

The consequence is that nearly all beekeepers and their employees are multiskilled. This is typical of all farmers. Your staff have to do a wide range of tasks from maintaining the hives and harvesting honey through to building and repairing hives.

Your Health and Safety Management Plans will, in general, be focused on beekeeping activities and food production, rather than carpentry. You must make sure that all hazards are covered in your plans.

It is very significant that the regulations that were applied to Cambridge Bee Products were related to timber and joinery work, rather than anything specific to beekeeping. The question arises: how many farmers would even think of checking the woodworking rules published by the then-Department of Labour? Realistically, few or none would do that. That is what caught out Cambridge Bee Products. It appeared to matter little that they had made good efforts in the other identified hazards more directly relating to beekeeping. This company was already firmly committed to staff safety.

Serious Harm injuries must be reported

The Health and Safety in Employment Act 1992 specifically states that Serious Harm injuries are to be reported. There are two important parts to this. First, all safety incidents and minor injuries should be recorded. Most farmers will already have an 'Incidents and Accidents' book or folder. The purpose of recording them is to get you to think about why it happened, or almost happened and what you can do to prevent it happening again.

Secondly, all Serious Harm injuries are to be reported under the Act. (See http://www.osh.govt.nz/law/hse-harm.shtml for more details on the definition of serious harm.) The ACC learns about most Serious Harm injuries because there are claims, but it does not pass this information to the Labour section of the Ministry of Business, Innovation and Enterprise (the new name of the Department of Labour). Generally MBIE hears of Serious Harm injuries from the employer or from the police, where there is a fatality. The number of farming accidents reported and number of ACC claims are widely different, meaning only a small percentage are actually reported. *Note it is also an offence not to report a Serious Harm injury.*

How can you avoid these investigations?

The most obvious way to avoid needing to report a Serious Harm injury is to prevent injuries from happening! The law states you must take 'all practicable steps' to prevent accidents happening.

But even if you have the best safety management system in New Zealand, some incidents and accidents will nearly always occur. In farming—and beekeeping is typical of all farms—*it is just not possible to fully control all of the potential hazards.* The scope of the work is so diverse that you will make a reasonable effort but still occasionally miss something. That is the core of the dilemma.

The nature of farming and the nature of investigations means that an inspector could arrive at your place of work and *almost always find some aspect where you are not in compliance with the law.* That means you could always face a possible fine: note that the inspectors have the authority to impose instant fines—as is happening with some quad bike enforcement—or to take the case through the courts.

The reality is that very few farmers get prosecuted in New Zealand, in spite of there being 12–15 fatal accidents per year and hundreds of Serious Harm injuries. The message from the Cambridge Bee Products prosecution is that you must try and be aware of all Acts, regulations, codes of practice and guidelines. It is indeed a worry that most beekeepers would have little idea of the rules around a large number of these. This case has serious implications for the beekeeping industry and to all farmers. How well prepared are you?

[Editor's note: Frank Lindsay's article 'Gearing up for safety', July 2010, pp. 21–22, focuses on making woodware, including safety aspects and rules for working a saw bench. We will endeavour to reprint this article soon and/or place a link to this article on the NBA website.]

Field day survey

As you will know from reports in this journal, the Auckland and Waikato branches of the NBA held a combined field day on 23 February. These two branches designed and conducted an informal survey of beekeepers, which was completed by just over half of those attending the field day. The Executive Council has received and will consider the results of this informal survey.

This photo was provided by John Burns. He says, "The photo is of an Italian girl (with well-worn wings) on a purple Hebe flower at my home in Onewhero (ex Franklin, now Waikato)." John entered a cropped version of this photo in the Franklin A&P Show Photography Competition in February 2013. The subject was 'Purple', and the photo was awarded first place in the Novice category.

Photo copyright of John Burns.

Proud of your honey?

We're seeking the finest honey in New Zealand

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for schedule, rules and entry forms

The Management Agency - Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998
Special Purpose Financial Statements
Year Ended 31 May 2012

INDEPENDENT AUDITOR'S REPORT

To the Minister of Agriculture:

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 6. The special purpose financial statements provide information about the past financial performance of The Management Agency Biosecurity (National Foulbrood Pest Management Strategy) Order 1998 as at 31st May 2012. This information is stated in accordance with the accounting policies set out on page 7.

Executive Committee Responsibilities
The Committee is responsible for the preparation of the special purpose financial statements which fairly reflects the financial position of The Management Agency Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998 as at 31st May 2012 and of the results of their operations for the year ended 31st May 2012.

Auditor's Responsibilities
It is our responsibility to express an independent opinion on the special purpose financial statements presented by the Committee.

Basis of Opinion
An audit includes examining, on a test basis evidence relevant to the amounts and disclosures in the special purpose financial statements. It also includes assessing:

- the significant estimates and judgments made by the Committee in the preparation of the special purpose financial statements; and
- whether the accounting policies are appropriate to The Management Agency Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998 circumstances, consistently applied and adequately disclosed.

We conducted our audit in accordance with New Zealand Auditing Standards. We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to obtain reasonable assurance that the special purpose financial statements are free from material misstatements, whether caused by fraud or error. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the special purpose financial statements.

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

Unqualified opinion
We have obtained all the information and explanations we have required.

In our opinion:
- proper accounting records have been kept by The Management Agency Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998 as far as appears from our examination of those records; and
- the financial report on pages 3 to 6 and the notes on page 7 comply with generally accepted accounting practice in New Zealand and fairly reflects the financial position of The Management Agency Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998 and the results of its operations for the year ended 31st May 2012.

Kenneth Peter Brown
Auditor
30th November 2012
RHB Chartered Accounts Limited
525 Cameron Road, Taunranga

The Management Agency Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998

Statement of Financial Performance As at 31st May 2012

	Note	2012 $	2011 $
INCOME			
Penalty on Levy		18,805	17,191
PMS Bio Security Levy		327,748	282,455
Bad Debts Recovered		7,095	0
Interest Received		5,370	3,664
AFB Recognition Course Income		470	0
		359,487	303,310
Levies - Charged Next Year to 31 May	1(b)	390,297	338,934
Less Income in Advance		(390,297)	(338,934)
Total Income		359,487	303,310
LESS EXPENSES			
Accounting & Reporting		2,838	6,185
Administration Fees		0	5,006
Aerial Surveillance		7,323	4,225
ADR Admin		9,297	9,061
ADR (AsureQuality)		34,393	32,935
AFB Recognition Courses		13,629	20,734
AFB Counselling (AsureQuality)		6,000	7,182
AFB Counselling & Audit Admin		6,430	9,977
AFB Audit Inspec (AsureQuality)		28,813	17,113
AFB Hive Inspection		73,700	40,638
AP2 Recruitment & Training		9,084	3,297
Apiary database upgrade		0	3,099
Audit Fees		4,200	4,245
Bad Debts written off		0	2,942
Bank Fees		0	118
Beekeeper Communication		0	2,770
Beekeeper Education		0	1,790
Biosecurity NZ		1,715	3,577
Chargeable Surveillance		0	2,157
COI Admin		6,834	6,805
COI (AsureQuality)		12,050	12,709
COI Default Inspections		281	4,874
Compliance Costs		1,421	1,495
Conference Attendance		1,995	1,617
Debt Collection Expenses		15,133	6,112
DECA (AsureQuality)		13,369	9,687
DECA Scheme Admin		6,073	2,261
EFB Strategy Development		1,970	1,590
Mgt Agency AsureQuality Audit		0	4,068
Plant & Food Research		15,637	1,908
Suspect substance test		744	510
Insurance		895	945
Legal Expenses		3,649	3,504
Magazine Expenditure		8,414	1,718
Management Agency Appointments		0	898
Manager Regional Visits		8,191	8,384
Management Agency Meeting Exps		6,669	5,847
Postage Printing & Stationery		13,714	14,634
Reporting Government		270	2,540
Telephone		4,318	4,966
Travel and Accommodation		3,004	2,344
Website		105	1,603
Total Expenses		322,158	278,071
NET SURPLUS		37,329	25,239

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 Movements in Equity
As at 31st May 2012

	Note	2012 $	2011 $
EQUITY AT START OF PERIOD		(30,459)	(55,699)
SURPLUS & REVALUATIONS			
Net Surplus (Deficit) After Tax		37,329	25,239
Total Recognised Revenues & Expenses		37,329	25,239
OTHER MOVEMENTS		-	-
EQUITY AT END OF PERIOD		6,870	(30,459)

The Management Agency Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998
Statement of Financial Position
As at 31st May 2012

	Note	2012 $	2011 $
CURRENT ASSETS			
Cash at Bank		197,174	194,932
Term Deposits		160,000	50,000
Accounts Receivable	1(b)	134,792	127,177
Total Current Assets		491,966	372,109
TOTAL ASSETS		491,966	372,109
CURRENT LIABILITIES			
GST Payable	1(c)	34,903	27,866
Accounts Payable		59,896	35,768
Income in Advance		390,297	338,934
Total Current Liabilities		485,096	402,568
TOTAL LIABILITIES		485,096	402,568
NET ASSETS		16,870	(30,459)
Represented by;			
EQUITY			
Funds Settled		(52,064)	(52,064)
Retained Earnings		58,934	21,605
TOTAL EQUITY		6,870	(30,459)

Treasurer _____ Chairperson _____

Date: 15/11/2012 Date: 23/11/2012

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
Notes to the Financial Statements For the Year Ended 31st May 2012

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 2013 have been charged prior to 31 May 2012. The amounts unpaid at 31 May 2012 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.

2 AUDIT

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

3 CONTINGENT LIABILITIES

At balance date there are no known contingent liabilities (2011:$0).

4 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

WHANGAREI BEE CLUB
Meets first Saturday each month (except January)
Time: 10.15 am, wet or fine (we are keen)
Contact: Chris & Desarae Williams,
Phone: 09 436 2729
Arthur Tucker, Phone: 09 436 1631
Kevin & Melissa Wallace
Phone: 09 423 8642 (Wellsford)
Email: secretary@whangareibeeclub.co.nz
whangareibeeclub@xtra.co.nz

WAIKATO DOMESTIC BEEKEEPERS
Meets every third Thursday (except January) at 7.30 pm *For prospective members: please contact the Secretary for venue meeting place.*

NB: We hold the Sept and March meetings at the club's hives.

Contact: Peter Gray, President, Phone: 07 855 0290
Email: president@waikatobeekeepers.org.nz
Maryanne Partridge, Secretary, Phone: 07 825 2691
Email: secretary@waikatobeekeepers.org.nz
Website: www.waikatobeekeepers.org.nz

WANGANUI BEEKEEPERS CLUB
Meets every second Wednesday each month (except January), at 7.30 pm at Canaan Apiaries, Mosston Rd., Wanganui.

Contact: Neil Farrer, Secretary/Treasurer
Phone: 06 343 6248

WELLINGTON BEEKEEPERS ASSOCIATION
Meets first Wednesday of the month (except January) at 7.30 pm in the Johnsonville Community Centre, Main Hall, Ground Floor, Moorefield Road, Johnsonville. All welcome.

Contact: Richard Braczek, Chairman
5 Tyndall St., Waiwhetu, Lower Hutt 5010
Email: ibraczek@paradise.net.nz

SOUTH CANTERBURY REGION

Contact: Peter Lyttle
Phone: 03 693 9189

CENTRAL OTAGO REGION

Contact: Nick Loughnan
Email: cobeekeepers@actrix.co.nz

Jo Boyd
Email: sunvale.meadows@xtra.co.nz

DUNEDIN BEEKEEPERS CLUB
Meets on first Saturday in the month September–April, (except January) at 1.30 pm. The venue varies so check phone or email contact below.

Contact: Margaret Storer, Secetary
Phone: 03 415 7256
Email: flour-mill@xtra.co.nz
Website: http://dunedinbeekeepersclub.org

NZ HONEY PACKERS AND EXPORTERS ASSOCIATION INC
Contact: Allen McCaw
Phone: 03 417 7198
Email: amccaw@clear.net.nz
or
Mary-Anne Thomason, Phone: 06 855 8038

AUCKLAND BEEKEEPERS CLUB INC
Meets second Saturday monthly at Unitec, Pt Chevalier, Auckland.

Contact: Alan Tinker
Phone: 09 818 9314
Email: alantinker2@gmail.com
Kim Kneijber
Phone: 09 418 1302
Email: kimk_bees@hotmail.com

NB: All correspondence to be directed to PO Box 44-427 Pt Chevalier Auckland 0122

Website: www.aucklandbeekeepersclub.org.nz

HAWKE'S BAY BRANCH
Meets at 7.30 pm, Arataki, Havelock North for workshops or meetings as advised to the members

Contact: Deanna Corbett, Branch Secretary
Home Phone: 06 876 8852
Email: djcorbett@xtra.co.nz
John Berry, Branch President
Phone: 06 877 6205

TARANAKI BEEKEEPING CLUB
Contact: Stephen Black
685 Uruti Road, RD 48, Urenui 4378
Phone: 06 752 6860
Email: beeclub@beesrus.co.nz

MANAWATU BEEKEEPERS CLUB
Meets every fourth Thursday in the month at Newbury Hall, SH3, Palmerston North

Contact: Paul Jenkin, Chairman
Phone: 06 376 8543 (after hours)
Email: paul@manawatubeeclub.org.nz
Mali Swanney, Secretary & Media Liaison
Email: secretary@manawatubeeclub.org.nz
(NB: Preferred address for email correspondence)
Mobile: 021 0225 4124
Phone: 06 376 8247
Mailing address: PO Box 4103, Manawatu Mail Centre, Palmerston North 4442

NELSON BEEKEEPING CLUB
Meets first Tuesday of every month, 7pm
Waimea Lounge, Richmond Park Showgrounds
Lower Queen Street, Richmond
Contact: Scott Williamson, President
Ph: 03 544 9737 / 021 172 4181
Email: tasmanbees@gmail.com

CHRISTCHURCH HOBBYIST CLUB
Meets on the first Saturday of each month, August to May, except January for which it is the third Saturday. The site is at 681 Cashmere Road, commencing at 1.30 pm

Contact: Helen English, Secretary
Email: chch.beekeepers@gmail.com
Website: http://www.chchbeekeepers.org.nz

UMF HONEY ASSOCIATION

P O Box 19348, Hamilton
Website: www.umf.org.nz

Contact: John Rawcliffe, General Manager
PO Box 125217, St Heliers, Auckland
Phone: 09 575 3127
Cellphone: 027 441 8508
Email: enquiry@umf.org.nz

NZ QUEEN PRODUCERS ASSOCIATION

Contact: Russell Berry
Phone: 07 366 6111

FRANKLIN BEEKEEPERS CLUB
Meets second Sunday of each month at 10.00 am for a cuppa and discussion.
10.30 am open hives

Contact: The Secretary
PO Box 1082
Pukekohe Auckland 2340
Email: franklinbeekeepers@gmail.com

Website: http://www.franklinbees.co.nz/

ROTORUA HONEY BEE CLUB
Meets monthly on a Sunday, 2 pm. Meeting details listed in club's newsletter and vary according to speakers' availability.

Contact: Kim Poynter, President
374 B Hamurana Rd, R D 7, Rotorua 3097
Email: birchwoodfarm@xtra.co.nz
Phone: 021 926 937

Jude Thomas, Secretary
4 Rika Pl, Kawaha Pt, Rotorua 3010
Email: jude.ken@xtra.co.nz
Phone: 07 348 6227

WAIRARAPA HOBBYIST BEEKEEPERS CLUB
Meets the second Sunday of the month except January, Norfolk Road, Masterton, 1.30 pm.

Convenor: Gerald Atkinson
06 377 0741 or 027 448 1518

MARBOROUGH BEEKEEPERS
Contact: James Jenkins, President
159a Budge St., Blenhiem
Phone: 03 577 5433
Mark Biddington, Secretary
8 Belvue Crescent
Witherlea, Blenheim 7201
Phone: 03 578 9746
Email: amandab@xnet.co.nz

NORTH CANTERBURY BEEKEEPERS CLUB
Meets the second Monday of April, June, August and October in Rangiora.

Contact: Mrs Noeline Hobson
4/76 Tennyson St., Sydenham, Christchurch 8023
Phone/fax: 03 337 3587
Mobile: 021 2112 655
Email: n.hobson@slingshot.co.nz

NZ COMB PRODUCERS ASSOCIATION

Contact: John Wright
Phone: 09 236 0628

NZ HONEY BEE POLLINATION ASSOCIATION

Contact: Russell Berry
Phone: 07 366 6111

BEE PRODUCTS STANDARDS COUNCIL

Contact: Dr Jim Edwards, Chairman
Phone: 06 362 6301

Is your group or Branch missing from here? Or have your details changed? Please contact secretary@nba.org.nz
Please also send any changes or additions to: editor@nba.org.nz

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

East Coast Ward
Barry Foster (President)
Tawari Apiaries Ltd
695 Aberdeen Road
Gisborne 4041
Ph: 06 867 4591
Fax: 06 867 4508
Mobile: 027 449 7131
Email: bjfoster@xtra.co.nz

Northern Ward
Neil Stuckey (Vice President)
PO Box 303251
North Harbour
Auckland 0751
Ph: 09 415 5931 (w)
Email: neil@whoney.co.nz

Southern North Island Ward
Mary-Ann Lindsay
26 Cunliffe Street
Johnsonville
Wellington 6037
Ph: 04 478 3367
Email: lindsays.apiaries@clear.net.nz

Central South Island Ward
Roger Bray
Braesby Farm, RD 1,
Ashburton 7771
Ph/Fax: 03 308 4964
Email: birdsnbees@xtra.co.nz

Waikato Ward
Stephen Black
Bees-R-Us
685 Uruti Road, RD48
Urenui 4378, Taranaki
Ph: 06 752 6860
Email: bees@beesrus.co.nz

Bay of Plenty Ward
Dennis Crowley
PO Box 16156, Bethlehem
Tauranga 3147
Ph: 07 579 2554
Email: crowleys@slingshot.co.nz

Upper South Island Ward
Ricki Leahy
151 Mangles Valley Road
Murchison
Ph/Fax: 03 523 9354
Email: beechdew@farmside.co.nz

Lower South Island Ward
Russell Berry
2488 State Highway 5, RD 3
Rotorua
Ph: 07 366 6111
Mobile: 021 741 690
Email: russell@arataki-honey-rotorua.co.nz

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

NORTHLAND
Interested parties wishing to start this branch up again, please contact Neil Stuckey 09 415 5931 (wk) or neil@whoney.co.nz

AUCKLAND
Graham Cammell
20 Thorps Quarry Road
Clevedon, RD 2 Papakura 2582
Ph: 09 275 6457
Email: graham@cammellshoney.co.nz

Bob Russell
101 Kern Rd
RD 3, Drury 2579
Home Ph: 09 294 8656
Work Mobile: 027 284 8951
Email: bob.russell@xtra.co.nz

WAIKATO
Cameron Martin
Haumea Road
RD 1, Galatea 3079
Ph: 07 366 4804
Fax: 07 366 4804
Email: busy-bee@xtra.co.nz

Jane Lorimer
Hillcrest Apiaries 'Kahurangi-o-Papa'
RD 3, Hamilton 3283
Ph: 07 856 9625
Fax: 07 856 9241
Mobile: 027 294 6559
Email: hunnybee_wave@ihug.co.nz

BAY OF PLENTY
Dennis Crowley
PO Box 16156, Bethlehem
Tauranga 3147
Ph: 07 579 2554
Email: crowleys@slingshot.co.nz

Barbara Pimm
448 Woodlands Road
RD 2, Opotiki 3198
Ph: 07 315 7650
Email:hikuhoney@xtra.co.nz

POVERTY BAY
Paul Badger
19A Pine St
Gisborne 4010
Ph: 06 868 4785
Email p-mbadger@xtra.co.nz

Tim McAneney
11 Oak St
Gisborne 4010
Ph 06 868 9446
Email: tim@mcaneney.gen.nz

HAWKE'S BAY
John Berry
46 Arataki Rd
Havelock North 4130
Ph: 06 877 6205
Email: jrberry@ihug.co.nz

Deanna Corbett
Home Ph: 06 876 8852
Email: djcorbett@xtra.co.nz

SOUTHERN NORTH ISLAND
Allan Richards
14 Bastia Avenue
Wanganui
Ph: 06 343 5039
Email: allan.serena@xtra.co.nz

Frank Lindsay
26 Cunliffe Street
Johnsonville
Wellington 6037
Ph: 04 478 3367
Email: lindsays.apiaries@clear.net.nz

NELSON
Murray Elwood
10 Whiting Drive
Wakefield
Nelson
Ph: 03 541 8929
Email: muzzbuzz@ts.co.nz

Nicky Elwood
10 Whiting Drive
Wakefield
Nelson
Ph: 03 541 8929
Email: muzzbuzz@ts.co.nz

CANTERBURY
Brian Lancaster
1133 Coaltrack Road
RD 1
Christchurch 7671
Ph: 03 318 7989
Email: be.lancaster@xtra.co.nz

Linda Bray
Braesby Farm, RD 1,
Ashburton 7771
Ph/Fax: 03 308 4964
Email: birdsnbees@xtra.co.nz

OTAGO
Frans Laas
Wildlife Solutions Ltd
102 Gladstone Road
Mosgiel 9007
Ph: 03 489 4597
Email: f-laas@xtra.co.nz

Peter Sales
"Te Ora"
RD 1, Port Chalmers
Dunedin 9081
Ph: 03 472 7220
Email: foxglove@paradise.net.nz

SOUTHLAND
Doug Lomax
15 William Stephen Rd
Te Anau
Ph: 03 249 9099
Fax: 03 249 9068
Mobile: 027 245 3384
Email: dougandbarbara@xtra.co.nz

John Stevenson
Southern Lakes Honey
PO Box 163, Te Anau 9640
Ph: 03 249 7954
Email: sl.honey@gmail.com

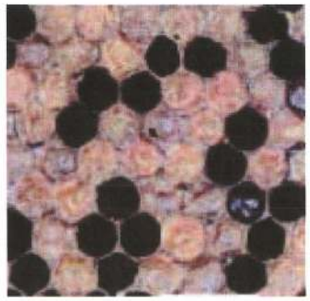
NBA LIBRARIANS
Roger and Linda Bray
Braesby Farm, RD 1, Ashburton 7771
Ph/Fax: 03 308 4964
Email: birdsnbees@xtra.co.nz

APIMONDIA OCEANIA COMMISSION
Maureen Maxwell, President
Ph: 09 411 7065
Mobile: 021 956 349
Email: maureen@wildforage.co.nz

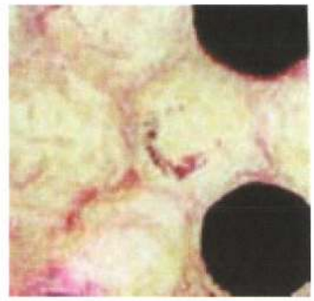
If your details have changed, please email editor@nba.org.nz and secretary@nba.org.nz so that we can update your details in the journal and on the NBA website www.nba.org.nz.

AFB RECOGNITION & COMPETENCY TEST PHOTOS

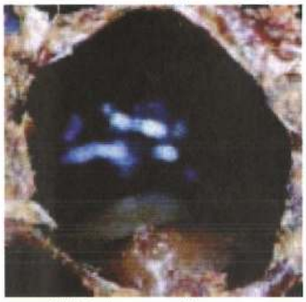
Unfinished cappings of healthy brood (yellowed)



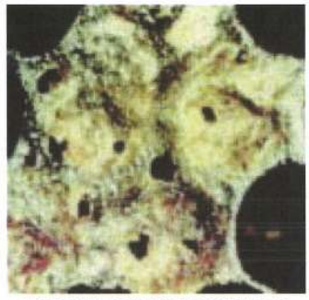
Cappings of brood infected with AFB



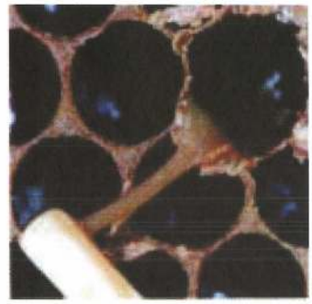
Bee chewing apart prior to emerging



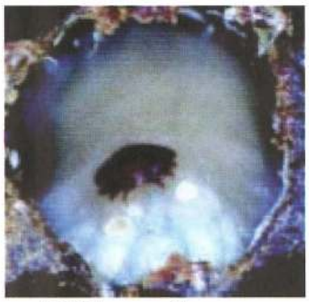
AFB diseased larvae



Holes in cappings of brood infected with AFB



AFB "ropiness" test



PMS larva with varroa

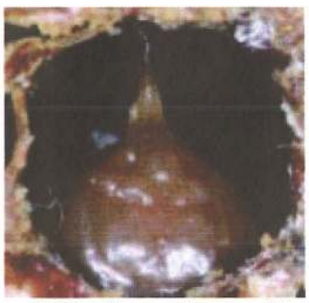
AFB—older, darker, diseased pupa

Removing PMS larva

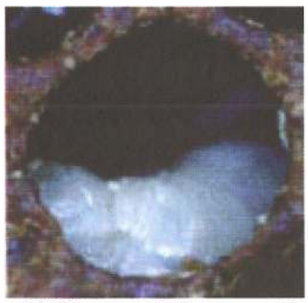
Chalkbrood—white mummy

Healthy prepupa

Sacbrood—coffee-coloured larva



AFB—diseased pupa with tongue



PMS larva spiralling up cell

Sacbrood—swollen larva

Photos taken by Dr Mark Goodwin for the AFB NPMS. First printed in 1994.

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

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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

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