March 2012, Volume 20 No. 2

The NEW ZEALAND BeeKeeper

Our competitive advantage

- Destroying AFB colonies
- Pacific Islands honey imports
- Be organised for peak performance

NBA Photo Library

Often the NBA requires photos for media, newsletters, Bee Week and general enquiries. We currently hold only a very few photos on file.

If you have what you consider may be a prize-winning photo or two and you wouldn't mind them being used publicly and without copyright, please email them to secretary@nba.org.nz

Photos must be attached as a jpg file. Please email each photo with a title and/or caption, and don't forget to add your name so that we may credit you.

Bees on bottlebrush. Photo: Liz and John Maynard

The New Zealand BeeKeeper is the official journal of the National Beekeepers' Association of New Zealand (Inc.)

ISSN 0110-6325

Printed by South City Print, PO Box 2494, Dunedin 9013, New Zealand

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JOURNAL SUBSCRIPTIONS:
— 11 Issues —
NZ $135.00 GST inc - incl P&P
Australia NZ$160.00 + TT Fees NZ$25.00 and incl P&P
Rest of the world NZ$170.00 + TT Fees NZ$25.00 and incl P&P
Subject to review if postage charges increase

DEADLINES FOR ADVERTISING AND ARTICLES:
Due on the 6th of the month prior to publication
All articles/letters/photos to be with the Editor via fax, email or post to Nancy Fithian (see details above).
Please direct advertising inquiries to:
South City Print Ltd, PO Box 2494, Dunedin 9044.
Phone: 03 455 4486, Fax: 03 455 7286
Email: sales@southcityprint.co.nz

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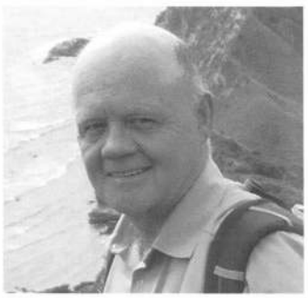
Front cover: Bee on Kowhai (*Sophora microphylla*). This photo was supplied by Liz and John Maynard and was taken in their garden.

Reflecting on our competitive advantage

By Barry Foster, NBA President



March is a month to take stock and reflect on a good or poor season. For some it was the season that was and for others it was the season that wasn't. It depended on which part of the country you were beekeeping in.

Many in the North Island report a patchy season as La Niña delivered a cloudy, drizzly season to the north and a fine, hot and brilliant season for many beekeepers in the south.

Wherever you are, even if you are still harvesting, you will be considering the groundwork for the next season as you reflect on this past one and ask yourself, 'How can I improve on that next season?'

In my last report I wrote of some of the advantages we have as an exporting country, and in particular those advantages our bee products enjoy in looking at prospects for 2012. This month I am continuing the theme by looking at some of the threats not covered in my last report. We all know of the major threats posed by varroa and other pests and diseases but often in the back of our minds there are other threats, three of which I cover here.

Honey imports from Pacific Islands

We cannot say enough about the need for the continuance of a robust biosecurity system. Some concern has been expressed over the risks associated with the importation of Pacific Island honey, and in particular the adequacy of surveillance in these islands. How often does MAF review surveillance standards, and based on what assurances do we trust the authorities in those islands that sign the phytosanitary certificates to import honey into New Zealand? If, say, EFB were detected in one or more island states, would it almost certainly arrive here due to a slow response or a lack of response to the incursion in those islands? We have asked these questions of MAF over a number of months leading up to Christmas. You can read their response in a letter dated 22 December 2011 from Matthew Stone, Director Animal and Animal Products, MAF Standards. *[Editor's note: see page 13.]*

Submissions on new hazardous substances likely to affect bees

The NBA Technical and Submissions Committee comprising Don MacLeod, Roger Bray and me, along with retired Professor of Entomology John McLean, did some outstanding work in 2011. Most of these successes should be attributed to Don, Roger and John, with my help where I could. You might have read Don MacLeod's article in the February journal on the submission he made on behalf of the NBA and himself to the Environmental Protection Authority (EPA, formerly ERMA) on Yates Super Shield Advanced.

> "We cannot say enough about the need for the continuance of a robust biosecurity system."

Other applications that this committee has made or may make submissions on are:

1. Sulfoxaflor, a new type of systemic insecticide that produces much greater nerve stimulation than the neonicotinoids and in so doing, greatly enhances efficacy and limits pest resistance. Sulfoxaflor is extremely toxic to honey bees and is likely to be used over a wide range of crops, including flowering crops and bare ground. A submission against release was lodged with the EPA in November 2011. An oral submission is likely.
2. Tripsol is a mixture of the synthetic pyrethroid acrinathrin and abamectin and is used to control pests in tomatoes. It is particularly toxic to bees. A submission is to be made.

New Zealand appears to be on a global trend of using increasingly toxic pesticides to control an ever-evolving resistant range of pests and diseases that attack our food and farm crops. Almost literally, the downstream effect is either directly killing our bees or possibly an insidious compromising of our bees' immune systems that, in turn, allow pathogens to express an enhanced effect on our bee stocks. In addition, recent research has shown that the honey bee has lower levels of the cytochrome P450 (CYP) monooxygenases that insects use to detoxify poisonous compounds. In fact, a honey bee has about half the number of CYPs found in a fruit fly or in a mosquito.

Potential change to laws governing GM ingredients in food

It is some 10 years since the NBA made written and oral submissions against the general release of GM plants to the then Royal Commission on Genetic Modification. At the time, our submissions against release were based on the likely effect on our export markets of honey containing GM pollen, and the ability of bees and our beehives on trucks to efficiently transport GM pollen far beyond any geographical isolation that might be attempted.

Since then a number of our larger exporters continue to trade on the GM Free label. The US has made clear that a priority for the proposed Trans-Pacific Partnership (TPP) is the abolition of laws that require GM foods to be labelled. Currently our laws state that

Continued on page 6

Timing of Autumn treatment is critical to ensure good hive health and strong colonies in the Spring. Mite numbers will now be at their highest levels and brood area is diminishing and under greatest mite pressure. Treatments should be applied before autumn brood is damaged as this will be your winter bees.

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Continued from page 4

GM ingredients should be generally labelled except for a 1% threshold of GM ingredients.

It is a given that our industry that relies on the export trade of our bee products should, and always will, support enhanced trading opportunities as this is key to our industry's prosperity. The website of the New Zealand Ministry of Foreign Affairs and Trade states under TPP that:

> *'TPP's greatest potential, however, is as a pathfinder for wider regional economic integration. A greater degree of coherence in the regulations that govern global supply chains would streamline international trade, with benefits for businesses and consumers. Over time it would remove unnecessary duplication, reduce costs, and unleash greater opportunities for small to medium sized businesses in particular…."*

We trade on what is perceived as being pure New Zealand honey by our customers overseas. Any change in our current regulations that adversely affects our reputation internationally could change all of that. Negotiations under the TPP continue without, to my knowledge, any submissions from our industry.

Conference 2012

The organising committee for our 2012 conference in Hawke's Bay report that everything is on track with engaging speakers, conference facilities and the like. The theme of this year's conference is 'The Future of Beekeeping.' More details will be announced in next month's larger issue of *The New Zealand BeeKeeper* that goes out to all registered beekeepers. I'm sure that it will be a thoroughly engaging, interesting and enjoyable conference.

Ralph and Jody Mitchell were asked to remove this swarm during pollination. Photo: Jody Mitchell.

Preparing for honey shows

By Kim Knejiber, President, Auckland Beekeepers' Club

Do you want to learn how to showcase your fabulous hive products?

How to have your honey judged as the best in its category at a club competition, A&P Show, or even the best in New Zealand? Then read on for some helpful hints and tips to help you maximise your success at a honey show.

Honey show rules: To avoid disqualification, make sure you read AND understand the rules and specifications. Take special note of regulation jars, lids or boxes. DO NOT enter damaged or unclean containers.

Judges' scale of points guidelines: Visit www.nba.org.nz and go to Honey Competition for the scale of points. This will help you understand priorities.

Liquid honey classes: Sort your frames by colour before extracting. Remember that excessive heat is the enemy: even electric uncapping knives darken honey. Correct moisture content is critical. Strain, filter and filter again. Dust and lint severely downgrades an entry. Check and remove froth or foam. Check for correct and consistent filling height. It is a good idea to change lids when arriving at the show to avoid travel stains. Polish jars and handle by the lid to avoid fingerprints.

Judges consider colour and correct class. The show stewards can assist you here. Other considerations: aroma, cleanliness, freedom of fermentation, crystals, foam or froth, density/viscosity, flavour, container and general appearance, accuracy and uniformity of fill.

For naturally granulated or creamed honey classes: firmness of honey, texture and evenness of grain are taken into account. Appearance in the jar, layering and lack of bloom are all considered.

Comb honey: avoid pollen cells or wax moth damage. Avoid travel stains, weeping and uncapped cells. Honey should have no signs of granulation. Judges may taste, open cells and remove comb from box to inspect the underside. There should be no sign of support wires. Correct size foundation wax used and the position of the midrib are both assessed. Cells should be uniform and full. Heat, even from a lamp, is the enemy. Cut comb should be evenly cut to fit the container and drained of excess honey. Lighter honey is more sought after commercially and generally scores more highly than darker honey. For Comb Honey sections or frames, the outside frames should be clean and free from propolis.

Beeswax: Grade and sort by colour. Strain, filter and strain again. Remove debris from bottom of blocks. Shrinking and cracking of moulds can sometimes be avoided by slow cooling. Take special note of competition schedule requirements for weights and sizes. Use scales when pouring into moulds. Trim and polish uneven edges. Wax must have a pleasant aroma. Avoid excess heat. Texture and tenacity are considered, so wax should be freshly poured, not brittle. Check competition schedule whether wax is to be left natural or if it can be polished for presentation. A box, board or tray might be useful for protection or presentation purposes.

Pollen: Must be clean and free from debris or foreign particles. A good variety of colours will score more highly. Pleasant aroma. Flavour should be balanced and free from bitterness. Not over-dry or brittle. Jars to be clean, polished and evenly filled with clean lids. Check that the bottom of jars are free of debris.

Conclusion

Honey is a luxury product. Only a small number of people in the world can still enjoy nature's unadulterated superfood. Honey shows are an excellent way to improve your harvesting and packaging skills and to promote with pride our 100% pure natural New Zealand hive products. Good luck!

Off and running in 2012

By the NBA Secretariat

It's been a torrid few months, and 2012 is shaping up to be a busy year for us all.

Membership

We are happy to report that membership income continues to increase on the same time last year. There was a very good response for renewals over the Christmas and New Year period.

If you haven't yet renewed your membership or Journal subscription we do encourage you to do so. You will find a form on page 12.

Those of you who have renewed should now have received membership packs for 2012; if not, contact the office and we will follow up. The packs contain information on the member benefits secured for the year. Please support these companies by choosing them for your business and leisure needs because they are supporting us. The secretariat will continue to approach more possible benefit partners throughout the year.

Keeping the Journal viable

After a number of years of no increase in the Journal advertising rates, the Executive Council decided to raise the rates. As a result, we undertook some extensive research against comparable publications and a fair and equitable rate card for 2012 was struck.

In raising the rates, and offering a range of discounted rates for contract advertisers, the Executive was well aware of the impact this would have on some advertisers. However, they stuck with the view that rate increases are a fact of life in business and especially so if the Journal is to remain viable. A yearly review of advertising rates will be undertaken by the Executive Council to ensure costs for producing the Journal are being covered.

Addressing the issue of pesticides

Daniel and Pauline attended the EPA hearing on Yates Super Shield with Don McLeod, who spoke to the NBA's submission. An opinion piece by Don was printed in the February journal and Barry Foster comments in his NBA President's report in this issue.

The issue of pesticides and their impact on bees will be ongoing and the Association has this as a key priority.

Tackling varroa resistance

As a result of Dr Mark Goodwin's alert to the imminent spread of resistant varroa, in April last year the secretariat wrote to the Minister of Agriculture and Fisheries, Hon David Carter, on behalf of the NBA to brief him on the issue. We suggested possible ways that MAF and the bee industry could work together to monitor and slow the spread of resistance while research continues in New Zealand and overseas.

We are still working with the Minister's office to sort out a framework that will work best for industry.

Undertaking the first-ever national survey of NZ's bee population

The secretariat has made an application on behalf of the NBA to the Honey Industry Trust for financial support to undertake a project by BERL (Business and Economic Research Limited) to conduct a formal, nationwide bee census. Not only will this provide a benchmark against which the whole industry can monitor what's happening to New Zealand's bee stocks, but it will also provide a detailed economic analysis of the true value of bees to the New Zealand economy. Armed with that information, the NBA can be a more effective lobbyist. We expect to receive a response to our application by March.

More work behind the scenes on GIA

The Industry Working Group on GIA has continued to meet and to work with MAF to iron out some of the main concerns about this important government/industry agreement. While it might seem like it's taking ages, actually a lot of progress is happening behind the scenes. It's progress that will have a major and beneficial impact on how GIA affects beekeepers and other agri-sector industries. We're looking forward to being able to circulate a clear-cut vision for GIA in the near future and that will start the Association's membership consultation process.

Working with MAF

Daniel and Pauline accepted an invitation to meet with MAF's new Deputy Director Andrew Coleman, who asked to see us. We thought that was a very positive sign. Andrew covered his role in the ministry and provided an opportunity for us to discuss many aspects of the bee industry with him.

> "... we have now drawn up a list of relevant policies and procedures for the Council's consideration."

A meeting was also held in February with David Hayes, who has recently been appointed to head up a new MAF division called 'Preparedness and Partnerships'. In this role he is the one 'in charge' of GIA from the MAF side, and as such, he is keen to get out and meet all the industry groups. He's interested in hearing where the bee industry currently stands on GIA, and also about what assistance you will need from MAF in the foreseeable future. We will report on that meeting in next month's update. It's positive though, that the Association is now dealing with MAF at such a senior level.

Dates set for Bee Week 2012

The dates for Bee Week 2012 have been set by the Executive Council. The week will be staged from 20–24 August. We will begin work on a media plan and promotional strategy for the event very soon and will advise branches and other interested participants as soon as these are finalised.

Generating media attention

The media remains very interested in bee-related matters. Since we last reported to you, we have had numerous requests for articles and interviews on subjects ranging from the causes of CCD, the impacts of pesticides, the value of pollination, the value of manuka and industry recruitment. We're very happy to keep generating media attention because that keeps the profile of the industry high.

Establishing Executive Council policies

As a result of the Executive Council's governance training, it was clearly identified that a new set of governance policies for the Council was needed. After taking professional advice we have now drawn up a list of relevant policies and procedures for the Council's consideration.

Stephen Black, chair of the Policies and Codes of Practice Committee, and the secretariat are working through a template for governance best practice and we hope to be able to report on that soon.

Executive Council meets more frequently

At the AGM in 2011 members expressed a desire for the Executive to meet more frequently. As a result, since then there have been four council meetings, both face to face and teleconferences. The frequency has enabled the Executive to cover the raft of issues confronting the industry and address ways the NBA could be most effective in dealing with them. This has, of course, resulted in an extremely busy secretariat attending MAF and industry meetings, lobbying government ministers, dealing with media interest and strengthening the NBA through membership drives and benefits.

Goodbye Jess

Sadly, Jess Williams has left us, moving on to a role with Positively Wellington Tourism. We wish her well. Jess was a hard worker with a very positive attitude and she's left a big hole in the office. We are looking to replace her as soon as possible, but it's not an easy task. Please bear with us in the meantime as we cover the jobs Jess managed. Responses to enquiries may take a little longer than usual.

VSH Queens Research Project

The NBA has arranged for a meeting with the whole project team for the Varroa Sensitive Hygiene (VSH) Queens Research Project. Executive Council member Kerry Gentleman, Pauline and Daniel will videoconference with Plant and Food Research in Auckland, Hamilton and Christchurch. This quite exciting project is moving into a new stage and the Council is keen to ensure NBA members benefit from it. We'll report on progress in the April journal.

Beekeeping Clubs subscription levels

This month Daniel and Pauline are meeting for a strategy session with a small group of prominent hobbyists to discuss concerns at the subscription rates increase for 2012. The feedback gained from this meeting will enable the Executive to make decisions that will benefit existing hobbyists and club members, and encourage others to become active participants in NBA affairs. The goal is to identify how the Association can work more closely with hobbyists, who are a rapidly growing section of the industry and who, one day, may be the next commercials!

BUSINESS

Internal audit

By A. Beekeeper

Well, it's another year for Wild South Honey and nothing has changed much.

The honey still comes to the same new shed and gets trolleyed into the same nice orange warming room. That is, of course, if the bees are kind to us and keep their little wings going. Even though the RMP and the clever little brains that worked it out don't care about this part, it has been a struggle.

Yes, the shed is still the shed and the mousetraps are still in the same place, still with the same mice in them. Oh no, I mean of course they get checked and the mice safely removed. They must be good traps though, because man do they catch some mice. I guess it is the food-grade peanut butter; its smell will seduce even the most careful and experienced mouse. I have heard there are rumours amongst the local vermin population not to get close to our honey shed.

Like every year, we have had our water tested. I tell you it is good water: no *E. coli,* low turbidity; it's so pure even the Virgin Mary herself could not compete.

Well, let's get to the processing area. What a nice bright orange room and a flash, newly painted floor: it must bring a smile even to a bureaucrat's face. That's if he or she is not blinded by the sparkling of the nicely cleaned stainless equipment. It has become a lot quieter to work in the processing area this year, as you don't hear the grunting and groaning of the workers anymore as they lift the honey boxes onto the stand. Now we have a box lifter to do this job for us. The spinner is still hanging in and separating the wax from the honey. Ross's super-duper extractor revs up and lets the honey run into the sump. At a switch of a button the liquid gold (we wish it were) runs through a manual filter, gets even cleaner if that is possible and off into a food-grade approved IBC.

Everything runs pretty smoothly for a fairly manual system. The only hazard I can see coming up is that the man on the knife is getting older every year and he might not keep the speed up forever. Well, we will cross that bridge when we get there. After doing this internal audit I must say that I am very impressed with us and give full marks.

Destroying American foulbrood colonies

By Dr Mark Goodwin, Apicultural Research Unit, Plant and Food Research, Ruakura

Under New Zealand legislation there are very clear requirements for dealing with colonies infected with American Foulbrood (AFB).

Any colony with AFB that has one or more larvae or pupae showing AFB disease symptoms must be destroyed, along with any equipment or bee products from the hive. This must be carried out within seven days of the disease being found. Hives that have had a sample of bees or honey that have tested positive for American Foulbrood spores are not classed as having AFB. Only those with visual symptoms of the disease are classed as having American foulbrood. However, any hive that tests positive for AFB spores should be treated with caution, and watched carefully as it may develop disease symptoms at a later stage. AsureQuality Limited must also be notified of the finding of an AFB hive within seven days.

The best way of destroying a hive is to block the entrance of the diseased hive and pour half a litre (one litre for hives with three or four supers) of petrol across the top bars. This should be done in the morning or evening when the bees are not flying to reduce the chance of the returning bees drifting into other hives.

However, despite the legislation, many AFB hives are not destroyed for weeks—and sometimes months—after they have been found because the beekeeper has not been able to find the time to come back to the hive in the evening.

When inspecting hives belonging to commercial beekeepers we write 'AFB' and the date on any AFB hives we find. I can think of at least two separate occasions with different beekeepers where we recorded that the hive still had AFB when we carried out a further AFB inspection a year later. However, if you are unlikely to be able to destroy an AFB hive at night/or morning within seven days, it is better to destroy it when found even if there are still bees flying, rather than leaving it for a long period of time during which it may be robbed out.

As part of a research project we placed an AFB hive next to an uninfected hive. In the middle of the day when the maximum number of bees were foraging we removed the AFB hive so all the foraging bees flew into the uninfected colony. We repeated this with 25 hives without spreading the infection. It is always best to kill hives when the bees are not flying but if there is no other option they can be killed when bees are flying, with minimal risk of spreading AFB.

Burning infected hives

Once the hive has been killed it should be sealed to prevent it being robbed out by other bees before it is burnt. To burn a hive, a hole of one metre in diameter and at least 300 millimetres deep should be dug to collect any unburnt honey. Full instructions on how to burn hives can be found in the *AFB Elimination Manual.*

As petrol is being used, a good deal of care needs to be taken when burning hives. There have been a number of cases where people have burnt more than the intended hives. In one case, some hives were placed in a pit and the fire lit. More hives were then taken off the back of the truck to put in the hole and when the beekeeper turned to take the next group of hives off the truck, he found they were already burning.

In another case where a large number of hives had to be burnt, a deep hole was dug and filled with petrol-soaked hives. The level of the petrol fumes had just about reached the lip of the hole when the lighted taper was thrown in. The resulting explosion rattled the windows for kilometres around. The beekeeper, minus his eyebrows, had to then pick up all the burning AFB frames that had been blasted out of the hole.

In some cases it is not possible to burn hives within the seven days specified by legislation because of fire bans. In this case, permission can be sought from the Management Agency to store dead infected hives in such a way that other honey bees are prevented from gaining access to them. The material can then be burnt when the fire ban is lifted.

Plate 1. Burning AFB-infected equipment. Photograph: Dr Mark Goodwin.

Care does, however, need to be taken when storing infected hives. One beekeeper had 10 AFB hives stored in his shed when one of his workers thought they would tidy up. The worker separated the floors and lids and added these to the appropriate stacks. He then added the AFB supers to the stacks of uninfected honey supers. It took two years of burning new AFB hives to sort that mistake out.

Sterilising hive parts

Beekeepers with a Disease Elimination Conformity Agreement negotiated with the Management Agency can, if their agreement specifies it, salvage and sterilise some hive parts. They can only be sterilised by a method approved by the Management Agency. Currently there are only three approved methods. These are:

1. paraffin wax dipping
2. irradiation
3. dipping in sodium hypochlorite.

The use of these methods will be discussed in the next article.

Reference

Goodwin, M. (2006). *Elimination of American Foulbrood Disease without the use of Drugs—a practical manual for beekeepers,* Revised edition. Wellington: National Beekeepers' Association of New Zealand (Inc.)

[Editor's note: This is the fourth article of a series that has been written for the Management Agency for the American Foulbrood National Pest Management Strategy. These articles were first published in 2003, and have been reviewed and updated where necessary.

We will run these articles on a regular basis over the year. The articles will cover a range of aspects of American foulbrood control, including how to inspect for and identify diseased colonies, the management of colonies to prevent American foulbrood and a beekeeper's legal obligation with regard to American foulbrood.]

A sticky situation

By The Beekeeper's Wife

The Beekeeper's Wife was very happy. The new home was finished, and the family had just moved in.

The budget was very tight so there was not a lot of furniture or furnishings, but to have their own new home was wonderful.

Then The Beekeeper announced that there were a couple of boxes of honey from the back garden hive to be extracted, and the only possible place to do the job was the new dining room. After all, there was no carpet laid yet, and the kitchen was at hand with water, etc. What could The Beekeeper's Wife do, but acquiesce?

The extractor was duly set up, and a pail set on the floor under the honey gate to receive the golden bounty so diligently gathered by the bees. With only a minimal amount of sticky spillage, the crop was extracted and the pail on the floor was nearly full.

The Little One was very interested in the proceedings, and was pottering around with his current favourite toy—the vacuum cleaner hose. This he liked to drag around behind him, fitting the end of it into various apertures that took his fancy, and tantalising the cat from time to time. And then—Oh! No! He plunged the business end of the hose deep into the pail of honey! What was more distressing—the contamination of the family's winter honey supply, or the difficulty of decontaminating the vacuum cleaner hose?

The honey was duly filtered and The Beekeeper's Wife trusted that the sugar concentration in the honey would deal to any life-threatening bacteria, and many rinses of the vacuum cleaner hose with warm water almost brought it back to normal, but forever after fluff and dust tended to clog the hose rather more frequently than before. Needless to say, that was the first and last time honey extraction was done in the house.

Now it's your turn!

All beekeepers have a wealth of tales to tell about their own sticky situations, mishaps or other near-disasters that are good for a laugh, even though it might take a while to see the funny side! Usually some good lessons are learnt that are well worth imparting to others.

We're putting out a challenge to you all to share your beekeeping adventures and misadventures with your colleagues. Feel free to use a pseudonym if you wish.

If you're shy about writing a story or think you're not a writer, banish those thoughts: we are happy to help shape your story.

Still feeling bashful? Photos are fine too, either to illustrate your story or simply on its own with a caption to help tell the tale. We look forward to hearing from you!

- Your Publications Committee

Repel bees from the honey house

Are your bees hanging around the windows and doors of the honey house? Spray a 50/50 mixture of water and Jeyes Fluid around the doors and windows. The strong smell will stop the bees coming around. I'm advised that Jeyes is available in your local hardware, garden centres and cleaning chemical businesses. Also remember that this is also a poison, so only use it outside.

- Frank Lindsay, NBA Life Member

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2012 Member and Journal Subscription Form

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The membership year runs from 1 January – 31 December. There are 11 issues of The Beekeeper journal from February to December. A journal subscription is included in the membership fee.

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MAF

22 December 2011

Barry Foster,
President,
The National Beekeepers Association of New Zealand,
PO Box 10792,
Wellington 6143

Dear Mr Foster

Importation of honey from Pacific Islands

Thank you for your letter of 25 November 2011.

As indicated in MAF's letter dated 14 November 2011, MAF consider ongoing surveillance and monitoring processes, border controls, and health status reports of the Pacific Island countries that export honey to NZ. These considerations help provide assurances to MAF that imports of honey from these countries do not present a biosecurity risk to New Zealand.

As indicated in earlier correspondence, new guidelines for the ongoing approval of Pacific Island countries will be incorporated into the import health standard at the conclusion of the MAF work programme arising from the Independent Panel report. In the interim a brief summary of the evidence for the biosecurity status of each Pacific Island country approved for exports to NZ is provided for you below.

The information provides direct evidence relating to the status of the islands for European Foulbrood (EFB). With respect to Israeli acute paralysis virus (IAPV), there is no direct evidence from past surveillance activity in the Pacific Islands that export honey to NZ, given the novel regulatory status of this organism. The considerations that provide MAF with assurances that the Pacific Island countries with respect to IAPV are therefore more focused on existing border controls and surveillance and monitoring systems for detecting anything unusual. MAF does not believe that the risks of IAPV with respect to imports of honey from the Pacific Island countries warrant immediate action.

Niue

Niue is the largest volume exporter of honey to NZ. The last survey conducted by AsureQuality was in 2005 and no evidence of EFB was found. While IAPV was not specifically surveyed for, all hives were inspected for Sacbrood and Chronic bee paralysis virus as well as evidence of any other pests and diseases. Niue has legislation (Agriculture Quarantine Act, 1984), a regulatory body to enforce the legislation, an effective quarantine system, and a response system should disease be discovered though the sole company's disease inspection program. The sole company owns all the hives on the island and they employ experienced beekeepers capable of detecting anything unusual in the brood or adult bee population.

Pitcairn Island

Pitcairn Island is the second largest volume exporter of honey to NZ. The last official survey was conducted in 2002 under the auspices of Animal Health Division of SPC (Suva, Fiji). Another unofficial physical and microscopic survey was conducted in 2007 by a former apiculture officer AsureQuality with no evidence of EFB or anything else unusual detected. In 2009 MAF requested information about border controls, surveillance and monitoring, and training of beekeepers on Pitcairn Island. MAF have received official assurances that Pitcairn Island does not permit the importation of honey or bee products from any country. Furthermore they have trained individuals acting under legislation and conducting regular surveillance for economically important bee diseases (including EFB and anything else unusual including viruses). Their physical isolation and the difficulty in accessing the island provides assurances that border quarantine is maintained.

Samoa

Samoa is the third largest volume exporter of honey to NZ, albeit in very small quantities to date (400kg last year). The last survey conducted by AsureQuality was in 2005 where 65% of the apiaries were surveyed and no evidence of EFB was found. While IAPV was not specifically surveyed for, all hives were inspected for Sacbrood and Chronic bee paralysis virus as well as evidence of any other pests and diseases. Samoa has a beekeepers association (BASI) whose members own most of the hives in Samoa and have received training to recognize clinical symptoms of exotic bee diseases (by AsureQuality in 2010). Samoa also has legislation (Quarantine Bill 2005) and an active quarantine service operating at the border.

Tonga and Tuvalu

In monitoring import pathways MAF can confirm that there have been no imports of honey from Tonga and Tuvalu for at least 10 years. The last survey conducted by AsureQuality for Tonga was in 2006 and no evidence of EFB was found. Again, while IAPV was not specifically surveyed for, all hives were inspected for Sacbrood and Chronic bee paralysis virus as well as evidence of any other pests and diseases.

Solomon Islands

In monitoring import pathways MAF can confirm that there have been no imports of honey from the Solomon Islands for at least 10 years. The last survey conducted by AsureQuality was in 1996. MAF is however aware that CSIRO Entomology Australia have recently determined the honey bee health status of the Solomon Islands and no evidence of EFB was found, see - http://aciar.gov.au/project/PC/2004/030.

Finally, I would like to reassure you that MAF remains committed and vigilant with respect to biosecurity for imports of honey and honey products. As NBA knows, we have been working towards updates of all such import health standards for some years. For reasons of regulatory efficiency and consistency for importers we are seeking to avoid short-term changes until the scientific work programme arising from the Independent Review Panel's report is completed. We do not believe this plan creates an increased level of biosecurity risk for New Zealand.

Yours sincerely

Matthew Stone
Director, Animal and Animal Products
MAF Standards

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FROM THE COLONIES

Auckland Branch

Our region is still waiting for the "hotter than normal, drier than normal" summer that NIWA predicted. I think the best way to describe the season so far is 'patchy'—patchy for weather, and patchy for crop both from place to place and from time to time. Our bees have been behaving much like us—staying indoors in the rainy periods, waiting for the rain to stop and eating far too much!

It is reported that there are plenty of clover flowers around (late January–early February) but no honey bees visiting. We can only conclude that the ground temperature is not yet warm enough for the flowers to yield their nectar, or perhaps the high humidity has something to do with it. On the other hand, we have had bouts of southwesterly winds—cool, but very drying—which have made the ground quite dry and hard.

Brian Alexander, of Woodhaugh Apiaries, reports an infestation of Argentine ants in one of his hives. These nasty little critters are smaller than our common ants and thinner, and are more brown than black. Brian and his staff have observed the ants invading the brood cells in the hive, and they have also been seen eating honey and pollen. The bees seem to be powerless to overcome the ants and the hive was seriously weakened, so they are a real threat. Fortunately, Brian has made contact with a company who have a chemical control product that is used outside the hive and is having good results. Argentine ants are widespread throughout the country, so Brian will almost certainly not be the only beekeeper who has encountered this problem. If you would like to contact Brian regarding the ants, his contact number is 09 420 5028. He will be happy to talk to you.

- Helen Sinnock

Poverty Bay Branch

Green Gisborne—for the first time in several decades the hills around Gisborne did not turn their normal brown over summer. Autumn seems to have arrived in early February with regular rainfall and cooler days.

Clover and multifloral honey is still flowing around the East Coast in February and harvesting has revealed good crops.

Manuka crops in Gisborne–East Coast 2011 season were at least 50% lower than average and in 2012 are much lower again. Perhaps we are in for a good one next year. Varroa numbers have been low so far.

This season beekeepers that did a mix of multifloral and manuka honey have fared better than the ones who went solely for manuka.

- Paul Badger, Branch President

Hawke's Bay Branch

When we are not moaning about the weather we have been busy organising this year's conference. Don't forget to think up some bright ideas for the Roy Paterson Trophy. It is always interesting to see new innovations.

Don't forget the photograph competition and save some of your best honeys so you can see how they compare against Hawke's Bay's finest. Monofloral honey is great but there is nothing wrong with natural blends and there is also a huge scope for deliberately blending honeys to achieve the tastes you want. Unfortunately my hives don't produce monowai, which has a very strong aniseed flavour. I would love to try mixing this with a mild honey; I think it would be a real winner. How about some of those more unusual honeys such as fuchsia or matagouri?

We are working on the registration form and other information for the April issue.

- John Berry, Branch President

Nelson Branch

With the weather bombs over it seems like a late season is kicking in, with reasonable flows in some areas. A lack of wasps from all the early rain should help to produce some autumn honeydew.

The harvest is just starting to get cranked up, about 3–4 weeks later than previous years with variable crops throughout the region. Not a vintage year but thankfully not a year like the last one.

- Gareth Ayers

Canterbury Branch

January has been an unusual month in Canterbury, alternating between very hot and heavy overcast days with the odd earthquake to keep us on our toes. Overall, most people should be happy with their crop in our region.

Times are changing in the Canterbury region along with most other places. Pollination of small seed crops is becoming a bigger part of most successful beekeepers' businesses whether we are seeking this type of work or not. There doesn't seem any escaping it. Pollination work brings its own challenges; this year seems to have more reports of hive deaths due to spraying, which is really disappointing to hear. Personally I'm tiring of people needing hives moved by the following day: it makes it hard to plan out a successful week. From what I can work out, this problem especially stems from the seed companies who grow these crops, not from the farmers. I would be interested to hear if anyone else is a little miffed by the treatment received from reps and if so, the branch could follow this up and try to rectify this problem for next year.

We need to voice our concerns collectively.

- Brian Lancaster, Branch President

Two examples of hives winning the battle against an irrigator. Unfortunately, it doesn't happen this way very often. Photos: Brian Lancaster.

Be organised for peak performance

By Frank Lindsay, NBA Life Member

Early February and perhaps it's now starting to dry out. The grass is starting to burn off in some areas, which means that clover will start to be stressed and will hopefully secrete a little late nectar.

In the bush the white rata and some ground sources are still flowering, such as lotus major and catsear, while pennyroyal is just beginning to make a show with its light purple flower spikes in the wetter areas. In town some trees and shrubs continue to flower: the biggest and brightest is the orangey-crimson eucalyptus.

In my garden the bees are just hanging about even though the odd pohutukawa is flowering nearby. It's not secreting so the bees are trying to get at a couple of frames of honey in an empty sealed nuc box.

It's quite surprising how a beehive's population seems to ebb and flow. A few months ago the bees were boiling over in the hives. Come the honey flow and four weeks later, most of the field bees are dead, giving their lives to fill two or three supers with honey. A few weeks later and a new generation of bees has emerged and the hive seems full again, ready for another honey flow. However, quite often this second flow just doesn't happen.

Robbing

Within a few weeks when most nectar sources have tailed off, the robbing season will start. Strong hives full of bees will be out trying to steal the honey reserves from weak and undefended hives. We can start a robbing session quite easily during this period by simply leaving honey frames exposed while removing the crop. Once bees get a sniff of free honey, they gather in large numbers and will try and get into any hive, setting up a stinging frenzy.

If this happens in a suburban garden, block the hive entrance(s) with grass and turn on the sprinkler. The constant water flow will cause the robbers to give up and go home. Reduce the entrance even further in the late afternoon and next time you open the hive, check that it still has a queen by looking for eggs. Before robbing season starts, it's best to close down entrances to 100 mm and block off any cracks or holes in the upper supers, while leaving room for ventilation at the top.

Preparing for winter

Inside the hive when nights start to cool, the bees will move any uncapped honey from the outside frames in the top super down around the brood nest. Some have already honeyed themselves down into four frames with brood.

Most of us remove the surplus honey, leaving a full super for them to winter over on. However, if we have a prolonged autumn, sometimes the bees will convert this honey into bees if there's plenty of pollen available and a dribble of nectar coming in to stimulate brood production—similar to spring conditions. Yes, they will need plenty of bees in the hive to winter over but they also require three to four frames with pollen and a super of honey for a two-high hive.

Some commercial beekeepers winter in singles with a minimum of six frames of honey but they feed pollen substitute and sugar syrup early in the spring to stimulate the bees into building up to a decent population again for the honey flow.

If your bees start chewing through their honey reserves, put the queen into the bottom super and place a queen excluder between the first and second supers to reduce the area in which the queen can lay. If you can't find the queen, shake all the bees from the second super into the first and then put on a queen excluder.

Achieving an early spring population

Over time you learn your area, recording each year what's flowering, what's going on in the hives and when different honey



Pennyroyal, lotus major and white rata, taken in the Wellington region in early February 2012. Photos: Frank Lindsay.

flows start and finish. You will then begin to organise your hives to peak at the time when the most nectar is available. For me on the coastal fringe, kamahi is the predominant tree along the bush edge so I get my bees to peak from mid-October onwards when this is flowering.

To achieve an early population in a cold windy climate, I leave a good population in the hives and plenty of honey. Most hives will be left three full-depth supers high with more than a super of honey. This might seem extravagant to some commercial beekeepers but my bees are often flying during the warmer afternoons for an hour in winter gathering a little nectar and pollen, which keeps brood rearing going. Some years I have had whole apiaries of bees use their reserves before spring. I either have to feed raw sugar, which takes a lot of effort to convert into nectar they can use—thus suppressing brood development—or I need to put another super of honey on to the hives.

The problem with putting on a super of honey (I put some supers aside for this purpose) is there is also a risk of spreading AFB. Raw sugar, although safer, can require more visits to top up the feeders.

Some beekeepers take all the honey supers off until they reach brood in the frames then split the hives, giving each half a protected queen cell and leaving both halves to their own resources. If the bees chew through what stores they have, they will have to live hand to mouth until being fed lots of syrup and set up for winter.

Too much of a good thing...

Leaving a lot of honey on hives can cause problems in the spring. Strong hives have a tendency to swarm if not managed closely. Generally I split most hives to reduce the swarming urge. If the hives had smaller populations going into winter, they come out slightly smaller and will then build up on the kamahi flow rather than gathering it. This would make my hives reliant on the later flows that are unpredictable, as the equinoctial winds and the weather play a major part around Wellington as to whether or not there is a later honey flow.

City beekeepers, however, have it a lot easier. There's always something flowering to stimulate the bees. Hives in some areas can produce up to 100 kg with constant removal of the capped honey frames but those that leave honey on hives without under-supers can have their hives swarm even in February. And just when you think you have mastered beekeeping in your area, conditions change.

Production this season

I have spread my hives to cover the different climates in my area and for some areas the overall honey production this year has been a little disappointing. I had a good early flow but the supers put on just before Christmas are still empty, with hardly a drawn-out frame. I had put on a lot of supers with new plastic frames, each with a couple of drawn frames to bait the bees up into the supers. In some hives only the drawn frames were filled—suggesting that only a dribble of nectar occurred that didn't stimulate wax secretion—and in others nothing was touched.

> "...don't think you have licked varroa when you have hardly any mites in your hives."

Generally if I have a bad spring I can depend upon pohutukawa and fennel, which flower from December onwards. While they flowered over a long period this season, I don't think they secreted much nectar as I'm only seeing the occasional full super of white or yellow capped frames. This is the second consecutive year pohutukawa hasn't produced well. It has been suggested to me that perhaps I'm now seeing similar conditions to the South Island where southern rata doesn't produce every year.

Whatever the honey flow, the hives are in very good order with quite a few superseding their queens. A lot of new queens have three to four beautiful frames of capped brood with hardly a cell missed; however, not everything goes to plan. There's the odd hive with hardly a bee flying. These I have found to be queenless, often with only the odd new larvae, suggesting that a drone-laying worker was starting to fulfil the role of the queen. The bees from these hives are dumped out on the ground some distance from the original site and the honey and pollen frames put on other hives (after a quick check to make sure all hives were disease free). If left as is, they would have been cleaned out by robbing bees or wasps.

Sometimes it's possible to save these hives by uniting a nuc on top but quite often the new queen is killed and you are back where you started. You can get a better acceptance if the queen is caged for a week or more until the laying workers' ovaries are reduced in the presence of queen pheromone, but this would require me making a second trip to release the queen. I find it better to get rid of the drone-laying workers away from the hives and let the returning field bees go into a nearby hive. Sometimes they are not accepted and will be killed but a spray of air freshener into the hive entrance and over the bees to neutralise the hive odour will see them join without too much fighting. Better to keep the nucs for those hives that still have failing queens—those hives that are down on bee numbers with spotty brood or showing the odd cells of sacbrood or chalkbrood.

If you do not have nucs available, put in a protected queen cell close to the brood and the new virgin queen will supersede the old. It's all about setting the hives up for the coming spring: a new queen, plenty of bees filling the supers and adequate stores of pollen and honey.

Mites are peaking

As brood rearing diminishes, the mites keep on breeding but with fewer cells to choose from they start doubling up, resulting in bees that are shrunken and/or have deformed wings. With a greater number of bees emerging damaged (unable to produce royal jelly to support the next generation), it's only a matter of a month or so and the colony will collapse.

The first sign visible outside the hives is drones or bees crawling away from the hives on a sunny day. They may look fully formed but inside they are not and they cannot fly. Early treatment of mites is essential to prevent this from happening.

With this in mind, last month I started going around the hives checking natural mite fall (most of my hives are on mesh bottom boards), trying to identify those with high mite numbers so they can be treated early. Generally in an apiary of 12 hives, two or

three will have fairly high mite numbers, and the bees drifting from these hives quickly spread mites to other hives over the next few months. It's been a nice surprise to find that a lot of hives have registered hardly any mite fall. The difference this season is that I have cut out a frame of drone brood, three months running since October. Just to check, I forked out some drone brood and the mites are there but down to two to three per hundred drone cells. (I used an onion holder purchased in Australia from a little food retailer.)

In those hives where I hadn't removed the drone brood, I found five to eight mites per 100 drone brood cells at the stage when the hive should be treated. Don't wait too long to treat your hives.

And don't think you have licked varroa when you have hardly any mites in your hives. Yes, you can relax for a month or two but unless all the hives in a given area are treated at the same time, your treatments could be nullified by reinvasion.

If you had bad swarming this season, expect these now-feral hives to start breaking down around May and June. I have found that one feral hive near an apiary can produce big mite numbers in all hives in the apiary during winter through robbing and reinvasion. With varroa mites, the idea is to keep their numbers as low as possible all through the year. As Randy Oliver said at last year's conference, it is the viruses that kill your bees and these only get away when there are high numbers of mites in your hives. The important point to remember, if you have had very high mite numbers in your hives, is that the damage to your bees by viruses may have already happened and could continue for the next six months.

What's a sign of viruses? I went over the photos I took during Randy's presentation. Look at the sealed brood. If you see half-chewed white pupae or off-white brood, suspect the hive has viruses. I found these most noticeable in the drone brood frames where there was spotty drone brood. Off-white brood could also be a sign of the early stage of AFB, so check carefully and remove half a dozen or more capped cells in the middle of an area of emerging brood just to make sure. Familiarise yourselves with all the bee disease symptoms before taking off honey or just checking a hive. If you are not sure, get a second opinion.

Things to do this month

Remove all comb honey frames. Remove and extract surplus honey—those frames that are not fully capped should be shaken to make sure the honey is dry; otherwise, leave it for the bees. Don't forget to do an AFB check before removing any honey. If bees are robbing, mark the supers and check the hives once the honey is off. Return and burn any that are diseased.

Requeen hives. Now is the best time to get queens mated while it's still warm and there are plenty of drones about. Queen producers should also have mated queens on hand if required.

In some areas it's time to winter down hives. Keep an eye out for wasps and close entrances down so the bees are better able to defend the hives against wasps and mice getting into your hives.

Waggle dance leads bees to nectar

From BBC News

The following article was published in 2005, but its findings remain of interest given the increasing use of transponder technology in tracking bees.

Radar has helped resolve a long-standing controversy about the purpose of a strange dance performed by bees, *Nature* magazine reports.

The famous "waggle" dance contains information about the whereabouts of nectar, just as was originally proposed in the 1960s, scientists now claim.

The theory met with scepticism, partly because people did not believe bees could decode such a complex message.

But now radar tracking has proved they do follow waggle dance instructions.

Mysterious dance

Beekeepers have long puzzled over the mysterious little performance, which bees stage for their hive-mates when they return home from a foraging mission.

On entering the hive after gathering nectar, a bee will run around in a tight figure of eight dance, waggling its abdomen as it does so. All the other bees gather around, apparently scrutinising the ceremonial manoeuvre.

"It is, at first sight, a rather confusing and not very organised movement," said co-author Joe Riley of Rothamsted Research, UK. "But if you watch it carefully you can recognise the very distinct and organised pattern."

It wasn't until the 1960s that a plausible explanation for the dance was proposed, by Nobel Prize winning zoologist Karl von Frisch. He suggested that the bees are delivering a complex set of instructions about how to find a rich nectar source.

The direction the bees point while performing the dance, Professor von Frisch speculated, indicates the direction of the food source in relation to the Sun; while the intensity of the waggles indicate how far away it is.

The theory was tested by setting up artificial feeding stations and monitoring whether the bees' dances did describe where the food was, according to von Frisch's rules. They did indeed, but some scientists did not believe observing bees could actually follow the instructions.

"What was questioned was whether bees could decode the dance because it seemed like a very difficult thing for them to do," Professor Riley explained to BBC News.

Indeed, it seemed they were not managing to decode the dance because they took much longer to reach the food source than would be expected if they were following the instructions.

This led some scientists to suggest that the waggle dance was in fact performing a much simpler task.

Professor Riley explained: "Other hypotheses were raised that suggested the dance was to attract the attention of bees in the hive, cause them to cluster around the dancing bee, and pick up the odour of the source visited.

"And then these bees would fly out of the hive and home in on the food source [using smell]."

Radar transponders

However, the new tests have shown Professor von Frisch was right all along.

Professor Riley and his colleagues fixed radar transponders to bees who had watched the waggle dance, to track their route to the food source.

They found they flew straight there. To double check, bee recruits were taken to release sites 250m (820ft) away from the hive. These bees flew to where the feeding site should have been had they not been displaced, showing they were following the dance instructions accurately.

"This was very strong support for the von Frisch hypothesis because in this case there was no possibility the bees were following regular routes or any odours that the dancer might have left in the air," said Professor Riley.

Professor Riley's team also discovered a possible reason for why the bees took longer than expected to actually reach the food source. They found that, although the bees flew straight to the location of the food, they were slow to home in on it.

Professor Riley thinks this might be because of the artificial—and largely odourless—feeding stations used in experiments.

Under normal circumstances, he believes, the bees would use the waggle dance to get near a fine crop of flowers, before relying on smell to actually land on them. But in the sterile laboratory environment this was harder to do.

Professor Riley believes his team's experiments will end debate about the function of the waggle dance.

"I can't see that there is any other explanation other than the one offered by von Frisch that could explain the bees' clear ability to travel to a destination that they've never been to before," he said. "It is a pretty convincing case to me."

Source

BBC News. Waggle dance leads bees to nectar. Published 2005/05/11 18:04:22 GMT. © BBC MMX. Retrieved April 12 2011, from http://news.bbc.co.uk/go/pr/fr/-/2/hi/science/nature/4536127.stm.

[Editor's note: Readers may recall that the February 2011 issue featured a report by Dr Oksana Borowik on the Third Annual Southern Hemisphere Bee Fest Symposium, Auckland, 2–3 December 2010. Oksana's report summarised more recent research in Australasia on transponders.]

La Niña set to fade

From BBC News

The NIWA National Climate Centre's outlook for early Autumn, February to April 2012, indicates that seasonal rainfalls and temperatures are likely to be near normal for almost all regions, apart from the west and south of the South Island where rainfall is likely to be normal or below normal and temperatures are likely to be average or above average.

Soil moisture levels and river flows are both predicted to follow the same regional pattern to rainfall: likely to be near normal for almost all regions, but normal or below normal for the west and south of the South Island.

A moderate La Niña is in place in the tropical Pacific and should persist into early autumn 2012, according to the NIWA National Climate Centre, before fading back to neutral conditions.

For the February to April season, mean sea level pressures for early autumn (Feb–Apr) are likely to be above average south and southeast of the country, but below average to the north of New Zealand.

For the remainder of the tropical cyclone season through to May, around the normal number of cyclones is expected overall (January to March is typically the most active part of the cyclone season). On average, at least one ex-tropical cyclone passes within 500km of New Zealand in 9 out of 10 cyclone seasons.

Overall picture

Temperature: For the February–April period as a whole, air temperatures are likely to be near average in most regions, but near average or above average in the west and south of the South Island. Sea surface temperatures in the New Zealand region are likely to be near average.

Rainfall, soil moisture, and river flows: The National Climate Centre projects that early autumn rainfall totals, soil moisture levels, and river flows are all likely to be near normal throughout most of the country. The exception is the west and south of the South Island where normal or below normal conditions are likely.

Two Million Blossoms

A new book has been released in the USA on the medicinal benefits of honey.

Two Million Blossoms: Discovering the Medicinal Benefits of Honey, by University of Arizona doctoral student Kirsten S, Traynor, details "how doctors have rediscovered a timeless and inexpensive remedy used effectively since the Egyptian pharaoh's physicians".

The 272-page paperback is divided into four sections that cover the history of honey, honey for human health, honey for wound healing and honey for pet care.

"This delightful book Kirsten has written is the book I wanted to write myself twenty years ago," world renowned honey researcher Dr. Peter Molan, Director of the Waikato Honey Research Unit in New Zealand writes in the foreword. Honey can "prevent people from suffering needlessly from ailments that detract from their quality of life."

The book is available through http://tinyurl.com/cyejf6d, Dadant and Amazon.com.

Source

Adapted from the media release 'Doctors discover an ancient solution to modern health care woes — honey', November 24, 2011. Thanks to Dr Peter Molan for forwarding this information.

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

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