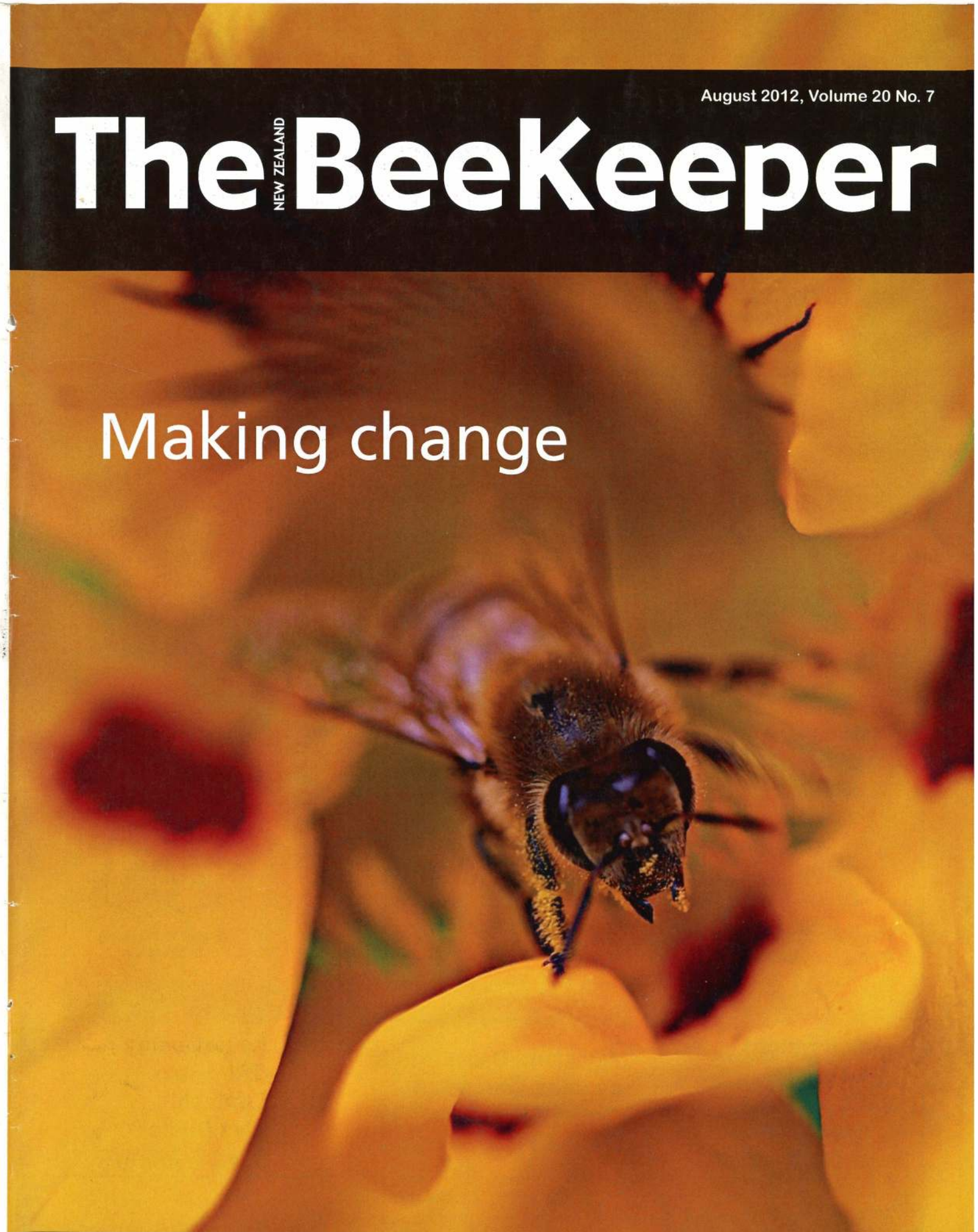
August 2012, Volume 20 No. 7

The New Zealand BeeKeeper



Making change

- Conference coverage
- Performance of VSH honey bees
- Psa review: implications for industry

The Future of Beekeeping
NBA Conference 2012

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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)

PO Box 10792
Wellington 6143
Ph: 04 471 6254
Fax: 04 499 0876
Email: secretary@nba.org.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

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 NPMS Manager
PO Box 44282, Lower Hutt 5040
Email: rbaynes@ihug.co.nz

American Foulbrood Management Strategy
www.afb.org.nz

AsureQuality Limited
Ph: 0508 00 11 22
www.asurequality.com

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Front cover: This photo, taken by Carol Downer, won first place in the Close Up category of the 2012 NBA photo competition sponsored by Ecroyd Beekeeping Supplies. Carol says, "I spent an hour in front of the nasturtium patch near my back door using a macro lens to capture a number of photographs of the bees collecting pollen".

Making change

By Barry Foster, NBA President

Many of you may be basking in the warm afterglow of Conference, a memorable event in late June.

For those of you who didn't attend, it was a very well run conference that broke records for attendance as more than 300 people attended the seminar days. The venue and organisation was good, speakers excellent, and the weather was kind. It all combined to make for a truly memorable conference.

The conference organisers from the Hawke's Bay Branch of the National Beekeepers' Association should be congratulated for their hard work and planning over many months to make this event a success. On behalf of the Executive Council and other members, I thank you very much for your efforts and fine organisation.

Conferences are about people interacting with each other in a convivial manner that often engenders a mixing of new ideas and thoughts. This conference was no exception. As President, I often had to attend meetings and didn't get to hear every speaker's presentation. Nonetheless, I took part in some important meetings that I found quite inspiring. Two of these meetings I'd like to mention in this report.

The first was on the Tuesday evening (26 June), when Executive Council member Kerry Gentleman and I arranged for all of those in the science community attending conference to meet together in one room, where we discussed what each of us is doing for our industry in our own particular area of research. We invited Dr Doug Somerville from Australia to be part of this gathering. It was good for all to meet and discuss the research being done across disciplines and to develop the interrelationships between scientists. We all enjoyed participating and we certainly intend to build on the constructive relationships we forged.

The idea for this gathering came from a panel discussion of scientists and businesspeople that I attended in early June, as part of the Transit of Venus celebrations held in Gisborne. See under proceedings for the website for the Royal Society under the Transit of Venus Forum: http://www.royalsociety.org.nz/events/2012-transit-of-venus-forum-lifting-our-horizon/forum-programme/

Derek Handley, co-founder of the mobile marketing company The Hyperfactory, made an interesting comment:

"Small countries can outperform larger ones e.g. the USA in rapidly changing direction in science and innovation. Literally we could get most scientists in one room together on a particular science question. We need to mix and mingle ideas & innovation."

> **"If anything will unify our industry, it will be in the field of scientific research."**

In 2011, Derek was named one of 125 World Class New Zealanders and a Sir Peter Blake Trust Emerging Leader. In 2011 he was invited to join President Obama's 'Startup America' partnership as a way for outstanding leaders being able to change how leaders give back by linking nonprofits with executive level leaders. See http://www.whitehouse.gov/economy/business/startup-america

This was my driver to get the group of scientists in one room at conference, and I spoke about it in my introduction. It is about taking a wider view and I feel that we need to socialise bee research more, perhaps with regional and conference forums, and get greater buy-in socially and financially. If anything will unify our industry, it will be in the field of scientific research. I think that we could well take heed from the wisdom given at the Transit of Venus Forums. For example Sir Peter Gluckman, science advisor to the Prime Minister, said:

"We need a true hybrid science incorporating science and the community. There has been isolation from the social sciences in the past.

Communities provide values and science provides knowledge. The best example of where this broke down is with the GM debate."

Our industry exports around $100 million annually, yet past connections with science and innovation have often been in response to crises such as varroa. Contributions to research in comparison with export values are paltry as a percentage of these exports. There is a lack of a strategic approach to research. Why? It is simply because beekeepers are so often disconnected from science and often have not had an opportunity to contribute to it; also, social and financial constraints play their part. We need to change this situation.

The second inspiring meeting was with our NBA Technical and Submissions Committee. We invited Cora Drijver from the Environmental Protection Agency and John Hartnell from the Federated Farmers Bee Industry Group. This meeting was a highlight from my point of view because it was the first time that all of these people had got together in one room and discussed one constant threat that our industry and all pollinating insects face—the new and existing pesticides that may affect us.

The NBA is clearly the leader in the area of pesticide issues facing our industry. Misuse of pesticides is one area that most would agree needs greater education and control.

Continued on page 6

Continued from page 4

The other area where our industry has had little past involvement is the registration and use of new and existing pesticides that might affect our bees. As a country, we have no strategic view on where we are going as new pesticides get ever more toxic in order to combat increased resistance from the target species. Open communication like this has got to be the significant part of the answer.

In my President's report to the AGM, I quoted Jack Welch, a past tough reformist CEO of the US giant firm General Electric, who once said, "Change before you have to". I see this as encapsulating our industry's position at the moment.

This year we have a unique opportunity as an industry to participate in a study to determine some worthwhile goals for our industry. AGMARDT (better known as The Agricultural and Marketing Research and Development Trust) has offered funding in principle to conduct this study in combination with contributions from industry. I believe that we need to grasp this opportunity and do it well. This means incorporating as wide a view as possible from industry and beekeepers. The advantages of participating are not limited just to the study itself. By continuing this dialogue into the future, it would lead to some substantial benefits and significant changes for the betterment of beekeeping in New Zealand.

New science project under way

Currently there is a very important science project being conducted at the GNS Science National Isotope Centre in Lower Hutt by Dr Karyne Rogers. This project is funded largely by AGMARDT with support from MPI, MFAT, The UMF Honey Association, GNS Science, the Honey Trust, Honey NZ Ltd, Claridges Organic Limited, Heathcote Apiaries, The Honey Company and Apitech, and various beekeeping industry organisations including the NBA.

The project is entitled 'Why is New Zealand failing sugar adulteration tests.' There have been some recent rejections of shipments from some of our export markets as a result of what are considered possible flaws in the current internationally acceptable test for sugar adulteration. All export shipments are now being tested by border agencies on arrival overseas and it is recommended by MPI that testing now be conducted in New Zealand prior to export.

Dr Karyne Rogers. Photo: Barry Foster.

We plan to bring you regular updates on this project as it progresses over the next twelve months, but in the meantime this is to serve as an introduction to this project and Dr Karyne Rogers.

The NBA wants you!

The National Beekeepers' Association of New Zealand

The NBA is looking for a new Lower South Island Ward Representative to sit on the Executive Council. Being a Ward Rep means being a part of the governing body of the NBA – you will be given the opportunity to direct, lead and control the affairs of the NBA on behalf of our members.

You will also be given the opportunity to act as the voice for your area, bringing issues relevant to Otago and Southland to the wider Executive table.

The NBA is looking for a leader; someone who is not afraid to speak up for their region. We need someone who can look at the bigger picture and make fair and balanced decisions that will benefit the industry, the Association and our members.

The NBA needs someone who can help to create an NBA which provides maximum value to its members.

If you're interested in working proactively to create positive change for both the NBA and the wider beekeeping industry, register your interest for the position of Lower South Island Ward Representative with the NBA National Office – 04 471 6254.

We look forward to hearing from you.

New Executive Council

Pictured is your newly elected Executive. The new members are Dennis Crowley (Bay of Plenty Ward) and Roger Bray (Central South Island Ward).

Left to right: Dennis Crowley, Mary-Ann Lindsay, Roger Bray, Daniel Paul, Barry Foster (President), Kerry Gentleman, Stephen Black, Neil Stuckey (Vice President) and Pauline Downie.

Photo supplied by Barry Foster.

Results of National Honey Show 2012

By Maureen Maxwell, President Apimondia Oceania Commission, Wild Forage Ltd

Hawke's Bay once again turned on lovely weather, excellent facilities and a warm welcome for conference attendees.

Due to this year's poor harvest in the North Island, competition entries for the 100% Pure New Zealand Honey National Honey Show 2012 were down slightly. The quality of the entries was good, however, with a nice mix of winners from both commercial and serious sideline smaller beekeepers.

Carol Downer once again very deservedly was awarded the 100% Pure New Zealand Honey Supreme Award trophy. Her entries were very carefully chosen and presented to the highest standard. Carol predominantly forages in and around Auckland City, with outstanding results.

Please note for those wishing to challenge Carol next year, the Supreme Award goes to the highest scoring exhibitor overall, taking into account the sum of the top six scores of an individual exhibitor.

Among the other outstanding exhibits, Allen McCaw's creamed honey (Class 7) was much admired, as was Hayden and Adrian Pohio's new Manuka Boosta Sports Gel (Class 16).

Congratulations to all competitors and my thanks to all sponsors. Thanks also to Peter Bray, our South Island judge, David Hills, the show steward and Lynn Greene, who compiled all the results so patiently.

Prepare for the 2013 Show!

Visit www.nba.org.nz for the Show Schedule and start preparing your entries for next year. The next show will be held at the NBA Conference in Christchurch, late June 2013. The competition takes place on the Tuesday of the week of the conference, with registration of entries due by 5:00 pm on the Monday.

[Editor's note: due to space constraints, we are unable to publish the full list of winners in the journal, but this list is available on the NBA website www.nba.org.nz.]

Carol Downer of the Auckland Branch displaying the array of trophies she won in the photo and honey competitions held at Conference. Photo: Mary-Ann Lindsay.

Photo competition results

By Mary-Ann Lindsay, Lower North Island Ward representative

This year's annual photography competition held as part of the NBA Conference in Napier, 25–28 June 2012.

The competition was again sponsored by Ecroyd Beekeeping Supplies.

Competition entries were received in four categories:

1. Close Up
2. Scenic
3. Portrait
4. Essay (4–7 photos)

The competition judge was Ken Dwyer of Photoworks, who also was the photographer for the official Conference photo.

Category winners

Close Up
1st Carol Downer
2nd John McLean
3rd Frank Lindsay

Scenic
1st Frank Lindsay
2nd Frank Lindsay
3rd Jody Mitchell

Portrait
1st Mary-Anne Thomason
2nd Fiona O'Brien
3rd Jody Mitchell

Essay
1st Carol Downer
2nd James Ward
3rd Jody Mitchell

People's Choice
1st Carol Downer
2nd Frank Lindsay
3rd John McLean

The overall winner was Carol Downer.

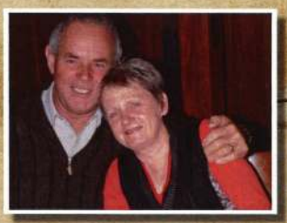
Congratulations to all winners and thanks to those who entered and participated in the judging. Thanks again to our sponsor, Ecroyd Beekeeping Supplies.

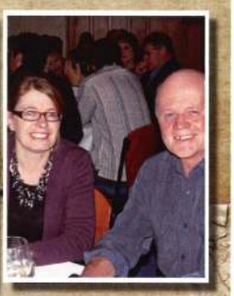
The categories for next year will be the same so get your cameras out and start snapping. Don't be camera-shy!

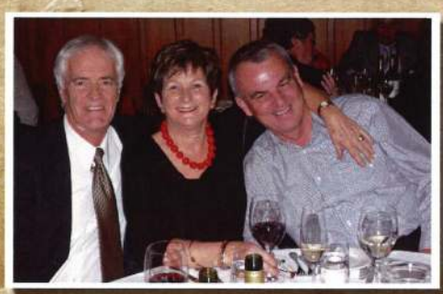
Over the last four years we have had four different overall winners. Next year it could be your turn.

[Editor's note: we will print a selection of the winning photos in upcoming issues of the journal.]

Hawke's Bay 2012







Above: Allan & Barbara Pimm; the Tecpak sponsor's stand

Row 1: Kev & Deanna Corbett; Karen & John Berry; Upper South Island Ward rep Kerry Gentleman watching the fun.

Row 2: Ralph and Jody Mitchell; Mr & Mrs Russell Poole; NBA Life Member Allen McCaw of the Otago Branch with the Hon Nathan Guy and the gift of a beeswax candle.

Row 3: Rosa Laas and NBA Past President Frans Laas; Byron and Michelle Taylor, Harlan Cox and Kali Bell.

Row 4, : Karen Stafford, EZYLoader Australia and NBA Life Member Frank Lindsay; Dr Doug and Mrs Somerville; Dr Karyne Rogers and NBA President Barry Foster.

Row 5: AsureQuality staff at dinner: Murray Reid, Margaret & Tony Roper; Conference speaker Dr Karyne Rogers, GNS Science.

Photos: Mary-Ann Lindsay and Deanna Corbett.

Roy Paterson Trophy 2012

Barry Foster won this year's Roy Paterson Trophy award presented at the AGM for the hive lifter that he and his staff constructed (see photo).

Shifting individual hives between pallets of four is heavy work and could result in back strain, quite apart from disturbing the bees. This lifter works on a scissor-grab principle that enables a two-box hive to be lifted gently and easily by two people using their thigh muscles to lift the hive, greatly eliminating any back strain in the process. The bees nearly always seem to be calm through the lifting process as it is so gentle and precise.

Barry demonstrating his winning innovation. Photographer: Neil Foster.

From the Conference organisers

The deadline after Conference was too close for the committee's round-up meeting, but what we really want to do this time is thank our wonderful sponsors. It is their support that makes Conference possible, so please return the favour and support their businesses through the year.

We would also like to thank the team at the Napier War Memorial Conference Centre who took such great care of us, and the Mission Estate Winery who provided a stunning venue and service to match for the Dinner and Dance evening.

A full conference report will be provided in next month's issue.

Photos: Frank Lindsay and Deanna Corbett.

EXECUTIVE UPDATE

By the NBA Secretariat

2012 Conference & AGM in Napier

The Executive and Secretariat spent much of the last two months preparing for their slots at conference and for the AGM. As part of this, weekly teleconference calls and face-to-face meetings with the Ministry for Primary Industries became the norm, in order to work through the details of the GIA scenario presentation.

GIA scenario

A two-hour open session was held to set the scene for how the biosecurity environment for the beekeeping industry would change if we agreed to sign the Government Industry Agreement (GIA) deed.

The aim of the scenario was to highlight the difference between how biosecurity planning and responses are handled now for our industry, and how they might be handled under GIA.

John Hartnell acted as MC, and David Hayes, Director Preparedness & Partnerships, Compliance & Response, represented the Ministry for Primary Industries along with Paul Bolger, Senior Policy Analyst. Barry Foster and Kerry Gentleman were the NBA/Industry representatives. Daniel Paul, CEO assisted with the PowerPoint presentation.

Barry Foster kicked things off, setting the scene for the scenario by explaining that the GIA concept has been around for several years now.

Government believes the current system of planning for and handling incursions is not fair to all parties, and it has proposed a scenario whereby government and industry co-operate more closely on how to deal with pests and diseases that might make it over the border.

GIA has created a lot of controversy, and most industries were against it in the early days. As a result, Government has adopted a slightly different approach —they've agreed to work more closely with industry on the conceptual design of GIA—and it's fair to say things are progressing much more smoothly.

Together with BIG and various other industry bodies, the NBA has been part of a working group that has put together a new framework for how GIA might work. So far, most industries are indicating their willingness to progress to Stage 1 of the GIA, signing a Memorandum of Understanding (MOU). But there is still a lot of water to go under the bridge.

During the GIA demonstration at the conference, Barry stressed that there will definitely be some costs to signing up to GIA. However, there will also be some outcomes and major differences in approach to biosecurity planning and incursion response that industry may feel are well worth the cost.

The demonstration was not about convincing anyone that GIA is good—or bad! It was simply about showing the difference between what happens now and what would happen under GIA, as well as providing a clearer picture of GIA so we, as an industry, can make an informed decision about whether or not it is right for the industry.

The NBA plans to hold a detailed consultation process with its members to get their feedback on GIA. For the bee industry to progress with GIA, it is a requirement that the whole industry works as one, and that the bee industry gets a mandate to proceed from industry.

Four important aspects of GIA were covered in the session:

- how upfront biosecurity preparedness and planning would be addressed
- how a pest surveillance programme could be designed and delivered
- the preparation of an incursion response plan
- what happens now and what would happen under GIA if we get an incursion.

A copy of the GIA Scenario script and PowerPoint presentation is available in the members' section of the NBA website or by emailing secretary@nba.org.nz.

Executive Council and Branches gathering

The Executive Council invited Branch presidents and secretaries to a small gathering over a few drinks one evening at conference. This gave Branches and the EC—the leadership of the Association—an opportunity to discuss a range of issues. It also gave the Executive Council a chance to talk with presidents and secretaries about some of the work they have been doing behind the scenes over the past year, and to give a brief overview of planned work for 2013.

Barry Foster spoke about the need to improve communication at all levels of the Association.

It is important to communicate effectively with our external stakeholders, he said. However, it is equally important, if not more so, to communicate with our internal audiences—our members. Some concerns were raised by some branches at the amount of information they were being sent by the Secretariat and that they did not see the need for all of it.

A major talking point was how to gain new commercial memberships and attract lapsed memberships back to the NBA. The Executive and CEO agreed there was more work to do on this, but were dependent upon the Branches doing what they could to provide the names of commercials to contact. Daniel Paul, Joint CEO, said the Secretariat now made a point of contacting new and renewed commercials to thank them for their subscriptions.

Another concern was that in order to attract members the NBA had to demonstrate value for money. Daniel explained the Secretariat and Executive were already working on new membership categories and pricing levels, along with attracting new benefit partners offering discounts to members. He explained some of the value is hard to quantify as it is not readily seen when meeting with government ministers, government departments and stakeholders. Barry reiterated the need for Branches to communicate their concerns to the Executive and that these sessions would be established as a regular event during conference week. He also said they may look at re-establishing quarterly teleconference calls with the Executive and Branch presidents and secretaries. →

NBA Work Plan for 2013

Barry Foster and Executive Council members Stephen Black and Kerry Gentleman, along with CEO Daniel Paul, presented the NBA work plan for 2013.

The vision

- To be widely recognised as the peak body representing the beekeeping and bee products supply industry.
- To be recognised by all sector participants as a valuable and influential industry leader.

The mission

- To help protect and promote beekeeping in NZ for the benefit of all beekeepers and those associated with the bee products industry.

Key issues for the industry

1. Varroa
2. Biosecurity
3. Market access
4. Bee health

Four key drivers of the NBA

1. Research: Keep our bees healthy
2. Represent: Speak for the industry on all important issues
3. Promote: Promote bees and beekeeping in NZ
4. Build: Better systems, improved leadership, a stronger NBA

Key actions

1. Finalise the NBA's rules to give clarity and direction.
2. Ensure sustainable funding streams so the NBA can do things that make a real difference.
3. Improve organisational governance and succession planning to give appropriate leadership.
4. Create and actively promote a compelling value proposition for the NBA to grow membership.
5. Set key performance indicators (KPIs) for Executive Council, Branches and Secretariat to ensure they are seen to perform.
6. Establish a biannual bee health survey to benchmark what's happening with NZ's bee populations.
7. Improve the NBA's stakeholder engagement plan to give us more influence.
8. Deal with GIA.
9. Undertake appropriate incursion response planning so we are prepared if the worst happens.
10. Identify and prioritise research requirements that deliver on what members want.
11. Seek funds to facilitate that research.
12. Run an annual survey of members and stakeholders to benchmark awareness of and satisfaction with the NBA's work.

The Executive will continue to update Branches and members on progress on a quarterly basis.

AGM

The guest speaker at the AGM this year was Jeff Grant, Chairman of AGMARDT. The Agricultural and Marketing Research and Development Trust, better known as AGMARDT, invests around $2.7 million per year aimed at exploring market opportunities, encouraging innovative ideas, and developing future leaders within the agribusiness sectors.

Jeff farms sheep and deer at Balfour in Southland and has extensive agribusiness and rural sector leadership experience. He is currently Chairman of the Milford Sound Development Authority and holds directorships on the Southland Building Society, the Animal Heath Board and the National Animal Identification and Traceability Board. He is a former Chairman of the NZ Meat Board, Meat and Wool New Zealand, the Primary Industry Council and the Meat Research and Development Council. Jeff has also been a director of Landcorp, Wrightson, and Agriculture ITO and has served as a Member of Parliament.

Jeff spoke about the importance of bees to New Zealand and the importance of having a strategy or work plan for the future. He suggested looking at how other industries operate, and to position the bee industry in such a way as to have a voice that is heard in government and among stakeholders.

Jeff challenged members with the following questions: How healthy is the industry, and what of its future? Is there a risk to the viability of beekeeping, and is the level of investment in the wider industry at a sustainable level for a viable future? Success attracts members.

Jeff also spoke at length about the value and importance of a commodity levy to industry. The Commodity Levies Act has many attractions in giving industry a platform to operate from. Diversity of an industry is easily accommodated for future funding. Stakeholders get to decide every five years which ensures focus on giving what levy payers want from its organisation.

Jeff finished by recommending that industry develop a strategy, and then decide the structure.

Executive Council

There were a couple of changes to the Executive Council lineup:

NBA Ward Representatives 2013

Northern	
Northland & Auckland	Neil Stuckey
Bay of Plenty	
Bay of Plenty	Dennis Crowley
East Coast	
Poverty Bay & Hawke's Bay	Barry Foster
Waikato	
Waikato	Stephen Black
Southern North Island	
Southern North Island	Mary-Ann Lindsay
Upper South Island	
Nelson & Marlborough	Kerry Gentleman
Central South Island	
West Coast & Canterbury	Roger Bray
Lower South Island	
Otago & Southland	Vacant

Finances

Greg Byers, NBA Treasurer, presented the financial reports for 2011 to members. The draft 2013 budget was presented and discussed with emphasis on the need to work on a new set of membership categories and fees to present to the 2013 AGM.

The accounts were ratified with acknowledgment from the floor of a job ➔

well done in producing reports that look to the future and that reporting had never been better.

Notices of Motion

There were 20 notices of motion: 13 were passed, two were withdrawn and five were lost.

A full list of the 13 notices of motion to be actioned will be posted to the members-only area of the website.

The AGM finished with a special vote of thanks and a presentation was made to departing Executive Council members Neil Mossop, Bay of Plenty, and Trevor Corbett, Central South Island.

The Executive Council also gave special thanks to Hawke's Bay Branch Conference Committee for organising an excellent conference with a record attendance.

Conference and AGM for 2013 will be held in Christchurch and will be hosted by the Canterbury Branch.

PEST AND DISEASE CONTROL

Psa review has major industry implications

The recently released report of the independent review into the Psa outbreak has major implications for New Zealand's multi-billion dollar pollination industry.

National Beekeepers' Association President Barry Foster says he will talk to the Ministry for Primary Industries (MPI) about improving their communication with the NBA, following the independent report into how the devastating kiwifruit vine disease Psa came into this country.

The Australian report couldn't identify exactly how Psa got into the country but identified shortcomings in New Zealand's biosecurity system.

Mr Foster says the failings all come down to a communication breakdown between MPI and affected industries.

"This allowed the importation of pollen. In this case the pollen came from plants but if it had come from an overseas beehive it could have had devastating consequences for our industry, as well as the kiwifruit industry."

New Zealand's beekeeping industry is estimated to be worth over five billion dollars annually. By providing pollination services, it supports many of New Zealand's major agri-export industries.

Mr Foster says the proposed Government Industry Agreement (GIA) would be one way of improving the communication between industries and MPI.

"Obviously we, as an agricultural sector, need greater communication with MPI and they with us. Anything to do with plant material being imported into New Zealand has an effect on our industry.

"For instance, if fruit isn't cleared of the small hive beetle there could be devastating consequences for our industry.

"And if beekeepers are badly affected by a pest or disease, there are major flow-on effects on other agri-sectors."

Mr Foster says while there will be some costs to signing up to GIA, there will also be some major differences in approach to biosecurity planning and incursion response that industry may feel are well worth the cost.

However, he says GIA is some way away and in the meantime he intends talking with MPI about how they can improve their communication lines, so the next importation of a potential risk to the industry can have red flags attached right from the beginning.

NBA Executive Council member Dennis Crowley says everyone knew the investigation into how Psa came into New Zealand would never prove exactly where the infection came from. However, he says the report showed up slackness in a number of areas.

"It showed some shortcomings in the way MPI (MAF at the time) deals with biosecurity issues. MPI suggested the kiwifruit industry should have asked more questions about the importation of the pollen. But how can an industry ask about what it doesn't know? MPI needs to check with all industries and get their sign off before it brings anything into this country."

The Psa disease swept through Bay of Plenty kiwifruit orchards, wiping out many gold vines and causing about $400 million in losses.

New Zealand Kiwifruit Growers Inc (NZKGI) says it is concerned enough about the failings identified by the review to seek legal advice on whether any further action should be taken. It says many growers have lost all or part of their livelihoods as a result of Psa coming into New Zealand.

Meanwhile, NZ Pork's appeal against the High Court decision not to stop MPI easing import restrictions on fresh uncooked pig meat will be heard in November.

Editor's note: The review findings and MPI's action plan to address those findings is available at http://www.biosecurity.govt.nz/pests/kiwifruit-vine-disease

Performance of VSH honey bees

By Michelle Taylor and Warren Yorston, The New Zealand Institute for Plant & Food Research Limited

The Varroa Sensitive Hygiene (VSH) Honey Bee Breeding programme was established in September 2004 by Plant & Food Research (PFR) at the request of the National Beekeepers' Association (NBA).

The development of this programme was outlined in the April 2012 edition of *The New Zealand BeeKeeper* journal. At the time, six beekeepers (A–F) were each completing the final performance assessments on at least six VSH queens that were naturally mated with VSH drones on Great Mercury Island (GMI) (VSH total 37), six VSH queens that were naturally mated in the Waikato (½ VSH total 40), and five of their own queens (beekeeper total 30). The beekeepers were unaware of the lineage of the queens they received, to ensure that the results between the VSH and ½ VSH queens were unbiased. All VSH queens were clipped and marked, and supplied to the beekeepers by 1 May 2011.

The queens were assessed in spring 2011 for survival, the number of varroa per 300 bees, colony size, brood health, temperament and the amount of VSH trait expressed. The assessments, excluding the VSH trait, were repeated at the start of February 2012 and the amount of honey produced was also recorded. The beekeeper (Bkpr) queens were not assessed for the expression of VSH trait as the colonies were treated with Apistan® or Bayvarol® for 8 weeks starting between 1–30 October 2011. This was to reduce the numbers of varroa present in the colonies, thus preventing them from dying, whilst also giving a benchmark for the area where the beekeepers were located. The VSH colonies were not treated unless there were more than 40 varroa per 300 bees. Once treated, the colonies were removed from any further assessments.

Queen survival

Twenty-eight (36%) of the 77 VSH and ½ VSH queens died during winter. The majority of the deaths are likely to be the result of introducing the queens to the colonies in late autumn, April 2011, when the colonies were wintering down and less likely to accept a queen. In spring 2011, some beekeepers replaced their weak Bkpr colonies but did not balance their VSH colonies. Thus, the winter survival of the Bkpr colonies was incomparable with the VSH colony survival. Of the 49 (64%) VSH and ½ VSH queens that were alive in September 2011, 30 (61%) survived through to February 2012. Of the 29 Bkpr queens, 22 (76%) survived. This difference may reflect the introduction of the stronger colonies to the Bkpr group in spring. Overall, the mortality observed throughout the season was higher than expected. As suggested, colony survival may have been limited by the state of the colonies during winter, and the lack of colony balancing in spring. The ½ VSH queens (75%) were more likely to survive through to autumn than the VSH queens (48%). As the VSH queens were mated on GMI, this limited survival is probably the result of a limited number of drones with which to mate, or of unfavourable mating conditions that prevented the queens from mating fully.

> "These data indicate that [the VSH] trait is worth maintaining as a varroa control tool."

The beekeeper with the least colony mortality in February had 20% colony death, whereas the beekeeper with the most mortality had 75% colony death. This large variation between beekeepers is due to location and/or management practices. In some cases if the results were combined, this variation would not be seen and it is this variation across beekeepers and groups that allows us to determine how best these VSH lines can be incorporated into future varroa control practices. For this reason, we have presented some raw data. In these cases, look at the results within each beekeeper (A–F, i.e. within a column) (Table 1).

Table 1. Queen survival in the three groups, across six beekeepers (A–F)

Queen survival in September

Beekeeper	A	B	C	D	E	F
VSH Queens	7	2	5	5	1	5
½ VSH Queens	8	3	4	4	3	2
Bkpr Queens	5	5	5	5	4	5

Spring supersedure

Beekeeper	A	B	C	D	E	F
VSH Queens	2/7	½	4/5	2/5	1/1	2/5
½ VSH Queens	6/8	1/3	1/4	0	1/3	0

Queen survival in February

Beekeeper	A	B	C	D	E	F
VSH Queens	3/7	½	1/5	3/5	1/1	3/5
½ VSH Queens	7/8	2/3	3/4	3/4	1/3	2/2
Bkpr Queens	3/5	5/5	5/5	5/5	9/4	4/5

Temperament

The temperament of each colony was determined by each beekeeper on a scale of 1 to 5, where 1 was aggressive and 5 was calm. Twenty-one (88%) VSH colonies scored 4 or 5 and three (12%) colonies scored 3. Fifteen (75%) ½ VSH colonies scored 4 or 5, four (20%) colonies scored a 3 and one (5%) scored a 1. Eighteen (75%) Bkpr colonies scored 4 or 5, four (17%) colonies scored a 3 and two (8%) scored a 1.

VSH expression

Each beekeeper was provided with queens from two to five of the queen lines listed in Table 2. →

Table 2. Range in percentage of the Varroa Sensitive Hygiene trait expressed in the colonies with queens from the VSH lines.

Queen line	VSH % minimum	VSH % maximum	Average VSH % for VSH : ½ VSH queens	Queens assessed (dead colonies excluded)
217/c/14	15	50		2
217/c/9	31	31		1
220/15/5	100	100		1
225/4/2	19	100		4
227/4/1	7	100	27.2% : 53.2%	13
227/4/9	0	100	39.3% : 65%	15
359/5				0

The VSH trait was assessed for each colony by estimating the percentage of adult varroa that had no offspring. This 'VSH percentage' varied between colonies headed by queens from the same mothers and between queen lines (Table 2: 0–100%). When grouped as VSH queens and ½ VSH queens, the queens mated with non-VSH drones (i.e. the ½ VSH queens) did not appear to have reduced the VSH percentage, and the ranges appeared similar. However, throughout the entire programme, breeder queens with a high VSH percentage produced more offspring that displayed the VSH trait than queens with lower VSH percentages. A wide range of VSH percentages was displayed by ½ VSH queens, including VSH percentages well below or above the VSH percentage of the mother. In general, however, the VSH percentage declined with each succeeding generation.

It must be noted that colonies found with limited varroa in the cells (<5 out of 400 cells) were recorded as 100% VSH, providing the varroa had no offspring. Queen lines that only had one assessment with 100% VSH, such as 220/15/5 could therefore appear more effective than lines with more assessments. However, **one queen line should not be regarded as superior to another, as the genetic variation contributed by each is imperative to the survival of New Zealand honey bees, particularly in relation to withstanding introduced organisms.** Only the VSH percentages of queen lines 227/4/1 and 227/4/9, with 13 and 15 colonies assessed, respectively, can be directly compared (Table 2). The average percentage of ½ VSH queens is higher than the VSH %. The reason for this is unknown. Direct comparison with the other queen lines is not possible because of the limited number of colonies available for assessment in November.

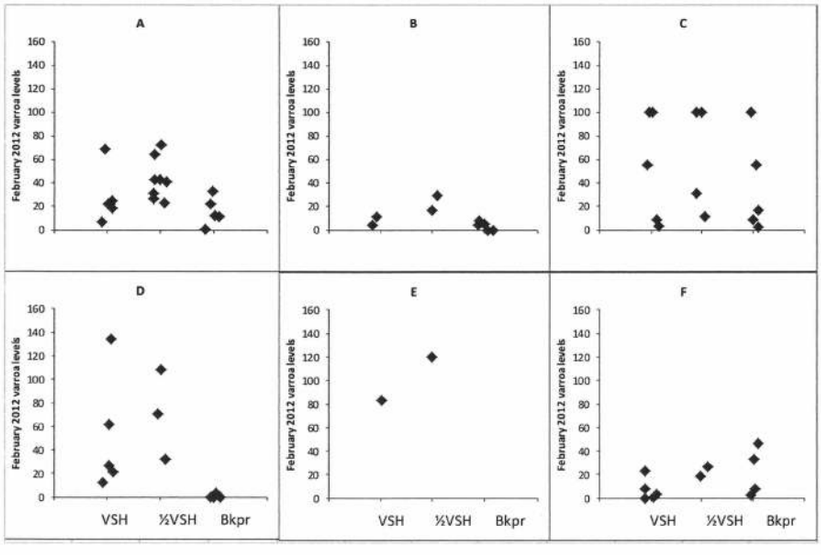


Figure 1. Numbers of varroa per 300 bees in February 2012 for each colony in the three queen groups. Each diamond represents one hive.

Varroa control

Varroa were expected to be controlled in all Bkpr colonies, as they were treated with Apistan® or Bayvarol®. The February numbers of varroa in Bkpr colonies managed by beekeepers A, B and D were below 40 mites per 300 bees (Figure 1), whereas the Bkpr colonies managed by beekeepers C and F appeared to have the same numbers of varroa as the untreated VSH colonies. Only beekeeper B had fewer than 40 varroa per 300 bees in the colonies in all three groups. This was the recommended treatment-threshold for the trial. This reduced number of varroa could be due to the location of beekeeper B.

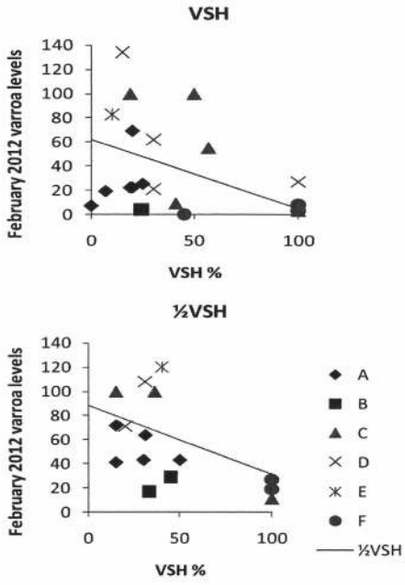


Figure 2. Numbers of varroa per 300 bees in February 2012 for each colony, graphed against percentage of VSH.

By graphing the percentage of VSH against varroa numbers in February 2012 (Figure 2), there appeared to be a slight effect where an increase in VSH percentage by 10 is associated with a decrease in February varroa levels by 5.7 ± 1.7. February 2012 varroa levels were on average 27 ± 9 % higher ($P = 0.007$) for ½ VSH than VSH colonies. This certainly does not suggest it can be a stand-alone varroa control tool at this point in the programme. However, it does support the theory that the VSH trait may play a useful role in the control of varroa, especially as chemical resistance unfolds and a more integrated approach is required. Of the 19 VSH and ½ VSH colonies that died or superseded over summer, only one had sufficient brood for a VSH assessment (10%) to be conducted.

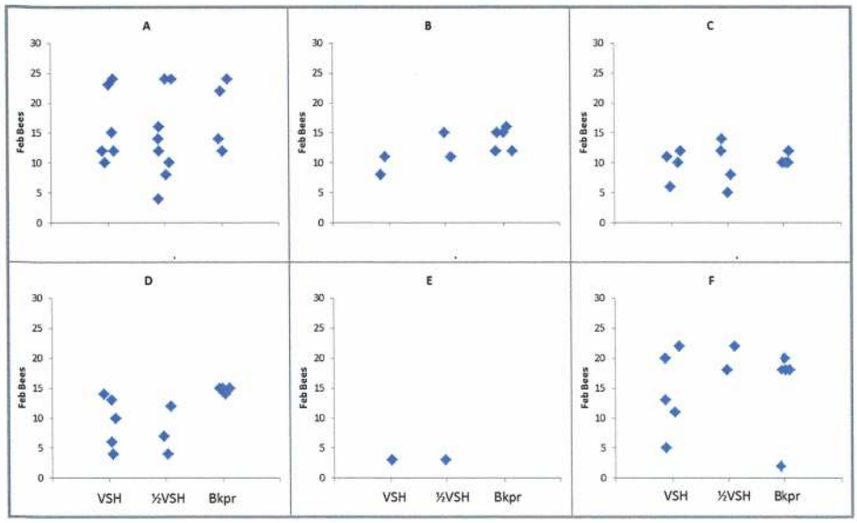


Figure 3. The numbers of frames of bees in each colony, within each of the three queen groups.

Colony size

For beekeepers A, B, and E, the variation in the numbers of frames of bees in February was similar in all three queen groups (Figure 3). Beekeepers C, D and F showed the least variation and/or more frames of bees in the Bkpr colonies, suggesting that these colonies were bigger than the VSH colonies. It is most likely that varroa was starting to affect the size of the colonies at this time. Colony size in February was partly influenced by location and/or management practice.

In February, the frames of brood in the VSH colonies ranged from 1 to 9, in the ½ VSH colonies they ranged from 2 to 9, and in the Bkpr colonies they ranged from 0 to 10. These ranges suggest location and/or management practices played a role in colony size. However, beekeepers B, C, D and F had on average more February brood in the Bkpr colonies, than the VSH colonies indicating that the varroa populations were starting to impact on the VSH and ½ VSH colonies.

Brood health

The health of the brood in each colony was determined by each beekeeper on a scale of 1 to 5, where 1 was diseased and 5 was healthy. In spring, 83% of the VSH colonies, 96% of the ½ VSH colonies and 83% of Bkpr queens scored a 4 or 5. By February, fourteen (61%) VSH colonies scored 4 or 5, two (9%) colonies scored 3 and seven (30%) scored a 1 or 2. Ten (53%) ½ VSH colonies scored 4 or 5, three (16%) colonies scored a 3 and six (32%) scored a 1 or 2. Sixteen (70%) Bkpr colonies scored 4 or 5, five (22%) colonies scored a 3 and two (9%) scored a 2. This shows the colonies were deteriorating by February, but 61% of the VSH colonies still appeared healthy without a spring treatment.

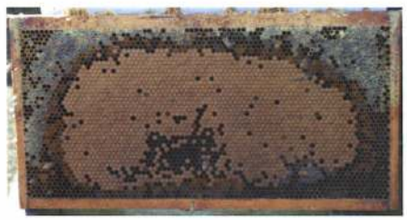


Figure 4. A frame of healthy capped brood from a VSH colony.

Figure 4 shows a brood frame from a VSH queen that was inseminated with a single drone. It shows that you should expect to see spots of open cells but that the rest of the capped brood is healthy. The brood should not appear diseased in any way.

Honey production

There was no significant difference (P=0.8) in average honey production between VSH, ½ VSH and Bkpr queens (Figure 5). However, there was a significant difference in honey production between different beekeepers, which is likely to be attributed to apiary location and/or beekeeping practices. Figure 5 shows the number of colonies within each queen group and the range in honey production of those colonies. Beekeepers C and F had a wider range in honey production within the groups than beekeepers A and D.

The above data provide a snapshot of the honey bees carrying the VSH trait during the 2012 season, in comparison to six honey bee populations raised from beekeeper queens. In terms of honey production, temperament and brood health, the VSH and ½ VSH colonies were not different from the Bkpr colonies. The VSH trait did enable 61% of the VSH colonies to remain healthy, without miticide use, until February. In contrast, colonies without spring varroa control treatments normally show significant damage. These data indicate that this trait is worth maintaining as a varroa control tool. ➔

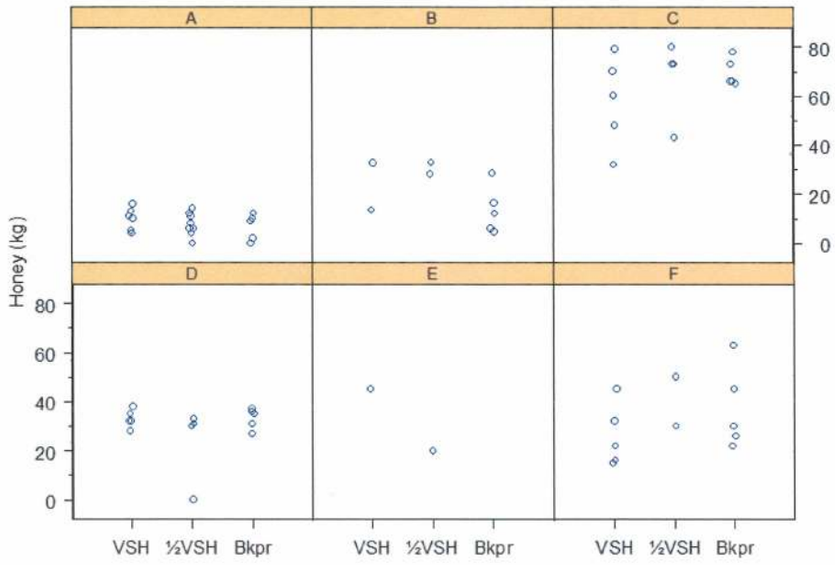


Figure 5. Boxes A–F represent the colonies managed by each beekeeper. Each circle represents the amount of honey produced by one colony. The colonies within each box are grouped by the queen type.

"This work must be completed in conjunction with industry (you)..."

Next steps

PFR has developed and maintained the VSH programme with NBA and industry help thus far. It is now time for industry to try to implement the VSH trait as a varroa control tool. Rae Butler and Philip Cropp from Nelson Honey Ltd have taken up the challenge to produce VSH queens for the New Zealand beekeeping industry through a licence agreement with NBA and PFR. For this trait to become a successful varroa control tool, there are still a few years of work to be done.

This work must be completed in conjunction with industry (you), as it is your feedback that will help fine-tune the VSH programme.

The biggest challenge is to increase the percentage of queens that display the VSH trait, whilst ensuring the genetic pool remains diverse. This means conducting assessments before the parent VSH lines are altered, as well as incorporating the VSH trait into established honey bee populations.

The intention is that queens from known VSH lines will be available for purchase in spring 2012. This will help increase the base level of the VSH trait throughout New Zealand, as all of the drones produced by the queens are directly from the VSH queen. It will also help fund the VSH assessments for the coming year and possibly help to develop a faster VSH assessment method. Contact Rae Butler at RaeB@nelsonhoney.com.

It has been a pleasure to work on this programme since its inception and as we hand it over, we wish to say a huge thank you to all of the beekeepers, NBA, Sustainable Farming Fund (SFF) and PFR staff that have enabled this programme to develop.

Publications Committee news

This month we farewell Publications Committee member Kushla Haenen of Te Puke. Kushla and her husband Glen are expecting their first child later this year. Kushla has been a valued member of the committee since September 2009, and we will miss her sharp eyes and knowledge of the industry. We wish her well in her new role as a mother.

We are pleased to welcome two new proofreaders. More in the September journal.

Frank Lindsay
Chair, Publications Committee

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FROM THE COLONIES

Auckland Branch

The shortest day is now behind us and hopefully we can look forward to lengthening days and a bit more sunlight.

Auckland Branch held their AGM on Thursday evening, 14 June, hosted once again by Neil and Audrey Stuckey at Waitemata Honey Company's premises. The meeting was preceded by a pizza meal, and Dr Mark Goodwin spoke to an interested audience of approximately 30 people about the latest findings and prophecies on varroa resistance. The strong message to take away from his talk was, "Check varroa numbers when you remove your treatments, so you know whether the treatment is still being effective". We are looking forward to the varroa resistance seminar in July, hosted by the NBA.

Dr Goodwin's talk was followed by the AGM and election of officers, all existing officeholders being re-elected, and the rest of the evening was given over to voting on the Notices of Motion for the National AGM.

Now is the time to be snug in the workshop preparing for the new season. Stay warm!

- Helen Sinnock

Bay of Plenty Branch

It's been wet and cold, with more frosts than usual in the top end of the Bay of Plenty so far this winter. Apiary inspections have shown many hives are low on stores and will require feeding to get them through. This I am hearing is a common situation for beekeepers in the area and around the country. On a positive note, the days are getting longer now and we're hoping for kind spring conditions ahead ☺

Congratulations to Hawke's Bay Branch for an informative and professionally run conference. This annual forum is the best way to network with industry participants, share ideas and to be informed of and discuss the issues confronting our businesses.

It is with great sadness we had to farewell our friend and fellow beekeeper Bertha Schonoveld who passed away on 26 June. Our heartfelt sympathy goes out to Dick and family. Her presence within the branch and the wider NBA will be surely missed.

- Greg Wagstaff

Poverty Bay Branch

The conference in Napier was well run and very informative: well done to the organising committee.

The main issues that stood out for me were the reminder of how important a good mix of high-protein pollen is to producing healthy bee colonies.

Dr Karyne Rogers' presentation about the issues surrounding sugar feeding—and the effects this is having in export honey when traces of sugar are detectable—was an eye opener. There has been a move over recent years to put hives into pollination with a single brood box and a honey super on top instead of using the traditional double brood box configuration. If this super is extracted and not just used as a feed box, any stored sugar will be included in the honey crop. We were also shown examples of where stored sugar can be lifted by the bees from a double brood box hive into honey supers when they are added at a later date. From the beekeeper's perspective, the less sugar feeding being given to hives in pollination the better.

Trees for Bees project

Gisborne has one of the demonstration farms where trees with high-quality pollen are being planted to improve the area as a site for keeping bees. At present the area has willow, kanuka and clover with a lot of gaps in between flowering periods. The project will be run for five years to see the improvement. Barry Foster, John McLean and I have been involved with the planting.

This photo shows the sprayed areas next to a road near Lake Repongaere, on a visit to Peter Hair's properties on 30 June. It has now been planted in Tagasaste, Five Finger, Flax, Tarata (or Lemonwood), Cabbage Tree, Hoheria and some Hebe Koromiko. We have yet to plant Rosemary, Banksia, Puriri, Callistemon (or Bottle Brush), Lavender, Hebe, Ceanothus or Californian Lilac and Grevillia fireworks in this site and a nearby site. It will look quite spectacular once finished and growing in a year or so. Photo: John McLean.

The project is being organised by Linda Newstrom-Lloyd.

AFB Recognition and Competency Course

Gisborne is holding a course on Saturday, 29 September. Registrations to be in to P Badger by 14 September.

- Paul Badger, Branch President

Hawke's Bay Branch

We had beautiful weather for the NBA conference in Napier and everyone seemed to enjoy themselves. Each day at lunchtime there were groups of people sitting outside enjoying the sunshine and catching up with old and new friends. I believe there were over 300 registrations, which has got to be close to a record.

Many of the seminars really got your brain cells working: a few of them were really quite worrying. Everyone is certainly going to have to be more careful sugar feeding in the future. Despite a few thunderstorms on the horizon, most people seem pretty upbeat. Although while production in many areas has been down, prices have risen, which has compensated to some extent.

A big thank you to Mary-Anne Thomason, Pam Flack and Deanna Corbett and the rest of the worker bees. The drones did a good job too (under supervision). There is a lot of work running a conference but also a surprising amount of satisfaction.

- John Berry, Branch President

Southern North Island Branch

Our annual NBA Conference and AGM are over. Unfortunately I was unable to attend but I have received good reports from members who were there.

SNI members are in reconstruction mode: fixing older gear and making new boxes etc., getting ready for spring and hopefully a good honey flow this year.

Our area covers a huge range of weather from Taranaki to Wellington and down the Wairarapa. In Taranaki the winter has started as usual (plenty of rain) but no bad reports on hive health. →

Wanganui/Manawatu: on the whole we have had good weather. I can still drive on most paddocks; others say the same.

Wairarapa: some colder, wetter areas has led to hives needing more feeding this year.

Hobby clubs in Taranaki, Wanganui, Manawatu and Wellington are very active, and membership generally is increasing. All the members of the clubs are concerned with hive health (as we all are) and they are holding training days to assist their members. Some of them may be commercial beekeepers of the future.

NBA affiliation has been discussed but clubs are now waiting for NBA Executive to return with new ideas. A number of the clubs have their own hives, registered under the club and paying Management Agency levies. These clubs therefore could be considered as a NBA Hobby beekeeper for membership purposes, but this was not acceptable to the NBA Executive.

It is interesting to see some small beekeepers are keeping their bees in top bar hives. I have heard many different viewpoints from both sides of this argument, but from a practical aspect it certainly takes longer to inspect a top bar hive and some of the construction of the 'box' also adds to the fun. However, there have been interesting articles in the *American Bee Journal* on top bar hives. As long as the small beekeeper is not after a decent crop of honey the bees seem fine, at least from the hives that I have inspected.

- Neil Farrer, NBA Life Member

Canterbury Branch

It feels as if we are having a cooler winter in Canterbury than normal. It turns out that colonies needed to be wintered down with more stores than normal, as the warmer April kept the bees flying and raising more brood for longer, then the sudden change in conditions for the worse has seen the colonies go into tight clusters. The winter work regarding varroa treatment has been slow going, as it has been hard to get more than two decent days in a row.

On behalf of the Canterbury members who attended, I would like to congratulate the Hawke's Bay Branch on running a very interesting and professional conference. It will be a hard act to follow.

At conference 2013, the NBA will be celebrating 100 years, which is an amazing achievement. All the arguments on rule changes aside, the founding document is a testimony to the vision that our forefathers had for the organisation to be as strong as it is 100 years later. With this in mind, we would like to hear from any beekeeping or beekeeping-related businesses that have also achieved this milestone and would like to celebrate with us.

- Brian Lancaster, Branch President

AFB Recognition and Competency course

TAURANGA, BAY OF PLENTY

Date: 8 September 2012 (Saturday)
Host: Bay of Plenty Branch of the NBA
Contact: Ross Carroll to register interest
(07) 552 4585 or
robro@farmside.co.nz
Venue: Te Puna Hall
State Highway 2, Te Puna
Start: 9.00 am
Finish: 2.00pm
Cost: $60 Non NBA members;
Members $30
Registration Deadline: 10 August 2012 (Friday)
Catering: Tea, coffee and lunch provided

New nuc math

First —

- A competent queen lays about 1200 eggs daily, if sufficient pollen is stored from last summer;
- And, enough bees are present to incubate the brood from this amount of output.
- And the latter part of August and September are not sub-zero.

Remember —

- A deep frame of foundation contains about 3500 cells per side—(7000 both sides).
- Figure 5000 cells per total frame since not all cells are used.
- Then it will take the queen four days to fill one frame with eggs. (1200 eggs per day multiplied by 4 days = 4800 cells = 1 frame).
- Egg to adult worker = 21 days.
- So, in 35 days, there will be between seven and eight frames of brood—in all stages. Then, 35 days divided by (four days per frame) = eight frames ... plus one complete emergence of adults, plus another emergence in one week.
- So far, this has been five weeks, or 35 days that began Aug. 20th.
- Then, from Aug 20th, 21 days until Sept 14th when 1200 bees emerge.
- Figure that another 1200 bees emerge every day after that.
- Which means that from the 15th of Sept to Oct 1st— you have 20,000 bees!
- And from Oct 1 to Nov 1 — you have yet another 30,000 bees!

So —

- 20,000 plus 30,000 = 50,000 bees (less some attrition).

There's not much room inside come Nov 1st because it takes one cell of pollen plus one cell of honey for each new bee to be raised!

Source: 'Making nucs' by Ed Wess, published in Bee Culture around the 1990s. Ed used two frames of brood and two frames of honey and pollen with a fifth of foundation for expansion with an introduced queen.

Feed to succeed

By Frank Lindsay, NBA Life Member

It's been cold and wet and the bees have hardly ventured out during this past month.

Meanwhile, up the coast they have had frosts and some mild warm days (which makes one question why we live in Wellington). However, despite the weather things are moving in the hive. On the odd fine, sunny day the bees will be flying from around noon onwards for a couple of hours, gathering pollen and nectar if it's available. You can get an indication of what's going on by observing the flight activity on the landing board. Lots of bees with loaded pollen baskets indicate the queen is laying and producing brood. Just how much will depend upon your location, the weather and what's blooming close by.

It's very difficult to describe conditions in your hive in the countdown to the honey flow and how it compares to another hives in your area when you only have one hive so I have attached a chart that reflects Wellington's conditions.

These conditions can vary in different parts of the country. For instance, manuka is already flowering in the Far North while in the lower South Island, it's still too cold and wet to open up hives and inspect them. Having said that, the coastal regions of South Canterbury are the first area in the country to reach 20°C in the spring.

Monitor honey reserves

Those beekeepers that started with a nuc last spring will now be starting to get a little anxious, wondering if there are enough honey reserves to keep the bees going until September and what to do about all those dead bees on the landing board. The majority of the bees in the hive would have been reared during the autumn so some will start to die off in the hive as the bees aren't flying. A dozen or so dead bees is nothing to worry about as there are new ones coming along to replace them. Bees crawling out of the hive can be caused by starvation or varroa mite reinvasion. Honey reserves from now on should be closely monitored.

Each beekeeper should record in a notebook (for a couple of years) what is flowering in their area and when, then note down the brood development in their hives. After a while it becomes easy to estimate whether things are on time, or if the season is a couple of weeks late this year. You will note that perhaps cabbage tree or hawthorn is flowering when your hives produce queen cells. I was told by a German beekeeper that they have to split all of their hives four days before the spring full moon (October here); otherwise their hives will swarm. This doesn't seem to be the case in New Zealand as we have on again–off again spring conditions where the flows are interrupted or cut short by inclement weather.

What is critical in spring development is that the hive should never run out of honey reserves. For every cell of brood produced, a cell of honey will be consumed by the bees feeding the brood and maintaining the centre of the brood nest at a temperature of 35°C.

> "...the hive should never run out of honey reserves."

It's OK to remove the roof for a few minutes on a warm afternoon to peer down into the hive. Apply a few puffs of smoke over the top of the frames to send those bees coming up to defend the hive back down amongst the cluster. The cluster of bees will either be in the middle or perhaps towards the warm (sunny) side of the hive.

Don't disturb the brood frames at this time but you can remove an outside frame and check it and the ones beside it for honey. If these appear nearly empty and it's the same on the other side of the brood nest, it's time to feed until the bees build up sufficient stores to carry them through at least a week; i.e., three full-depth frames of honey. Small colonies of a super of bees will take perhaps two or more weeks to use this much, but it's important to at least maintain a reserve of three full frames of honey in the hive right to the start of the first honey flow.

Some sort of top feeder above the cluster area is best but unlike in the autumn, unless it's very warm, the bees will be much ➔

A general guide to beekeepers in the Wellington District

The following table provides an indication of how an average hive in the Wellington region should build up during the spring in preparation for the main honey flow, which generally occurs in early December.

Date	Frames of Bees	Frames of Brood	Amount of Honey	Size of Entrance	Supers Occupied
July 20	4-5	2-3 patches	12-14 Kg	10 x 75 mm	1
Aug 20	6-7	2-3 frames	5-7 Kg	10 x 75 mm	1
Sept 15	6-7	4-5 frames	5 Kg	10 x 75 mm	1
Oct 6	7-8	5-6	2 Kg	10 x 75 mm	1
Oct 20	8-10	7-8	2 Kg	10 x 75 mm	1
Nov 1	10	9	2 Kg	10 x 75 mm	2
Nov 15	12-16	10-14	Stimulate	10 x 75 mm	2
Nov 24	20	14-16	Stimulate	10 x 75 mm	3
Dec 8	25-30	16-18	Flow started	10 x 75 mm	3-4
Dec 12 (1)	30+	16-20	Flow on	20 x 75 mm	4-5
Dec 20	30+; 60,000-80,000 bees	Queen under excluder	20-30 Kg	20 x 75 mm	As required

Note (1) Crowded conditions—Demaree if required.

Extract or add supers up to 8 January then allow bees to complete and seal combs. The above data is a general average, and would be exceeded in some areas with a good flow, such as Karori and parts of the Hutt Valley.

slower in emptying the feeder (the water to sugar syrup ratio is one to one).

A wet and dry sugar feeder.

Most commercial beekeepers use either a frame or top feeder. The feeder in the photo has two compartments. The bees are fed sugar syrup in the front one (the plastic mesh helps to prevent the bees from drowning in the liquid) and raw sugar in the back one. Raw sugar remains soft while white sugar goes hard in the feeder, making it more difficult for the bees to add water to and take up the sugar syrup.

The advantage of this type of feeder is that the hive is not disturbed when extra syrup or raw sugar is put in. But as one beekeeper recently told me, bees fed raw sugar will not utilise it if the hive has run out of honey, hence the development of this type of feeder.

As soon as feeding starts, the bees will expel more water vapour that will condense under the hive mat so more ventilation is required to allow it to vent away. A twig or matchstick on the high side (the entrance should be sloping down by 5–10 mm to allow rainwater to run off the floor) will be enough to keep the underside of the hive mat dry.

Colony preparation for the honey flow

A calendar of events for hives being managed to maximise honey collection capability.

August				September					October			
4	11	18	25	1	8	15	22	29	6	13	20	27
I<- - - - - - ->I				I<- - - - - ->I		<- - - - - - - - ->I			<- - - - - - - - -			
I Drone Egg Production				I Queen Rearing Period		I Queen Cell Introduction			I Mated Queen Introduction			

Nectar Sources:

August	September	October
Heath	Willow	Dandelion
Five-finger	Kowhai	Fruit trees
Konini	Barberry	Buttercup

November			December						January			
3	10	17	24	1	8	15	22	29	5	12	19	26
I- - - - - - - - - - - - - - ->I				<- -								
I Critical 7–9 week Colony build-up period				I Honey Flow. I 1 December has been assumed to be the start of the major honey flow, however variations occur about NZ.								

Nectar Sources:

November	December
Rewa Rewa	White clover
Tawari	Thistle
Berry fruit	Catsear

Source: Frank Lindsay. Originally published in the Wellington Beekeepers Association newsletter, August 1998.

For a full-strength colony at the start of the anticipated major honey flow:

- Encourage vigorous brood production for 7–9 weeks beforehand
- Introduce mated queens, make divisions, replacements. 7–9 weeks beforehand
- Undertake queen rearing 12–13 weeks beforehand
- Stimulate drone egg production 16–19 weeks beforehand

Honey production depends on colony size

Adult worker population	10,000	20,000	30,000	40,000	50,000	60,000
Honey per colony (kg)	4	14	23	32	41	50
Honey per bee (g)	0.40	0.70	0.77	0.80	0.82	0.83

Source: Practical Beekeeping in New Zealand, *by Andrew Matheson.*

Things to do this month

Prepare for the new season's work. Get queen raising equipment and feeding equipment and grass spraying gear ready. Do your truck maintenance oil changes, new tyres etc., as you won't have time after the season starts.

Those in the warmer areas can now put foundation in the extracting frames. Some will just order completely assembled frames ready to go into the hive (this can save a lot of time).

Check all hives for weight. I have saved a few that were on the verge of starving by adding bees and honey. Count back two months from the first honey flow to work out when varroa strips should go in the hives.

Those beekeepers starting to see varroa-resistant mites should also be planning their treatments, but most of these are dependent on outside temperature for smaller hives.

However, those hives with a large brood area will work if placed immediately on top of the brood frames. I started checking hives in July and one apiary had four dead hives and the rest had very high mite numbers. Treatments can no longer be taken for granted.

An interview with Dennis Crowley

Incoming NBA Vice President Dennis Crowley is the new Bay of Plenty Ward representative on the Executive Council. The Secretariat interviewed him about his role and experience in the industry.

What made you decide to become a beekeeper?

One November a friend of mine asked me to help him shift some hives, and my interest stemmed from there. Although I was a builder with a farming background at the time, I realised I would enjoy beekeeping more than my current occupation. I worked for the same friend for about a year, and then I bought my own business.

Tell me about your current business.

I have between 700 and 800 hives in the Te Puke area. We do kiwifruit and avocado pollination, and a bit of honey production as well. There are two of us out there with the hives, plus my children help out over summer.

What do you enjoy most about beekeeping?

The lifestyle associated with beekeeping is brilliant, particularly working outside and being my own boss. I like that I make my own decisions, and whether they succeed or fail, those decisions are mine. When I started beekeeping in 1998, I took off my watch and haven't put it back on since. I love that my day is based around the site, as opposed to time.

Why did you decide to become an Executive Council member?

Every industry needs a strong body to lead it. It's important for an industry to have people that can speak on its behalf, and keep tabs on the rules and regulations that come with a global economy. It would be so easy for me to sit back and do nothing, but if there aren't people to lead the beekeeping industry going forward, every beekeeper will suffer the consequences, including me. I want to get involved and do everything I can to stop that from happening.

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

In my eyes, the lack of unity and co-operation among beekeepers is a real issue for the industry. One thing I would love to see is strengthened relationships between older beekeepers and younger beekeepers. Those beekeepers that have been involved in the industry for a long time have so much to teach, so much information to pass on. We need to be educating the new beekeepers as much as we can, to ensure stability in the industry. I'd like to see more forward planning for the beekeeping industry. We need to collaborate as much as we can, and keep dialogue as open as possible, both internally and externally of the beekeeping industry.

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

Somewhere outside—I'm definitely the outdoorsy type. I really enjoy fishing and skiing, and I coached high school rowing for seven years. My wife and I walk and tramp, and I recently bought myself a mountain bike. I'm going to try and get myself into shape—I'll let you know how it goes!

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
Kerry Gentleman
176 Ward-Holmes Road
RD2, Takaka
Ph: 03 525 7571
Fax: 03 525 7569
Email: frazer.kerry@clear.net.nz

Lower South Island Ward
VACANT

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

NORTHLAND
VACANT

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: bobrussell@kol.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
Frazer Wilson
Ward-Holmes Road
RD2, Takaka
Ph: 03 525 7571
Fax: 03 525 7569
Email: frazer.kerry@clear.net.nz

Kerry Gentleman
Ward-Holmes Rd
RD2, Takaka
Ph: 03 525 7571
Fax: 03 525 7569
Email: frazer.kerry@clear.net.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
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

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.

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