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

Lower South Island Ward
Frans Laas (President)
Wildlife Solutions Ltd
102 Gladstone Road
Mosgiel 9007
Ph: 03 489 4597
Email: f-laas@xtra.co.nz

East Coast Ward
Barry Foster (Vice 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
Maureen Maxwell
BeesOnline/Wild Forage Ltd
97 Taylor Road, Waimauku
Auckland 0882
Ph: 09 411 7065 (h)
Mobile: 021 956 349
Email: maureen@beesonline.co.nz

Waikato Ward
Lewis Olsen
260 Ryburn Rd
RD 3
Ohaupo 2452
Ph: 07 823 6706
Email: lewis.olsen@clear.net.nz

Bay of Plenty Ward
Neil Mossop
Mossop's Honey
1064 State Highway 29
RD 1, Tauranga 3171
Ph: 07 543 0971
Email: info@mossopshoney.co.nz

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

Upper South Island Ward
Glenn Kelly (Treasurer)
Motueka Apiaries
PO Box 421
Motueka 7143
Ph/Fax: 03 528 8174
Mobile: 021 159 8483
Email: nzhoneys@yahoo.com

Central South Island Ward
Trevor Corbett
PO Box 20
Waipara, North Canterbury 7447
Ph: 027 450 4567
Email: beeworks@xtra.co.nz

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

NORTHLAND
Sarah Peacey
Wairua Apiaries
76 Malone Road
RD 9, Whangarei 0179
Ph: 09 434 6344
Mobile: 021 031 9129
Email: sandspeacey@gmail.com
Simon Peacey
Wairua Apiaries
76 Malone Road
RD 9, Whangarei 0179
Ph: 09 434 6344
Mobile: 021 858 648

AUCKLAND
Ian Browning
1824 Great South Rd
RD 3, Drury 2579
Ph: 09 236 0764
Bob Russell
101 Kern Rd
RD 3, Drury 2579
Home Ph/Fax: 09 294 8656
Work Mobile: 027 284 8951
Email: bob.russell@paradise.net.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.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
Don Simm
2 Walsh St
Gisborne 4041
Ph: 06 868 3866
Mobile: 021 150 3041
Email: donsim1@xtra.co.nz
Barry Foster
695 Aberdeen Road
Gisborne 4041
Ph: 06 867 4591
Fax: 06 867 4508
Email: bjfoster@xtra.co.nz

HAWKE'S BAY
John Berry
46 Arataki Rd
Havelock North 4130
Ph: 06 877 6205
Email: jrberry@ihug.co.nz
Mary-Anne Thomason
15 Sydney Tce, Takapau
Hawkes Bay 4203
Ph: 06 855 8038
Email: kintail_honey@xtra.co.nz

SOUTHERN NORTH ISLAND
Peter Ferris
PO Box 255
Masterton 5840
Ph: 06 378 7632
Email: happy.ferris@xtra.co.nz
Frank Lindsay
26 Cunliffe Street
Johnsonville
Wellington 6037
Ph/Fax: 04 478 3367
Email: lindsays.apiaries@clear.net.nz

NELSON
Glenn Kelly
Motueka Apiaries
PO Box 421, Motueka 7143
Ph/Fax: 03 528 8174
Mobile: 021 159 8483
Email: nzhoneys@yahoo.com
Michael Wraight
15 Titoki Place
Motueka 7120
Ph/Fax: 03 528 6010
Email: wraight@xtra.co.nz

CANTERBURY
Brian Lancaster
177 Greendale Rd
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
Allen McCaw
Milburn Apiaries
RD 2, Milton 9291
South Otago
Ph: 03 417 7198
Email: amccaw@clear.net.nz
Peter Sales
"Te Ora"
RD 1, Port Chalmers
Dunedin 9081
Ph: 03 472 7220
Email: foxglove@paradise.net.nz

SOUTHLAND
Carne Clissold
Glass Brothers Ltd
RD 5
Gore 9775
Ph: 03 207 1866
Email: carne@glassbrothers.co.nz
John Stevenson
Southern Lakes Honey
PO Box 163, Te Anau 9640
Ph: 03 249 7954
Email: sl.honey@gmail.com

www.nba.org.nz

National Beekeepers' Assn – Member Services

CHIEF EXECUTIVE OFFICER:
Jim Edwards
10 Nikau Lane
RD 3, Otaki 5583
Ph: 06 362 6301
Fax: 06 362 6302
Mobile: 021 631 447
Email: ceo@nba.org.nz

EXECUTIVE SECRETARY:
Pam Edwards
10 Nikau Lane
RD 3, Otaki 5583
Ph: 06 362 6301
Fax: 06 362 6302
Email: secretary@nba.org.nz

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

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

NBA membership & Journal Subscriptions:
Pam Edwards
10 Nikau Lane
RD 3, Otaki 5583
Ph: 06 362 6301 Fax: 06 362 6302
Email: secretary@nba.org.nz

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Dunedin 9044.
Advertising: Leonie Young
Telephone: 03 455 4486
Fax: 03 455 7286
Email: sales@southcityprint.co.nz

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

Important contacts to the New Zealand Beekeeping Industry

Rex Baynes
AFB NPMS Manager
PO Box 44282, Lower Hutt 5040
rbaynes@ihug.co.nz
info@afb.org.nz

American Foulbrood Pest Management Strategy
www.afb.org.nz

AsureQuality phone:
0508 00 11 22
www.asurequality.com

Exotic Disease and pest emergency hotline
0800 809 966
www.biosecurity.govt.nz

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Deadline for articles and advertising

October issue: 23 August
(goes to all registered beekeepers in New Zealand)

November issue: 23 September

All articles/letters/photos to be with the Editor via fax, email or post:

Nancy Fithian
email: editor@nba.org.nz
(See page 2 for full details)

President's Report

Honey imports

At long last, the independent review panel finally presented its report to MAF. The panel reported to the Director-General on 19 June, but the announcement to the industry was not made until July. This delay was of some considerable concern to the Executive. MAF would have announced it almost immediately if the decision was clear-cut and in their favour. What were they up to?

When the panel's announcement was made, I was somewhat surprised that it didn't provide a clear-cut decision either way. After the decision, MAF announced that it would review the findings and see where it would go from there. This decision is expected around early August. Once MAF has made up its mind about how it wants to proceed, then we can respond accordingly.

The independent review panel criticised MAF for the way it dealt with the Import Risk Analysis (IRA) process. The panel felt that some of the arguments put forward by MAF were not sustainable, and that MAF had been somewhat arbitrary in its decisions.

In the time since the IRA process was completed, the state of the beekeeping world has changed rather dramatically and this has not been factored into MAF's public thinking. The Import Health Standard (IHS) was formulated based on some known information and a lot of untested assumptions. With the new knowledge that is now available, the IHS would have needed to be substantially altered to reflect the new conditions, but it was not. Why not?

In 2006 I prepared a report for the Executive Council about *Nosema ceranae*, a pathogen that was causing considerable interest in the scientific community. This organism was being blamed for unexpectedly high mortality in bee colonies in Europe. Subsequently this pathogen has been implicated as one of the factors in the colony collapse disorder (CCD) problems found in North America. This organism was dismissed as being inconsequential by MAF after this was pointed out to them at the time. MAF then made the extraordinary statement that *Nosema ceranae* was not present in Australia because the Australian authorities had not reported it. In 2007 the Australians actually did look for it and found it. Then MAF also made the equally extraordinary statement that because certain pathogens had not been reported in New Zealand, they must be present. The independent review panel also commented on this display of faulty logic.

In the scientific world, using assumptions to make inferences is a risky activity. Failures of assumptions are often fatal to the outcome in more ways than one. In both cases there was insufficient information to make a decision and MAF should have acted accordingly. That is, it should have either tested the assumptions for validity, or taken the correct conservative approach and say that the risk factors were unknown, and therefore honey imports were too risky until more information was gained. MAF deliberately chose to act on these untested assumptions.

Why risk the beekeeping industry's per annum contribution of over three billion dollars to the national GDP through bee pollination, plus the substantial contribution that bee products also make to the economy, for the sake of 'free trade'?

MAF reviews border operations

The entire primary production industry should take note of MAF's intention to reduce staffing levels of its passenger, cargo and border standards directorates. The intention is to reduce staffing levels by 60. The stated reason is because of reduced demand for their services due to a reduction in cargo and passenger movements, plus a substantially reduced budget. Why cut down on biosecurity effort, when past and present governments have stated that a

robust border control system is absolutely vital to preserve our primary production industries? The present system is not entirely foolproof, and Government needs to provide good evidence to show that these proposed changes will not increase the likelihood of risky organisms slipping through the border control system. The original varroa incursion into New Zealand was quite clearly a failure in their systems. We don't want to see Small Hive Beetle getting into this country because of reduced border surveillance effort.

New CEO and Secretary

As you will all be aware, Jim and Pam Edwards are not renewing their contract and we are in the process of finding new administrative services. We have had nearly 100 applicants for the two positions. The shortlisting and interviews should be completed by early August and we hope to have a replacement Executive Officer and Secretary by early- to mid-September.

Monofloral standards consultation process

More than 50 submissions were received from individuals and groups. This is quite a respectable response to a very important issue for all honey producers. The submissions are being analysed at the moment and should be presented to the BPSC around the beginning of August.

Having a set of standards for defining monofloral types will go a long way to assist beekeepers in improving returns. For example, a lot of beekeepers take their honey off at the end of the season and can actually reduce the price for their honey because several honey flows can occur during the main summer flow. If the honey was progressively harvested during the season, then varieties like clover honey can be separated from later season Lotus and catsear flows. Clover honey is worth more than a multifloral pasture blend. I do this as a matter of course in my own operation by removing my spring fuschia honeys just at the start of the manuka flow. I get improved value for my manuka, and can also market the spring honey at a better price than I would if it were blended into the manuka crop.

- Frans Laas

On the front cover

This month's cover photo was taken by Fiona O'Brien and was the winning entry in the inaugural NBA photo competition, organised by NBA Executive Secretary Pam Edwards.

The competition was judged by Rotorua-based professional photographer Meg Lipscombe APSNZ.

All photos were displayed at conference, where all conference attendees could also vote for their favourite photo. The "people's choice" was hotly contested in three categories. Congratulations to Jody Mitchell and Jane Lorimer, whose "people's choice" winning photos will be published in next month's journal.

Meg Lipscombe APSNZ, with some of the excellent photos on show. Photo: Jim Edwards.

Private Bag 3080, Hamilton, NEW ZEALAND
Phone 64 7 850 2800 Fax 64 7 850 2801

AsureQuality

Report to the annual NBA conference, Rotorua, 10 June 2009

PERSONNEL

Apiculture Officers AsureQuality Limited

Murray Reid	Hamilton	Phone (07) 850 2881	Fax (07) 850 2801	Mobile (021) 972 858	Email reidm@asurequality.com
Byron Taylor	Hamilton	Phone (07) 850 2867	Fax (07) 850 2801	Mobile (021) 918 400	Email taylorby@asurequality.com
Tony Roper	Christchurch	Phone (03) 358 1835	Fax (03) 358 6222	Mobile (021) 283 1829	Email ropert@asurequality.com
Marco Gonzalez	Christchurch	Phone (03) 358 1937	Fax (03) 358 6222	Mobile (021) 951 625	Email gonzalezm@asurequality.com

Registrars of Apiaries AsureQuality Limited

Bob Derry	Registrar, Hamilton	Phone (07) 850 2837	Fax (07) 850 2801	Email derryb@asurequality.com
Margaret Roper	Registrar, Christchurch	Phone (03) 358 1717	Fax (03) 358 6222	Email roperm@asurequality.com

BEEKEEPER, APIARY AND HIVE NUMBERS

There were 2669 beekeepers, 21,550 apiaries and 362,540 hives on the 29th of May 2009 compared to 2589 beekeepers owning 343,155 hives on 20,438 apiaries this time last year. In the last two years, apiary and hive numbers have recovered after an extended period of decline following the varroa incursion in 2000. Hive numbers increased by around 18,500 hives to over 362,000 in 2008/09 while beekeeper numbers also rose. Most hive increase was driven by new entrants to the commercial industry and commercial beekeepers looking to capitalise on manuka honey prices.

Table 1: New Zealand beekeeper, apiary and hive statistics as at 29 May 2009

Location	Beekeepers	Apiaries	Hives
Northland–Auckland–Hauraki Plains	521	3069	53210
Waikato–King Country–Taupo	175	2283	46083
Coromandel–Bay of Plenty–Poverty Bay	274	3325	67769
Manawatu–Taranaki–Hawke's Bay–Wairarapa	565	3736	60458
Marlborough–Nelson–West Coast	250	1942	28083
Canterbury	524	3743	52870
Otago/Southland	360	3452	54067
New Zealand	**2669**	**21550**	**362540**

EXPORT OF LIVE BEES

Shipments of live bees to Canada this year surpassed the record set last year by 25%. Over 30000 x 1kg packages of bees were sent along with 3000 extra queens. By comparison, 22500 packages of bees were exported in 2008, 15120 packages and 4350 individual queen bees in 2007 and 8988 packages and 10,172 queen bees in 2006. Prices paid to suppliers held steady this year, with exporters paying around $22 per kg for bees and $25 per queen.

HONEY CROP

The New Zealand honey crop for 2008/09 is estimated at 12565 tonnes, up 190 tonnes on the 2007/08 crop of 12375 tonnes, and 18.5 percent higher than the six-year average. Honey crops above the six-year average were reported from all districts but there were marked differences within some districts. Over the year the climate swung from La Niña to neutral and then back again to La Niña, which resulted in warm settled conditions with below average rainfall in many areas and above-average sunshine hours, especially in the South Island and Hawke's Bay. November to December were dry and sunny months and rainfall was less than 50% of normal in eastern areas and between 50-80% of normal for the majority of the North Island. This affected pasture honey crops in East Coast areas of the North Island and Canterbury, South Canterbury and Otago. The dry warm weather saw an early start to the Waikato honey crop, which continued into January.

Manuka did not yield very well over the whole country. Northland and the East Coast of the North Island reported below average crops of manuka, with only average crops from else where in the North Island. The South Island did not fare much better, with below average crops of manuka being the norm this year. Other bush sources such as rewarewa, kamahi and tawari yielded good crops of honey but the Central Otago thyme crop was described as average.

Table 2: New Zealand honey crops

	2004 (tonnes)	2005 (tonnes)	2006 (tonnes)	2007 (tonnes)	2008 (tonnes)	2009 (tonnes)	6-year average (tonnes)
Northland, Auckland, Hauraki Plains	1047	1221	1337	1252	1186	1756	1300
Waikato, King Country, Taupo	1164	1095	1124	1270	1436	1864	1326
Bay of Plenty, Coromandel, Poverty Bay	2052	1498	1937	1897	2492	2250	2021
Hawke's Bay, Taranaki, Manawatu,	1330	1440	1935	1912	2755	2082	1909
Marlborough, Nelson, Westland	550	800	690	675	966	1140	804
Canterbury	1500	1500	2100	1620	1980	1718	1736
Otago, Southland	1245	2135	1300	1040	1560	1755	1506
New Zealand	**8888**	**9 689**	**10 423**	**9666**	**12375**	**12565**	**10601**
Yield/hive (kg)	**30.2**	**33.1**	**34.7**	**30.7**	**36**	**34.7**	**33.3**

- Murray Reid
National Manager Apiculture
Hamilton

NZFSA review of tutin standard

NZFSA is required, within six months of the commencement of the Food (Tutin in Honey) Standard 2008, to commence a review of Parts 2 (Options for Compliance) and 3 (Sampling and Testing).

The review is to consider:

(a) the operation of Parts 2 and 3; and
(b) the impact of Parts 2 and 3 on the persons to whom this standard applies.

NZFSA has commenced this review and is accumulating a list of matters that need to be considered drawing from discussions at industry conferences this year.

We would like to ensure as many beekeepers and processors as possible have the opportunity to contribute to the review at this initial stage. We invite beekeepers and honey processors to submit comments, data and any other relevant information on these matters.

Please submit your comments and information to NZFSA no later than Monday, 31 August 2009.

This information must be submitted in writing either by email to mathew.rogers@nzfsa.govt.nz or mail to:

Mathew Rogers
NZFSA
PO Box 2835
Wellington

This request was originally circulated via industry email lists in July.

What else are we doing on tutin?

I presented the following information at the NBA Conference in June and thought it might be useful to share it again here.

NZFSA has several toxicological projects under way to ensure we understand tutin poisoning sufficiently well to permit Food Standards Australia New Zealand (FSANZ) to set permanent limits.

The projects are:

(1) Genetic Toxicity: University of Auckland
This project is designed to look at the potential for longer term genetic damage from tutin. The tutin molecule fits the OECD predictive structural toxicity model. Many substances that the model predicts will be gene toxic are not when tested, so we have no particular reason to think that tutin is (or isn't!)

(2) Mode of Action: University of Otago
This project is looking at how tutin and its related compounds, including hyenanchin, act and whether there are significant differences in their activity in cell-based assays.

(3) Cumulative Toxicity: AgResearch
This project is designed to look at the effect of consuming lower doses of tutin over a period of time. If the body does not excrete it or detoxify it as fast as it is ingested, it may build up over time and cause illness.

(4) Honey Feeding Study: AgResearch
There is some doubt about whether tutin is the only significantly toxic compound present in toxic honey. This study is designed to confirm whether tutin is the only substance we need to regulate to prevent toxic honey poisonings.

We also surveyed the laboratories at the end of May and they reported that around one-third of honey samples submitted from the 2009 crop contained tutin, and 4–5% had tutin in excess of the limit.

Some beekeepers we spoke to at conference had checked tutu bushes and thought there was no problem but still had excessive levels of tutin in their product. The bees obviously were working other tutu bushes they hadn't checked or were foraging over a wider area.

If there is any doubt about whether you have tutin in your product, please ensure it is tested before sale. Better to be safe than sorry!

If you have any questions about the review, please contact me on 04 894 2609 or email me at jim.sim@nzfsa.govt.nz

- Jim Sim
Senior Programme Manager (Animal Products)
New Zealand Standards
NZFSA

Sting: *a novel from a bee's point of view*

Dunedin primary school teacher Raymond Huber is the author of *Sting*, a novel for children about the adventures of a young drone, Ziggy.

We are pleased to publish a review of *Sting* by Zoe Mitchell, daughter of Bay of Plenty Branch members Jody and Ralph Mitchell, along with an interview with Raymond Huber.

You can find more information on Raymond's website, http://www.raymondhuber.co.nz/ and on the publisher's website www.walkerbooks.com.au

Zoe Mitchell's review

Ziggy is the main bee in the story *Sting* by Raymond Huber. He is a very curious drone who loves to explore his environment and help other bees. Ziggy finds out lots of secrets about his life as a drone and how he is different from the other drones in his hive.

What I liked about the book was the amazing way Ziggy's world is described from a bee's eye view. Things that we think are small are huge to a bee. Like a raindrop falling from the sky, is like a bomb to a bee.

The message of the story is to follow your dreams because you might find what you are looking for.

I think this book will be a hit for children of all ages, even if you don't like bees, you will learn a lot about them. *My whole class at Kaimai School liked it too.* I really loved this story and I hope there will be another book about Ziggy and his adventures!

- by Zoe Mitchell, 9 years old

Interview with Raymond Huber

What's your own experience with bees?

I was about eight years old, playing alone in our Christchurch garden, when a swarm of bees swept over me. I thought the world was ending. Almost forty years later some friends gave me an unusual birthday present: a beehive full of bees. I became fascinated, and less afraid of bees. I'm a hobby beekeeper and still learning that there's a lot to learn.

What prompted you to write Sting*?*

I wanted to write the kind of book I loved to read as a child—an adventure where a small hero, like Frodo the Hobbit, saves the world. The bees seemed ideal characters: so tiny, but so vital to human survival. I love science so I blended bee biology with a little fantasy. The army plot is based on a news report about US weapons scientists using bees in war zones (that made me angry).

The novel is written from a bee's (drone's) point of view, which may be a first for a children's novel. Was this your original plan?

It's probably a first, but ideas are seldom completely original. I was inspired by books like *Beak of the Moon* by Philip Temple (about keas). When I started writing the drone character I quickly realised Ziggy could not be a lazy bee—one of Drone's Club (they were inspired by P.G. Wodehouse's books). Characters take on a life of their own as you write—the cliché is true—so I was as surprised as Ziggy when he found his family of highly intelligent bees.

Writing from first person/bee viewpoint 'forced' me to imagine a bee's life. I suspect that imagination is an under-used tool in the scientific worldview.

The book covers bee biology, hybrid bees, using bees for military research and colony collapse disorder. How did you go about researching it?

Researching was enjoyable because bee-people seem to be generous with their time. I interviewed scientists at the University of Otago—Professor Alison Mercer is a world expert on bee brains. I talked to beekeepers, and read fantastic books such as *Sweetness and Light* by Hattie Ellis and *A World Without Bees* by Alison Benjamin.

It was important to keep the biology fairly realistic in *Sting*, apart from the bees speaking English. I used research such as bees responding to magnetic fields, although I don't think scientists have ever put bees inside an MRI scanner—only a

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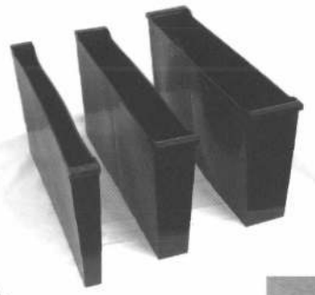

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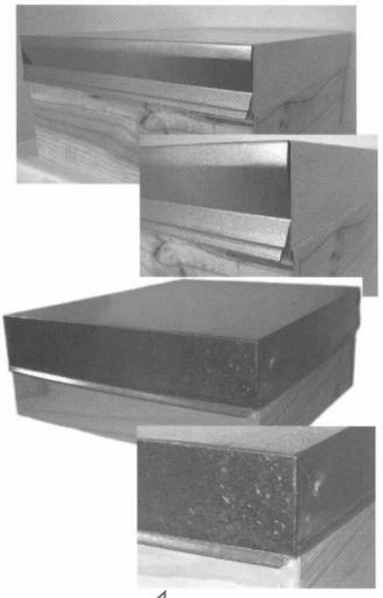

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Continued from page 9

writer would do that. The scientist in the book is based on a real person who spoke out against against unethical science.

As well as being an author, you're a teacher in Dunedin. How have children responded to the book?

I've been a primary teacher for 15 years. I always aimed to make my lessons imaginative and fun (that's teacher code for 'chaotic'), so writing seems a natural extension of teaching.

The response has been very positive. Children tell me they find *Sting* exciting and funny. Adults tend to like the underlying messages about the environment or war. Boys have been especially enthusiastic. Parents have reported their boys reading and re-reading it.

A child reader asked if *Sting* was about 'following your dreams'. That's probably true for Ziggy the bee, but more so for me the person.

How long have you been a children's author? Do you specialise in writing books with a scientific bent?

I'm been writing for about 10 years while teaching, but now I'm trying to make a transition to full-time writing. I turned 50 last year, so I figured it's now or never. I've written a lot of activity books for schools (mostly Science and English) in NZ and some for the US.

Do you have another book in the pipeline?

I'm writing a sequel about the same bee characters. It deals with pesticide dangers for bees and is set in Tokyo (Japanese hornets make great villains). It's going a bit faster than *Sting*, which took two years to complete.

Are there any budding beekeepers out there as a result of your book, Sting*?*

I hope so. The story aims to create a fascination with bees, and also to make children feel more at ease with them. I hope it will change the way people see bees at least. One adult reader said he avoided standing on a bee after reading the book: that's one bee saved, 1,000 billion to go.

Since *Sting* was published, I've visited many schools to talk about bees and hobby beekeeping. Schools show a lot of interest in the subject (they call it 'mini beasts'), and children naturally love the living world.

Sting, Walker Books Australia. RRP $16.99, 154 pages, ISBN 978 19211 50890.

In next month's issue:

Honey comparisons
Taming your techno-fear: part 2
Effects of SHB on the hive

Preparing your business to respond to a pandemic

You will be aware that the numbers of Influenza A H1N1 (swine flu) cases in New Zealand are increasing. The Ministry of Health advises that this trend is likely to continue over the coming weeks and months.

Obviously, a pandemic of this kind or any similar type of crisis will affect your business, your staff and customers. Just how much you are affected will depend on the severity of the crisis and how well prepared you are.

Planning to see your business through a pandemic is important. This can be done by planning the steps your business will take before, during and after a pandemic. There is no one, single response you can plan for. You and your staff need to respond flexibly depending on the situation. Keeping your plan updated will also be useful in the event of another type of crisis occurring.

Information on the Department of Labour website, www.dol.govt.nz, that could help you with your planning includes:

- commonly asked questions and answers for employers about potential employment issues that could arise during a pandemic
- information to assist with business continuity planning
- workplace health and safety guidance, including infection control advice relevant to the workplace
- advice on the use of personal protective equipment in the workplace
- practical scenarios that illustrate the different measures businesses can take to protect themselves.

Keep informed of developments and update your plans, and your employees accordingly. In addition to the existing business networks and organisations you belong to, the Department of Labour, Ministry of Economic Development and Ministry of Health websites provide ongoing sources of information on the implications of a pandemic for workplaces, businesses, and public health. Visit www.dol.govt.nz, www.med.govt.nz, or www.moh.govt.nz to find out more.

Source: Courtesy of the Department of Labour.

Conference comments

If you didn't go to conference in Rotorua (7–10 June), you missed a good one.

There were moans about having to be on site at 9.30 on Sunday morning for the new and small beekeepers' forum; but those who did were well rewarded. There was a large attendance in spite of the relatively high cost for small holders.

The selection of subjects was excellent; with Hawke's Bay Branch President John Berry giving a forthright dissertation on how to ensure the hive had the right queen. John's message was to buy from a reputable breeder who sells queens that produce gentle offspring, and with the ability to produce a good crop in the region that you have your hives.

The relative advantages and disadvantages of Carniolan and Italian queens were well explained.

We were taken through practical and theoretical methods of varroa control, with the theme being to check regularly as no method is 100% effective.

There followed information on AFB recognition and reporting, hive inspections with advantages of having a DECA, tutin and how to avoid tutin contamination of honey, the necessity of hive registration, requirements for legal selling of honey, and tips on storage of equipment between usage.

We were fortunate to have Jerry Hayes, the senior Apicultural Officer from the Florida Department of Agriculture. With a vast knowledge of many facets of apiculture, he was able to offer input into many discussions, on Sunday and throughout the conference.

Most specialty groups (i.e., queen producers, honey packers, pollination group and manuka honey producers) also made a start on the Sunday.

There were two Government Ministers at the evening Conference opening, indicating the respect for beekeeping among our relatively newly elected politicians.

In Monday's first session, Jerry Hayes (who by this time had discarded his tie in favour of a Bay of Plenty sweatshirt), explained the problem with neonicotinoids. According to Dr Christian Maus of Bayer, neonicotinoids were very effective when used correctly; unfortunately, the finer points of usage were not originally recognised, leading to a blanket ban in several European countries. Gisborne beekeepers were among those hit by residual poisoning.

The last session before lunch was a very racy dissertation by Ken Ring, pointing out there was nothing new in weather predicting. It is just a matter of the moon, the sun, the observation of cycles and putting them all together to show that there is a 19-year cycle to use as a base.

In the afternoon Dr Mark Goodwin led us to consider that, although a particular pesticide might be harmless, a conglomeration of pesticides could be a risk to bees. He expanded on the topic of pollination of kiwifruit by bees or various artificial methods.

Something completely different was the Chinese practice of mandible clipping of queens, as discussed by Dr Christian Pirk. Unable to grab a competitive queen, several queens could be introduced into a hive at different times, leading to increased brood rearing by queens of differing ages.

Big boys' (and girls') toys were on display throughout, so that any apiarist could decide what was essential to ease the workload.

On Tuesday we heard again from Jerry Hayes, with Dr Christian Pirk, who led us through the life cycle of the small hive beetle and steps that can be taken to control this pest when, not if, it reaches us.

Professor Peter Molan explained, with his usual brilliance, how honey's antioxidant and anti-inflammatory activities reduce the ravages of aging.

Pollinator decline, CCD, and the effect of a foot-and-mouth outbreak on beekeeping were also explored.

Two field trips completed an enjoyable conference organised by the Bay of Plenty Branch.

- Ron Morison

AFB RECOGNITION AND COMPETENCY (DECA) COURSE

The Franklin Beekeepers Club will host a DECA course

Date: Saturday, 3 October 2009
Time: 9.30 am sharp
Venue: Ramarama Hall (25 mtrs off the Southern Motorway)
Cost: to be advised but includes coffee, tea, biscuits, savoury lunch
Limited to 60 people: first in, first accepted!
Contacts for bookings:
Peter 09 238 6103
Craig 027 309 4023
Matt 027 669 0804

See ad to come in the September issue

From the colonies

Northland Branch

Congratulations to the BOP branch for organising a very good conference—well done. Good speakers, good organisation and, as always, much of the benefits come from talking with beekeepers.

Sarah Peacey has given presentations to the Whangarei Bee Club and to the branch on the Australian Small Hive Beetle Trip and is happy to go to other parts of Northland to give the presentation. The implications for how we manage our hives and our sheds are major if and when we get SHB. Good to learn about it now and incorporate new management systems before it hits us.

It's a quiet time of the year, with bees off soggy paddocks onto quarry and forestry sites, wintered down, plenty of honey and access to lots of that high-protein gorse pollen. We have had a particularly cold and wet winter and the wet started in May, rather than the more typical July onslaught. We've been battered by a few southerly gales that have sent lids flying. Having said this, we really are blessed with relatively warm winters. It is rare in Northland for daytime maximum temperatures to dip below 12°C in the winter. Consequently we don't often have a complete brood break, although with the Carniolan influence, we notice a lot more hives going broodless in winter even with a queen. Bruce Robinson in Kaitaia has had some of his bees bringing in a small flow over the last month!

At the end of June we went to Wellington, Christchurch and Dunedin to visit family and we were shocked how cold it was. The bees must need antifreeze to survive in Otago! I went for a walk in the hills behind Dunedin with three layers, a woollen jersey and a jacket, gloves and hat, walking uphill and I still couldn't stay warm. When I turned for home and the sun dipped behind the hills I reckon I had Shackleton, Scott and Amundsen for company and that I could see polar bears in the paddocks!

Two of our employees and I went to a first aid course run by Red Cross a month ago. I thoroughly recommend the training: practical, informative and fun! Every workplace needs a trained first aider for compliance with Occupational Safety and Health and the training needs to be refreshed every two years. Given the isolated nature of our work and the potential hazards we are dealing with much of the time, it just makes sense to have people trained.

The Whangarei Bee Club held a hugely successful AFB Recognition and Competency Course and test a couple of months back. Thanks to John Gavin for his tutoring.

It was good to see that John Berry is as good a fisherman as he is a beekeeper. Our two staff, who are very successful rock fishers, were very impressed.

- Simon Peacey, Branch Secretary

Waikato Branch

Today sees the return of the children back to school for the third term. That's a relief.

We've returned from our school holiday trip to Rotorua, where we endured the high-speed luge chase and the quackers of the yellow duck excursion, as well as the constant barrage of stinky mud smell complaints from our five-year-old, I could not help but notice the very early signs of spring. Several flowering cherry trees are in full bloom, the first lambs and calves and the first milk tankers on their rounds. Lo and behold, the first apiary I visited when back at work greeted me with a small show of daffodils.

Even the odd farmer is boasting about the first small signs of grass growth. Our turn's getting closer!

Reading though the July journal, I was pleased to see the return of Gary Jeffery's name in the magazine. In his article he spoke of using weed matting to suppress the weeds around the hives. By chance the other day I was in my local RD 1 shop, where I found numerous thick black plastic squares that are used on powdered calf milk pallets, looking for a new home. If you sit your hives on pallets they go just as well on top as they do under them.

Informed people make happy people, so I was happy to see the report of the NBA Executive Council meeting held after the conference being passed on. Keep it up so we can all stay happy.

Next meeting of the Waikato Branch: Friday 7 August, 10 am at McMeekan Centre, Ruakura Research Campus, Ruakura Road, Hamilton. On the agenda is the Tutin review submission.

- Stephen Black

Bay of Plenty Branch

It's raining again and quite cold (just for a change). We have had some lovely winter days but there seems to have been more constantly wet weather than in other years. We had a number of lids take to the paddock in the recent wind, which is very unusual for our lids. Luckily the farmer noticed them off and we were able to put them back on before any harm was done.

Most of the time is being spent doing maintenance jobs in readiness for the spring, which is not too far away. The sites are still accessible for the little bit of TLC they need at this time of the year. The gorse and wattle are flowering for pollen supplies, while the sugar keeps being used for the nectar supplement. Before we know it we will be into the spring checks and so it starts again. Hopefully the weather will start to get warmer and drier soon.

- Barbara Pimm, Branch Secretary

Continued on page 15

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- it's the easiest to use (rigid strips - no curling)
- it's very safe to use (very important - especially for staff)
- it has twice the contact area (4 strips per brood chamber)
- very kind to beeswax, propolis & comb honey
- very gentle on queen bees & nucs
- it can be used during the honey flow if required
- strips have a 5 year expiry date from date of manufacture

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We'd strongly recommend that you use Bayvarol® as one of your alternate treatments and Thymovar® as the other.

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100 to 796 strips	$1.85 + GST each
800 to 8800 strips	$1.48 + GST each
9600 plus strips	$1.43 + GST each

Packets contain 20 strips, cartons contain 800 strips. For orders of up to 100 strips please add $6 incl. GST for freight. Orders of 100 strips or more are despatched freight free to anywhere in New Zealand. Payment is required prior to despatch by Visa, M/Card, Cheque or Electronic Banking.

For any enquiries or orders, please phone 03 358 7498 or email: Bayvarol@beehealthy.co.nz

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Hawke's Bay Branch

As you know, beekeepers are never happy. It has finally rained and rained and rained and rained.

I will be running an AFB Recognition and Competency (DECA) Course on Saturday, 15 August at Arataki Honey, starting at 9 am. All participants will have to meet the costs of the test themselves, but the course itself will be free for all NBA members. Non-members will be charged a fee of $30, which will go towards branch funds. As our branch secretary is away at the moment, anyone wishing to do the test will need to send their $25 for the test to Mary-Ann Lindsay, 26 Cunliffe Street, Johnsonville, Wellington 6037. As Mary-Ann needs 10 days to process applications, please get them in as soon as possible. If you're not an NBA member, please bring $30 for the course on the day.

Conference was, as always, a great place to meet up with old friends and surprisingly enough to learn new things. The ability to keep multiple queens in one hive by removing the queen's mandibles! A fascinating use for applied bee behaviour. Weatherman Ken Ring was also a fascinating speaker who put forward some very plausible thoughts on how weather was cyclic and how he based his predictions on these cycles.

When I got home I went back through some of my honey production records, which go back over 40 years. I was careful to only use apiary records from yards that have not had any major changes in either position or floral sources, and the results of the 19-year cycle were fascinating. Weather and women are both cyclic: both meant to be experienced and enjoyed and, of course, totally unpredictable.

- John Berry, Branch President

Nelson Branch

The dates for the NBA CONFERENCE 2010 in Nelson have been set:

Sunday 27 June:	hobbyist seminars
Monday and Tuesday, 28–29 June:	seminar days
Wednesday, 30 June:	AGM

School holidays begin the following Friday, 2 July, so take the kids out of school and come to Nelson early for a holiday in the sun.

The Nelson Branch of the NBA had a good attendance of 21 beekeepers at their meeting on 20 July. As well as hearing from Fraser Wilson who reported on the remits, we talked about next year's conference to be hosted here.

Most beekeepers feel that their hives are coming through the winter with good strength and I just hope that it is not due to their robbing out feral hives that are dead from varroa. That of course presents AFB issues and also brings us to the reality of having to face the 're-invasion' problem with varroa more this year. With the past few days feeling very springlike, we are all observing lots of heather, tree lucerne and acacia pollen coming into the hives.

There was a lot of discussion about the importance of keeping good communication with other beekeepers regarding varroa treatments, re-invasion issues, and also any AFB outbreaks. We were grateful to hear that AsureQuality Limited is trialling an electronic registration of apiaries and notification of AFB hives, as presented by Byron Taylor at conference. We applaud this initiative and look forward to this being in full use by all beekeepers soon!

In association with the NBA, Philip Cropp is organising a AFB Recognition and Competency (DECA) Course in August, probably to be held in Tapawera. There will be a small fee to cover the one-day course and test fee. If interested in registering, contact Philip at (03) 522-4130.

Emmanuel Kelly gave an informative presentation on the Small Hive Beetle (SHB) following his visit to Australia with other NZ beekeepers in May. This trip was made possible by funds from the NBA Honey Industry Trust Fund and the kind and hard work of many North Island beekeepers who did all the organising and co-ordination. I feel Emmanuel's 'hands-on' talks with Aussie beekeepers and the viewing of the problems there has made all of us a lot more aware of the issues associated with this menace, and we came away fearing the day that we too would have to face a 'slime-out'.

- Merle Moffitt

Canterbury Branch

Canterbury is in the midst of a long, drawn-out winter. We have had few frosts but the ones we have had have been severe. We have had what seems like a lot of rain, so we could be setting the scene for a good year as the soil moisture is certainly past saturation point. Time will tell.

Most Canterbury beekeepers will be facing varroa this year so there is a need to be vigilant and be ready to act. I know I'm not looking forward to this season with the added challenges that this will bring. Guess those that survive varroa will look back and wonder what we were so afraid of. Here's hoping the ground conditions start to dry out so access isn't the same problem as it was last year. Good luck for the coming season, I think we will need it!

- Brian Lancaster

Otago Branch

With a few 'spring feeling' hours sneaking in amongst the coldest July for a while, the bees and beekeepers are briefly coming out of hiding. Only just long enough to discover it really is too soon yet! It is interesting that this time of year a brief calm sunny spell will have bees coming out for a look,

even on a day of around 8 or 10 degrees. They would be staying home if it were summer but this time of year they must have cabin fever like the rest of us.

Beekeepers are just checking too and we had another branch meeting recently to discuss the AFB situation in Otago. Rex Baynes, the AFB NPMS manager, led a discussion to further our proposal to establish an AFB-free zone south of the Waitaki.

Before one or two of you scoff too loudly, it is worth checking the stats. Last year the national level of reported AFB was 0.27% of hives, compared with 0.33% in 2009. Otago comes in as the lowest region at 0.08%, or one-third the national average. There are 360 registered beekeepers in Otago and Southland, and of these, 17 reported disease. While we accept there will unfortunately be a degree of underreporting and unregistered hives, we have no reason to believe this is any worse here than elsewhere. Indeed, the recent helicopter survey—which is the only hard data we have—suggests it is on a par or less. Therefore the reported level can be assumed to be a true indication that there is less AFB in the region now than anywhere else in the country.

There is clearly an incentive to try and keep this trend happening to the point that it will be very hard for bees to contract AFB. With only 30 apiaries out of 3740 having AFB reported, it isn't exactly all over the place anymore. Many of us can remember when practically every beekeeper had some AFB in their hives every year. Things definitely have changed in this part of the country and I believe the strategy is largely responsible for this. Apart from any thing else, it has involved beekeepers in the control of the disease to a greater degree. They are much better informed and the stigma that kept it underreported for many years has pretty well disappeared.

So our plan? Well, we think with only seven or eight 'hot spots' to focus on, it will be possible to thoroughly investigate the source of each reported AFB hive. Sometimes it is an isolated case with no apparent source: perhaps some old honey in some old gear used for the first time in years or a willow clearance exposing a wild hive. Most times, though, the primary AFB hives in these circumstances are no real threat if discovered before there is a chance for it to spread. You could argue that they have been sacrificed to find and remove a residual source of AFB spores. Other times a clear source of infection is identified, like a robbed out hive. What we can try to do is prevent this being repeated and escalating by investigating each and every notified outbreak. In doing this, we have a good chance to further decrease the AFB incidence the following year. Worth a shot, we think, before varroa dominates our thinking.

- Peter Sales, Branch Secretary

From Telford Rural Polytechnic

An AFB Disease Recognition and Competency Course (DECA) is scheduled for Friday 28 August starting 9 am at Telford, finishing around 3.30–4pm. Cost is $50 which includes $25 test fee. Bring your own lunch or purchase from dining room. Contact Telford, 0800 TELFORD (835.3673) ask for David Woodward ext 832 for an enrolment form or email:david.woodward@telford.ac.nz *Deadline for enrolment is Friday, 14 August.*

Control of varroa using organic treatments—part 7

Michelle Taylor, Mark Goodwin, Omar Martinez, Heather McBrydie & Lisa Evans
Plant and Food Research

Plant and Food Research, with support from the Sustainable Farming Fund (SFF), the National Beekeepers' Association (NBA), contributions from a number of beekeepers, and ZESPRI, are working with beekeepers to try to increase the efficacy of organic varroa control products. This is the seventh article of a series, written as a means of sharing the information about use and efficacy of organic varroa control products.

During the 2007–2008 season four organic products were assessed in both single and double brood box colonies. These were Apilife VAR®, Thymovar®, Apiguard®, and thymol crystals. All of the colonies that were treated with one of these products in autumn (March) 2008 required a second synthetic autumn (Bayvarol® /Apistan®) treatment. This was because the varroa levels in late autumn were too high for the colonies to survive throughout winter. The inability of organic chemicals to control varroa in autumn may be due to the high levels of varroa resulting from the treatments being applied too late (March).

In the 2008–2009 season, we tried to assess whether conducting the autumn organic treatment earlier in the autumn when the level of mites was low would control the varroa more effectively.

Because the cooperating beekeepers did not have time to accurately assess varroa levels in a large number of colonies only one product was used this season. Apiguard® was selected based on the least number of organic colonies that died during the previous season and because the beekeepers considered it to be the easiest to use (Table 1).

	Hive loss (number)	Ease of use (1-5)	Total
Bayvarol®	0	1	1
Apiguard®	1	2	3
Thymovar®	4	3	7
Apilife VAR®	6	4	10
Thymol	7	5	12

Table 1. Organic products used in the 2007–2008 season were ranked by beekeeper opinion, with 1 having the easiest instructions and application and 5 being more difficult to understand and apply. The number of colonies that died during the autumn was included in the total for each product.

2008–2009

Twenty-one colonies were managed as part of the trial by each of seven beekeepers throughout the 2008–2009 season. Varroa was controlled using either a synthetic product or Apiguard®. The effect of oxalic acid, ventilated floorboards and food grade mineral oil (FGMO) on the efficacy of the treatments was also assessed. The following seven treatments were randomly applied to each group of 21 double brood box colonies that contained young queens (<12 months) and had a queen excluder between the top brood box and the first honey super:

1) Bayvarol® solid floor
2) Bayvarol® ventilated floor
3) Apiguard® solid floor
4) Apiguard® ventilated floor
5) Apiguard® + oxalic acid solid floor
6) Apiguard® + oxalic acid ventilated floor
7) Apiguard® + oxalic + fogging solid floor

The oxalic acid, ventilated floorboards and FGMO were requested by the beekeepers participating in the trial and the reason why each method was included is as follows:

Oxalic acid kills varroa on bees. It is thought to work best in winter when there is little or no brood. Whether it would reduce varroa numbers enough during spring and autumn to enable Apiguard® to effectively control varroa was unknown.

Ventilated floorboards are thought to be beneficial when integrated in a varroa control programme as they reduce the number of varroa that climb back up to the brood nest and reproduce. Whether the removal of these fallen mites throughout the season would reduce varroa numbers enough during spring and autumn to increase the effectiveness of Apiguard® to control varroa was unknown.

Food grade mineral oil (FGMO) is used by hobby beekeepers and a couple of commercial beekeepers to control varroa in New Zealand, although the effect on varroa has not been assessed in NZ. The use of FGMO is not accepted by the current organic certification agencies. Whether FGMO would increase the effectiveness of Apiguard® by reducing the varroa levels over summer and autumn was unknown.

It is likely that if any of the three factors increased the effectiveness of Apiguard®, the same may also occur when used in conjunction with Thymovar® or Apilife VAR®.

The effectiveness of the two control products and any increased efficacy resulting from the type of floorboard, or the application of 5ml oxalic acid per frame of bees, or the application of four puffs of food grade mineral oil was determined by measuring the effect on varroa levels, honey production and the number of frames of bees and brood. The varroa levels were assessed by conducting sugar shakes before- and after-treatments. The honey crop was removed from the hives by the first week in February 2009. A single

application of oxalic acid was conducted immediately after the removal of honey, and at the same time as the Apiguard® application. FGMO was fogged into the allocated colonies every three to four weeks throughout the season.

Thresholds of "20+" and "40+ mites" per 300 bees in a sugar shake were used in this trial to determine whether the products had effectively controlled the varroa. When there were between 20 and 40 mites in a sugar shake after a treatment, the colonies were treated a second time with the organic product. When there were more than 40 mites the colonies were treated with a synthetic product.

The varroa levels from all (n=105) of the treatment groups before and after the spring treatment (September-October) and before the autumn treatment (first week in February) were all less than five mites per 300 bees (Figure 1). These mite levels suggest that a spring Apiguard® treatment controlled varroa as effectively as Bayvarol® over summer, providing the autumn treatment was conducted before the end of the first week of February.

In the assessment after the autumn treatment, the Apiguard®colonies had significantly more mites than the colonies treated with Bayvarol®. This was irrespective of the type of floorboard. Of the colonies that were treated by the first week in February (n=90), based on the threshold levels 14.4% (n=13) required a second organic treatment, and an additional 7.7% (n=7) of colonies required a synthetic treatment. In comparison, all of the colonies that were treated in the second half of February (n=15) had more than 100 mites per sugar shake and required a synthetic treatment.

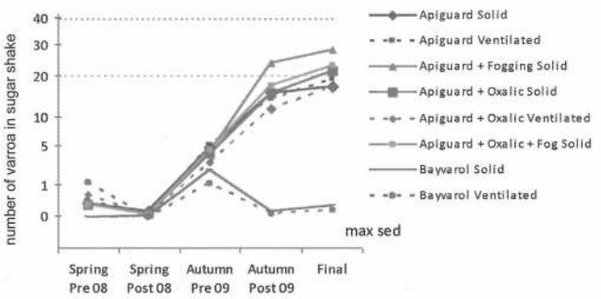


Figure 1. Average varroa counts collected from colonies with or without ventilated floorboards and treated with Bayvarol® or Apiguard® and/or oxalic acid or FGMO fogging throughout the 2008–2009 season. The widely spaced, orange dotted horizontal line indicates the level above which the hives were to be treated with the allocated product. The closely spaced, red dotted horizontal line indicates the level above which the hives were to be treated with a synthetic product.

Although Apiguard® colonies had significantly higher varroa levels after the autumn treatment than the Bayvarol® colonies (excluding the colonies that were treated later in February), the average levels were not above the "40-mite" threshold. This suggests that an additional organic treatment may have been sufficient to effectively control the varroa till the spring treatment. All of the 2007–2008 colonies that were treated with an organic product required a synthetic treatment, compared with only 7.7% of the colonies treated by the first week in February. This suggests that by removing honey and treating the colonies at the end of summer (first week in February), it may be possible to control varroa in autumn using two treatments of Apiguard®. As we did not continue looking at the colonies after April, we were unable to conclude what happened to the colonies in each of the treatment groups after this time.

The type of treatment or floorboard did not have any effect on the amount of honey collected by the colonies, or the size of the colonies at the end of the season.

Conclusion

It was possible to control varroa sufficiently in the spring with an organic chemical. As with last year it was not possible to control varroa in the autumn with a single organic treatment. If, however, the treatment was applied early enough in the autumn, varroa may possibly be controlled with two organic treatments. The use of ventilated floorboards, oxalic acid or fogging with food grade mineral oil did not add to the level of varroa control.

Our special thanks go to the seven beekeepers that took part in this trial, for their generous supply of hives and their time spent counting mites and applying treatments. Without their help this trial would not have been possible. Thanks also to Ceracell Beekeeping Supplies for providing the Apiguard® at "cost" for use in this trial.

New Life Members honoured

Three prominent members of the bee industry were awarded life membership of the NBA at the conference in Rotorua in June. They are:

- Ruakura-based bee researcher Dr Mark Goodwin of Plant and Food Research Limited (formerly HortResearch)
- Neil Farrer of Wanganui, immediate past Vice-President of the NBA
- Pauline Bassett of Te Kuiti, former NBA Executive Secretary.

Mark and Neil received their awards from NBA President Frans Laas. Pauline was unable to attend Conference this year but Waikato Ward representative Lewis Olsen accepted the award on her behalf.

Congratulations to each of you for your well-deserved honour.

L to R: Dr Mark Goodwin, Neil Farrer and Pauline Bassett
Photos: Mary-Ann Lindsay; Fiona & Jeremy O'Brien.

Letter to the editor

Why aren't we sharing information?

Dear Editor,

It is past the shortest day. Here in the foothills of Canterbury the frost is thick on the ground. The last of the honey dew has been extracted, the wax melted and the big 4x4 truck has no deck, while the chassis has a crack welded up to satisfy the ever-vigilant COF man at the testing station.

It is a time for reflection and planning. Part of our operation here in the foothills revolves around farming, and this evening I was sat by the fire reading articles in the *Deer Industry News* about dry matter gross margins and improving productivity. Positive articles that spurred the thought that maybe, just maybe, in the current varroa 'under siege' mentality that we are in, maybe we should start selling bees to finance a major fencing programme. And as I sat and mulled by the fire I thought, bugger it, we beemen are in a strange industry. I read the farming magazines and all the contributors are ready and willing to divulge to the last cent how and how many dollars per kilo of dry matter they are making and spending, while I wouldn't even know if my neighbouring beeman was still in existence.

Within the industry we have a wealth of experience and knowledge and we have people talking of quitting because it's so hard to make a dollar. I was at the tavern last night for our Friday night fish 'n' chips and was introduced to a reputable grower of seed crops, who begrudingly moaned about the price he had to pay for bees to pollinate his crops. He had no idea how our industry worked and felt he wasn't getting value for money for the ten grand he forked out to the beeman.

Which brings me to my point. With varroa here in Canterbury and many beemen seriously thinking about quitting or scaling down because the time and effort put in isn't rewarded with a positive bank balance at the start of the next season, why the hell aren't we sharing information on how to make a go of it?

Why haven't we got a uniform pollination price and standard organised for next year in which the buyer of our services can have faith? Why are we not sharing important information with each other, and I mean, really important information like how we are achieving good yields of honey—whether it's two-queening for quality comb honey, or running singles on bush sites to produce organic honey dew, or sharing our cut-off dates for requeening with direct cells. We need to know who is buying our honey and who should we be selling to. We also need information about who is holding us to ransom, knowing that we are short of cash, and offering us a rock-bottom price at a drip-feed payment schedule that doesn't even match the overdraft that we have to carry to ensure they, the packers, stay in business.

Divide and rule has been the catchphrase handed down for generations and it is no different today. The honourable Minister had us sussed in his address at the Conference. In today's economic climate we need to unite and share information on how we are succeeding, or not, because success breeds success which, in turn, engenders a feeling of positivity for the industry.

My challenge to *The New Zealand Beekeeper* is to start publishing information that shares success stories. Share ways on how people have learnt how to do it right and not over and over with mediocre results. Share thoughts on diversification. One of last year's employees rang this morning from Canada: "I need you to take me back on the payroll next year, James; I gotta teach you how to make package bees 'cause it was dog-eat-dog here this year, everybody scrambling for a limited number. There's a market here and you need to be in on it".

The list goes on. We're embattled and shackled by a bureaucratic procedure for our extraction plants. They need to be upgraded to the 21st century but it's a major cost. Why haven't we got a co-operative plant with state of the art machinery that can process more than a couple of tonnes a day, where half a dozen beekeepers unite under a single RMP that can, in turn, hold the packers to ransom to pay a fair price for the product?

- James Corson

Australian SHB study trip report
Part 1: Small Hive Beetle and the hive

This article has arisen from the recent NBA trip to Australia to study Small Hive Beetle. My thanks go to the many people involved in organising the trip, to the Honey Industry Trust who funded it and to the Australian beekeepers and researchers who gave up so much time to talk to us, show us things and patiently answer lots of questions. I am sure that the industry in New Zealand has already benefited from the knowledge we gained. My thoughts on SHB have been somewhat modified by listening to the likes of Jerry Hayes and Dr Christian Pirk at Conference this year.

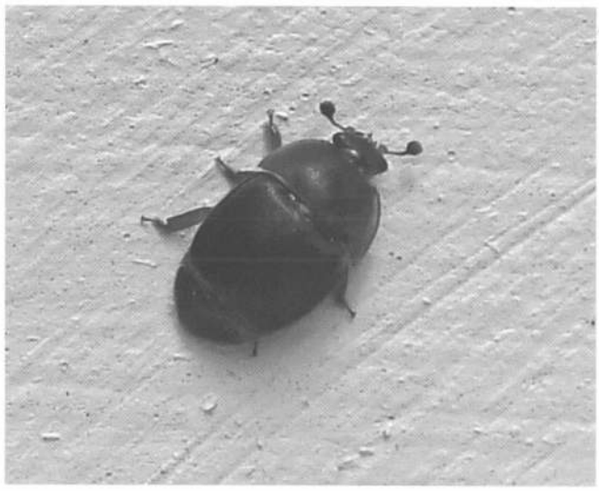
Life cycle

There are four stages in the life cycle of the Small Hive Beetle. Eggs are laid inside a hive and hatch into larvae, which then leave the hive to pupate in the ground from which the adult beetles emerge. The most destructive stage is that of the larvae.

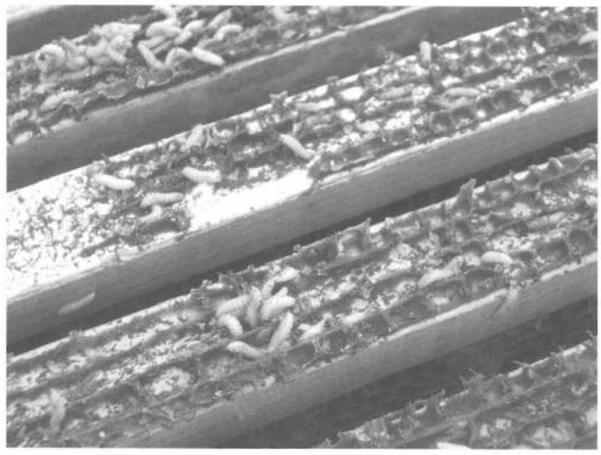
Adult beetles tend to enter hives at dusk. The bees seem to allow them to enter freely. Once the beetles are in the hive, they look for dark corners and areas where they are away from light and, if possible, the bees. Adult SHB are mature enough to lay eggs at 3–6 days old. The eggs are sprayed in clusters of 30–40, generally on darker comb, but they can be laid through cell walls into brood.

The larvae hatch between one and four days after the egg is laid, depending on temperature and humidity, and look like maggots. They crawl out of frames towards light (whereas wax moth larvae move away from light). The larvae are 10–13mm long and 1.3mm wide. The larval stage generally lasts 10–19 days, but if conditions are unfavourable, it can be as many as 30 days. The higher the levels of protein in the food of the larvae, the larger and quicker they grow.

Small Hive Beetle larvae in frames. Photo: Brian Lancaster.



Adult SHB. Photo: Jody Mitchell.



Larvae on top bars. Photo: Sarah Peacey.

Comparative size of SHB and bees. Photo: Jody Mitchell.

The larvae then crawl out of the hive to pupate, and seem almost indestructible. They feel rubbery and while they can be squashed with a hive tool, it takes a lot more effort than with wax moth larvae. Beekeepers in Australia talked of

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putting larvae into a sealed plastic bag, leaving it on a hive lid in temperatures over 40°C and finding them still wriggling after more than an hour!

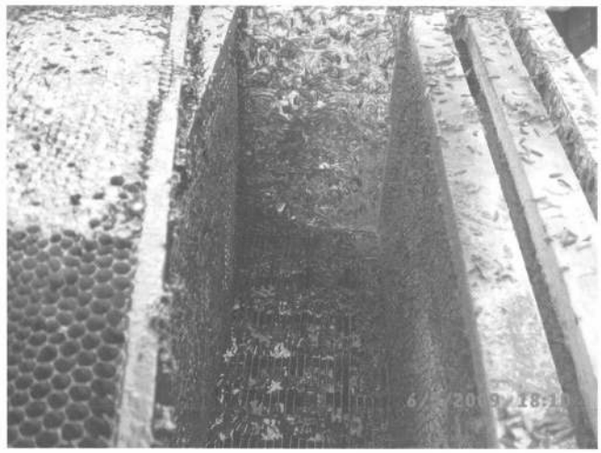
Pupation generally takes place in the soil close to the hive but the larvae are capable of moving 200 metres to find the right soil conditions. They normally pupate at depths of 100–150mm and within a few metres of the hive. The success of pupation is moisture and temperature dependent. They require a minimum 20–25% soil moisture to pupate. At 10°C it can take up to 100 days; at 20°C this stage takes 15–60 days before the adult emerges. Generally, the higher the temperature the quicker they develop.

Young adult beetles are readily attracted to light. Adult SHB have been known to live for 167 days under laboratory conditions. They can live in fruit trees and other environments until hives come into the vicinity. It is probable that they can breed successfully in fruit and other media, but hives are preferred. SHB have been found breeding in a compost heap with rotting fruit and there has been one unconfirmed report of them breeding in a silage heap. SHB does best in warm, humid conditions where there is ample food.

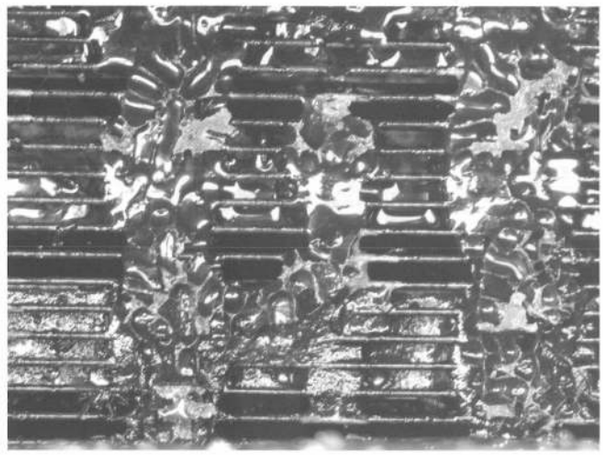
Adult beetles in the hive are not destructive and some hives tolerate very high numbers; 3,000–4,000 per hive have been counted. The bees tend to corral them and will keep them imprisoned for long periods. The beetles are kept alive as they induce the bees to feed them even within their prisons. Some hives show very aggressive behaviour towards the beetles, harassing them constantly, but they are unable to kill them because of a hard carapace and the beetles' 'turtle' behaviour. The beetles pull everything in and crouch down so they only present their hard carapace to the bees. Once the beetles are freed, they mate and lay eggs.

The destructive stage of SHB is the larval stage. The larvae look like maggots. They tunnel through the combs feeding on pollen, brood and honey. They particularly like any slum gum or hive detritus in which they can hide as well. As they move through the combs the larvae defecate, producing yeasts which ferment the honey, causing it to go slimy and ruining the honey in the process. The larvae continue to feed until they are sufficiently developed to pupate. At this point they slime out and move out of the hive and into the soil.

As the larvae move through the combs producing slime, the bees retreat from the affected combs, and eventually they will abscond from the hive. The effects of a 'slime out' are pretty awful. One member of our group said it is the most disgusting thing he'd ever seen in a hive! The smell is nasty, the wriggling mass of larvae awful and the slime plain disgusting, sticky, dark coloured and difficult to get rid of. Once a hive has been abandoned, other bees will not rob honey or move in. The hive needs to be pulled apart and cleaned. Most of the Australian beekeepers were using wooden frames with wax sheets and these were generally burnt. The woodware of the hive can be thoroughly cleaned, aired, and then reused, but is time consuming. In New Zealand, where so many plastic frames are used, it may be possible to clean and sanitise them, but it would still be time consuming.



View of a slime-out. Photo: Brian Lancaster.



Slime on queen excluder. Photo: Jody Mitchell.

Attractiveness of hives to SHB

On any apiary site there may be hives side by side that are affected by SHB quite differently. There does not always appear to be a reason for some hives being affected and others not; however, there are situations that will attract beetles and there are some hives that are definitely more vulnerable. SHB are attracted to hives by bees giving off stress chemicals, and the beetles can smell these from as far away as 20 kilometres!

There does not seem to be anything more attractive to beetles than hives. Many different substances have been tried and Australia is continuing research into SHB attractants. The hives that are most vulnerable are those that are queenless, weak, nuclei, splits, hives with lots of boxes on therefore with extra space in them, and stressed hives (i.e., stressed by pests, disease, being moved, sprays, poor nutrition, etc). Australia does not have varroa, which will add stress to New Zealand hives. Although not proven by scientists, it is a commonly held belief that SHB spreads AFB.

Queen breeders in particular seem to be having a hard time with nucleus hives. Logically this is understandable—nucs are smaller, tend to have fewer bees (therefore more space), get disturbed frequently and are regularly made queenless—all

are risk factors for hives where beetles are concerned. We were told of one example of a hot, humid day when 100 nucs were worked—one week later they were all slimed out! The same problems may face beekeepers here with shaken bees and splits. Beekeepers will need to think about the work they do in hives and the timing of it. Requeening seemed to cause problems for some Australians in terms of when they did it. Hive build-up and swarm prevention will need to be thought through carefully. Splitting and requeening may be better done in spring because the temperatures are cooler and SHB numbers are likely to be lower. Spring production of queens will have implications for New Zealand as spring queens here are at a premium anyway. One thing to remember is that pollen patties, of any description, are the most wonderful source of high-protein food for hive beetle. In one research programme, the pollen patties fed the SHB larvae more than the bees!

Management practices to control SHB

There are management practices that help reduce the effects of SHB in most hives. Good hygiene around hives and keeping the inside of hives clean are essential. The less debris and burr comb around, the fewer spaces for SHB to take over. Keeping hives strong and with a minimum number of boxes seems to help. None of the hives seen in Australia had more than two boxes and beekeepers kept their hives tight; i.e., there was no extra space in the hives and the bees occupied every part of the hive. People talked of the ability of SHB to take over a hive very quickly where hives had honey boxes left on. Beetles lay in the top box, where bees have stopped working, and within a few days larvae start spoiling the honey, slime drips down and the bees abscond. In Australia, the practice seemed to be take one honey box off and add one box. Very rarely was more than one honey box left on.

Small Hive Beetles do not like new comb, there being nothing to hide in or eat, so frequent frame replacement is one way of helping to reduce areas that are suitable for them to breed in. Frame replacement may provide another useful management tool to use against SHB.

New Zealand beekeepers and beekeeping will survive SHB but it will mean a change in some management practices, both in the hive and in our sheds. New Zealand beekeeping has survived varroa, which is much more devastating to the bees. However, the combination of SHB and varroa will be much more difficult to deal with (remember that Australia doesn't have varroa). Having said this, the general opinion of the Study Group was that EFB would be much more damaging to the New Zealand beekeeping industry than SHB, particularly in its first few years. Small Hive Beetle will be one more thing to add stress to our bees and what we need to do now is to look at our beekeeping practices, look at our management practices, continually look at what may cause our bees further stress and work out ways in which we can mitigate the effects. SHB is only one of a raft of diseases and pests that our bees may have to contend with in the future.

- Sarah Peacey, President, Northern Branch
Northern Ward study group representative

About the Apiary

In early July, a new beekeeper and I were out having a look around some apiaries to make sure they were still heavy and upright. It was cool although sunny and a few bees were flying, mostly gathering water. Inside the hives, the queens have just started laying again—the new season has begun. The brood area will be restricted to the size of your fist in the colder areas but in the warmer areas, where it's easier to keep the brood area warm, the bees could have brood in the bottom half of two or three frames depending upon the strength of the hive. The bees are using the stored pollen and honey for this purpose, replacing those bees that are dying off during the winter from old age. Once brood rearing is underway, the bees start to consume stores at an increasing rate; one cell of pollen and one of honey are used to produce each bee. It also takes a lot of energy to keep the centre of the hive at 35°C and therefore doesn't take long for a hive already short on stores to run out and die.

Emergency feeding

Commercial beekeepers generally are out in August doing their first round of feeding. A couple I know have combination top feeders. One half contains raw sugar and the other, syrup. When the bees have cleaned up the syrup, they work on the raw sugar until the next syrup feeding round. Some feed 15 litres at a time, which should hold a hive for three to four weeks.

I have been around some of my nucleus colonies and a couple were starving. You can tell when bees are on their last legs. They can't fly at you when the hive roof is removed; they will shiver their wings and fall off the frames when they are lifted out. Unless this hive is given immediate attention, it will die. It needs a little honey or warm sugar syrup lightly dribbled over the top of the frames to get the bees going again and an immediate injection of at least three frames of honey. You can't just rob this honey from the colony next door as it's not possible to inspect both hives for AFB during the winter. Disturbing colonies can lead to their death in cold areas. (If the bees don't recover within 15 minutes, take the hive home and put them in a warm, dark basement or shed. They should soon recover with a little warmth.)

If you haven't put honey aside for feeding purposes (from hives with a known clean history; otherwise it's the quickest way to spread AFB), then you will have to a feed thick sugar syrup; i.e., a 2:1 sugar to water ratio. Feed three or four litres, then go back in a few days and give them some more if it's a strong hive. Top feeders are best as the bees don't have to move too far to get at the syrup and the heat given off, but the cluster tends to stop the syrup from going completely cold. If you only have frame feeders, move them in a little so they are close to the cluster.

No feeders but still have to feed? Buy some plastic bags the size of a bread loaf. Partly fill the bag with three litres of warm syrup and put a rubber band on the end to seal it. Place an empty super on the hive and put the plastic bag on top of the frames where the bees are clustered. Then take a pin and put two or three pin holes in the centre of the bag. Press down on this spot and allow a pool of syrup to gather. Spill a little over the edge on to the bees to entice them up on to the bag. They will take the syrup and their combined weight will force more syrup out until most of it is consumed.

If the hive still has a couple of frames of honey, is strong (i.e., enough bees to cover a super) but will soon need attention, give them five kilograms of raw sugar, as suggested in last month's column.

Winter robbing

In one apiary we visited, at least six hives were flying in great numbers and there were excited bees at their entrances. All were heading back towards the last apiary we had visited, but there weren't any bees flying in that particular apiary.

These bees had located a dying feral hive—perhaps one of last year's swarms—and were busily bringing back honey and with it, most likely, varroa mites. In Wanganui, a hobbyist beekeeper has counted as many as 200 mites a day coming in with robber bees, so it doesn't take long for the robber hives to reach their mite threshold of five days. This robbing will stimulate more brood rearing, which has just started again. These mites, apart from feeding on the healthy bees, will go into the cells containing brood in great numbers, kill or badly deform bees because of the viruses they carry and will kill the hive within a month without an emergency treatment. If treated early, the hives will come through good and strong. You might think that one feral hive being robbed won't have much effect on an apiary, but I have monitored 18 hives close to a feral hive being robbed: all hives had a massive increase in varroa mite drop during this winter robbing period. By the time you read this, hives that engaged in winter robbing will be down to a four-frame nuc size and will only have a week or two to live. Look for signs of shrunken bees and larvae at the hive entrance and *treat them immediately.*

Winter work

I have spent a few days inside cleaning up some old queen excluders. Most of these had rotten wooden rims and were partially blocked with wax. I was repairing them to use on top of my stacks of supers to prevent mice from entering once the weather warms. Why? Recently I saw fresh wood chips below a stack of supers. A rat had eaten its way up through two supers of frames and had just started making a nest with green grass and pine needles. It gave me great satisfaction to knock it on the head despite it doing $60 damage to newly drawn frames. (It hadn't taken any of the rodent baits I had placed in plastic bottles underneath the pallets of supers.)

The best way to clean wax off excluders is to put them in a bath of hot water. I haven't got anything suitable to do this, so I was using a gas torch to heat the wax. (Besides, using a torch was a nice way to keep warm.) First, I cleaned most of the wax from the continuous wire side of the excluder by running a hive tool down the wire. Then I gently heated the wax, section by section of the excluder, and gave the excluder a sharp knock on a bench to remove the molten wax. After

Continued on page 27

Stainless Steel Mesh for Managing and Monitoring Varroa Mite in Bee Hives

A corrosion resistant, long-life product

The MAF guide for New Zealand beekeepers "Control of Varroa" recommends the use of mesh bottom boards in beehives to increase varroa mite mortality and reduce the likelihood of bee re-infestation.

Stainless steel (ss304) woven mesh options:

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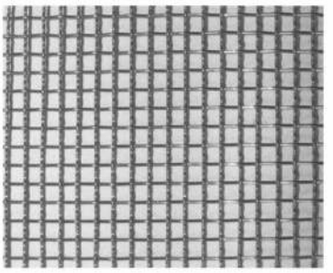
10% deposit required with order
Current prices available from info@xcluder.co.nz



Grade 6 mesh stainless steel

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Note: Mesh can be precut into panels on request – please email or ring the Xcluder office for your specialist needs and pricing.

Continued from page 25

removing the wax from each excluder, I ran my eye over it to see that the wires were straight, and then sideways to see if any wires were sticking up slightly. If so, I gently reset them with a hammer and used pliers to straighten wires that were out of alignment.

It wasn't until putting on the new wooden rims that I found I have accumulated five different designs of excluders over the years. It just shows how queen excluders have changed. Now we are using excluders without rims to prevent this build-up of wax (with the wooden rims, the bee space is too big). Some just fit into the frame and others were slightly bigger. The soldered ones came out the cleanest, as the melting solder tended to expel the wax from the surface of the wires. A couple I couldn't repair: seems the weight of a cow on an excluder puts the wiring out of alignment. Still the ones I have repaired are now ready for use. There's still a lot of other work to before the spring—it's only 14 weeks to the honey flow.

Things to do this month

Make up and prepare equipment for replacement or for additional hives. Check hives after storms. Check hive weights. (Some commercial beekeepers are starting 3-4 week feeding rounds.) Check several hives in each apiary for natural mite fall—a high number indicates robbing or poor autumn treatment. (A winter honey flow is also a sign of robbing, unless you are close to the South Island beech forests.) Stimulate your queen breeder and drone production hives so they get building rapidly, ready for the first queen matings in October.

- Frank Lindsay, NBA Life Member

NATIONAL HONEY COMPETITION

At the NBA Conference 2009 in Rotorua, NBA members voted to establish a National Honey Competition, which would be held annually in conjunction with the NBA Conference.

The Auckland Branch, which will be overseeing this project, seeks expressions of interest from members who would like to assist in writing of appropriate schedules, regulations, preparation, act as stewards or judges or in general to be part of this working committee.

Please contact Maureen Maxwell
(Northern Ward Representative)
ph: 09 411 7065
mob: 021 956 349
or email to: maureen@beesonline.co.nz

Gary Glasson took these photos in August 2008 near Otira on the West Coast. He says, "we had to move the bees so a power pole could be replaced. This was the day we decided to move them back: it wasn't snowing when we set out."