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The NEW ZEALAND BeeKeeper

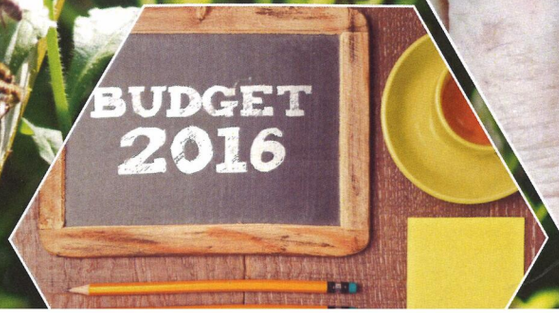

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TABLE OF **CONTENTS**

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PRESIDENT'S REPORT

DETERMINING OUR STRUCTURE

Ricki Leahy, NBA President

I hope everyone managed to get a good break. It certainly has been the silly season for those of us with lots of beehives that depend on us—and indeed us on them. How I wish we had those seasonal celebrations in midwinter as they do in the northern hemisphere from where they originated: log fires, long nights and an abundance of food and good cheer after the year's work and harvest are done. I am sure, however, that with true Kiwi spirit our work continued and we all found the time to do those special things that we all should do.

I hope also that members of the Executive Council, the Management Team—and indeed the members of the Interim Apiculture Industry Governance Board—all had time to take a break from the incessant e-mails and had a chance to reflect on all that has been happening over the last few months. We have all had to really work hard to get a grip on the changes being proposed and to spend hours reading to gain an understanding of how these changes will reflect on us in the future.

Voting on the redrafted constitution

All members should have received in the mail an information pack, including a voting paper. This pack should provide all we need to know to make an informed decision as to whether the NBA should adopt the new constitution, thereby establishing the foundation of what will be Apiculture New Zealand. *(See notice: page 9.)*

The Executive Council (EC) has spent a lot of time and energy since the 2014 Wanganui Conference working on achieving agreement to move forward step by step. The EC made a decision to call this postal vote at its meeting in early December 2015 after final consideration and acceptance of the redrafted constitution. This key decision would not have been taken if it were perceived as a bad move for either our members or the industry as a whole.

The Interim Apiculture Industry Governance Board (AIGB) has a good majority of NBA members sitting around its table. All have contributed to developing the redrafted constitution. Consequently, they are delivering the opportunity that a very clear majority of both NBA members and the industry have requested, by establishing a sound foundation for our industry that focuses on the future generations who will inevitably follow in our footsteps.

The most important thing that you can do as an NBA member is to participate in the special vote. Remember that what we are voting for is, quite simply, the adoption of the redrafted constitution, which in turn enables the final step in the unification process.

The most important thing that you can do as an NBA member is to participate in the special vote.

Your positive vote will deliver the foundation that will enable the whole apicultural industry to unite under one banner and ensure we are better represented by a single, strong, united voice. The redrafted constitution has been written to be generally acceptable to all industry sectors and to enable us all to move forward constructively into the future.

Under the redrafted constitution, hobbyists will be described as 'non-commercial' beekeepers. Their subscription is lower and therefore, as feedback has indicated, more acceptable. They will also have their own category within the beekeeping sector and the ability to elect their own representative on the board.

Commercial beekeepers have a strong representation on the board and when coupled with non-commercial beekeepers will have a slight majority, thereby maintaining the desired beekeeping focus of our apiculture industry.

The market sector will be aptly represented, with the probability that one or more of their representatives elected to the board will have commercial beekeeping interests alongside their market representation in processing, packing and sales.

Beekeeping club memberships are also adequately accommodated in much the same way as they are now, thus giving all those other 'hobbyist' beekeepers a home in the industry where they can find information, tuition and comradeship.

All in all, Apiculture New Zealand will have the means to better represent its members and in time achieve better funding for

industry good activities, research, biosecurity and other such necessities that will deliver good value to us all.

Budget for 2016

The NBA Executive's draft budget for 2016 remains a work in progress as I write this. That draft budget will continue as a financial management tool for the next 12 months. The changes to the constitution, if adopted, will not affect that budget to any degree, as there are no massive expenses to be incurred. The subscription rates are very similar to what members pay now, so income should be at least similar to the 2015 year.

When the inaugural board is elected and in place, it will be responsible for all required executive decisions, which will include the need to ensure that the Association lives within its means.

We should remind ourselves that by using the NBA as the platform for industry unity, we will carry over the history and all the good and positive elements that the NBA has to offer.

Governance

It has been agreed that if the outcome of the special postal vote is to accept the redrafted constitution, the combined NBA and BIG Executives will continue working together to make any required industry decisions until the inaugural elected Board takes office at the conclusion of the AGM, which will be held directly after Conference 2016.

By using the NBA as the platform for industry unity, we will carry over the history and all the good and positive elements that the NBA has to offer.

Similarly, the Interim AIGB will continue with its work by organising the election of sector representatives and facilitating how they may make themselves known to their respective sectors.

Most other arrangements that are in place will carry over through this interim phase, thus maintaining a continuation of business and work plans as usual. This is partly why the Apiculture Industry Focus Groups were established in 2015. This is also why our Management Team is continuing in its role. It is recognised that no operational changes could be considered until the new elected board is in place. Our contract with the Management Team reflects this understanding. The new board will live by and adhere to the rules and definitions of the adopted constitution.

Weighting of the special vote

In accordance with the NBA's rules, the special vote is weighted. That means that the number of votes members have is weighted to the level of subscription paid. It's extremely important that we all make the effort to vote and have our say. Your vote will count. The vote for acceptance of the redrafted constitution is undoubtedly the biggest and most important decision that has been made for a very long time, perhaps ever. The outcome will determine the future structure of our industry.

Just as strong beehives produce lots of honey, so will a strong, united voice speaking for our industry produce very good value for us all.

Happy beekeeping.

Ricki Leahy
NBA President

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TREES FOR BEES CORNER

GETTING READY FOR **WINTER:** PLANNING YOUR **BEE FEED PLANTING**

Angus McPherson, Trees for Bees Farm Planting Advisor

While winter may seem some time away, now is the time to be planning your bee feed planting for 2016.

To have the best chance of success you should have a clear idea of what you want to achieve, whether it's purely bee feed, or whether it also incorporates factors such as shade, shelter, riparian protection, food and aesthetics. You also need to consider the location of your planting—including distance to your apiary—and how much area you have available to plant.

Planting is for all the family. Photo courtesy of Kintail Honey.

In terms of bee feed, you need to know what time of year you are planting the bee feed for, so that you can select the appropriate species of plants, and keep your autumn/winter feed close to the apiary sites. The Trees for Bees website has lists of suitable plants, and your local nursery or farm planting advisor can help with what grows well in your area.

It is also time to start thinking about preparation for planting—any fencing or tree guards required, weed and pest control, specific plant locations, and the choosing and sourcing of plants. Fencing requirements can range from permanent fencing where stock or other grazing animals are to be permanently excluded, through to temporary electric fencing where grazing or browsing is allowed once the plants are established. Fencing might not be required where there are only a few plants, and instead tree guards can be used. These can range from Combiguards to protect from rabbits, to tree sleeves to protect from sheep, up to large timber tree guards to protect from cattle and horses.

Weed and pest control

Weed control prior to or at the time of planting is important so that any grass or weeds don't smother the new plants and compete for any moisture. There are a number of options including grazing the area late summer so the grass is short come autumn, and then spot spraying where the plants are to be located, before or after planting.

Other options include blanket spraying the area to be planted, and then planting a ground cover species to keep the weeds down. Pest control is also very important,

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CONDOLENCES

We extend our heartfelt sympathies to the family and co-workers of Bailey Honeycombe, a 19-year-old beekeeper from Arataki Honey Rotorua, who died on 27 November 2015 when the company truck in which he was a passenger ran into the back of a large loaded logging truck travelling very slowly in fog.

as rabbits, hares, possums and goats can do significant damage to newly planted trees. You may need to poison or shoot any pests, and be prepared for ongoing pest control.

Plant location

Plant location is important in getting the spacing between plants right, as you want the plants to be able to grow in the open to their full size without being overcrowded. This helps maximise flowering, and most plants flower more in the sunlight unless they are specialised shade plants. If you are in a dry area and have limited opportunity to irrigate, then look at those areas that are still showing some green at this time of year. Mark the site with a stake so that you can identify it when it comes to planting. Use a mix of plants—some to flower in the first year (e.g., herbs and shrubs), while others such as oak and maple trees may take a number of years to first flowering.

Finally, stage the planting over time—only plant what you can manage, including ongoing maintenance.

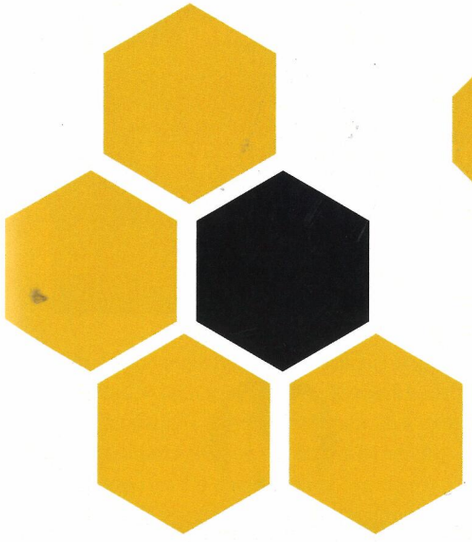
APRIL JOURNAL

Are you planning an article or advertising for the April journal that goes to all registered beekeepers? The deadline is just around the corner.

Please see notice on page 32 for details.

SPECIAL VOTE

NATIONAL BEEKEEPERS ASSOCIATION



Following the NBA Executive Council's Notice of Special Vote on December 17, 2015, NBA members are now invited to vote 'for' or 'against' the following Special Resolution:

The National Beekeepers Association adopt the proposed changes to the constitution and rules, as drafted by the Interim AIGB.

This is a watershed moment for the apiculture industry, and it presents a chance for you to be a part of shaping the industry's future—so make sure you cast your vote.

All 2015 NBA members will be eligible to vote, despite the fact they may not have re-joined for 2016, or paid their 2016 subscription by the time the vote is held.

People who were not members in 2015, but who join the NBA for the 2016 year, must have paid their subscription by 1 January 2016 to be eligible to take part in the Special Vote.

By now all members should have received their voting pack in the mail, containing all the information needed to make an informed decision. If you haven't received your pack, please phone the Election Helpline: 0800 666 034.

Post your voting document no later than: **Monday, 15 February 2016** so it is with the Returning Officer **before voting closes** at: **12 Noon, Friday, 19 February 2016.**

RESEARCH FOCUS GROUP REPORT

UPDATE FROM THE TECHNICAL FOCUS GROUP

D.N. MacLeod

New name

The National Beekeepers Association's Technical Committee has been renamed and is now known as the Apiculture Industry Technical Focus Group (AITFG). Philippa Rawlinson of the Bee Industry Group has been a member and contributor for several months. All submissions will now be made under the new name. *[Editor's note: for purposes of simplicity in the journal, we will refer to this group as the Technical Focus Group; however, we will use the acronym AITFG for consistency.]*

Committee members for 2016 include Dr Oksana Borowik, Roger Bray, Barry Foster, Don MacLeod, Dr John McLean and Philippa Rawlinson.

Methiocarb bee deaths: Bay of Plenty

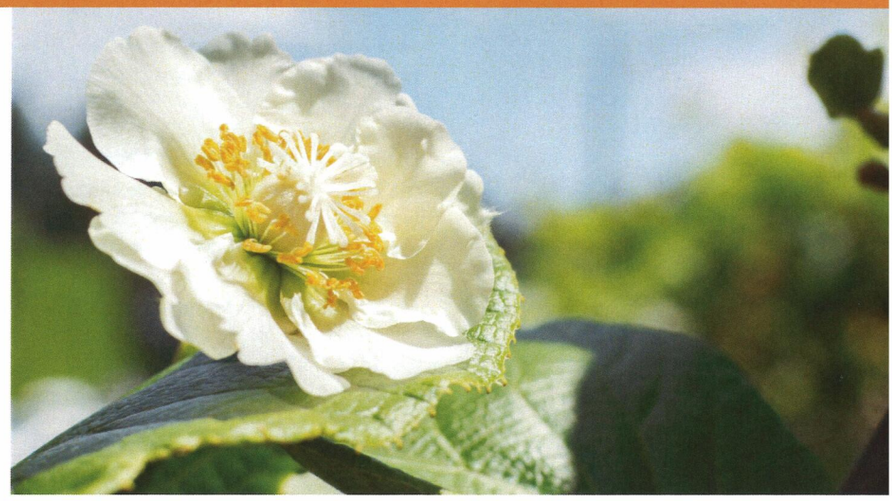
During September 2015 we had five reports of bee deaths. An analysis of the dead bees found high levels of methiocarb. Methiocarb is commonly used in a molluscicidal bait and has been formulated as Bayer's Mesurol® Slug and Snail Baits/Pro.

In 2002, Mesurol® 75 WP (the formulation is now a 200SC) was approved for use as a bird repellent. It is also being used on gold kiwifruit to prevent bird damage to plants at budding, which has been a challenge for growers to control. Gold kiwifruit buds up earlier than green and at a time when there is a shortage of food for birds, so the birds attack the emerging new buds on the vine. It has not been implicated in any known bee kills until September 2015.

Methiocarb for use as a bird deterrent is approved by the EPA but does not require registration under the Agricultural Compounds and Veterinary Medicines (ACVM) Act.

A possible vector for the bee kills is bees obtaining propolis from the sprayed and budding kiwifruit vines, and by this means have brought the toxin to the hive, as the vines were not flowering at this stage. We cannot exclude flowering plants in the pasture beneath the vines.

This season there has been a major change in application technology where growers have used a new low-drift spray nozzle with a tank-mixed organo-silicone surfactant/penetrant (designed for the application of hydrogen cyanamide plant growth regulator this past season). Plant growth regulators need to enter the plant to work; bird deterrents need only settle on the outside of the plant.



Surfactants are not normally used with Mesurol® 200SC, and are not mentioned at all on the label recommendations. This could be another example of where surfactant/penetrants were recommended but not required to support the active ingredient in use. All of these possibilities are still being investigated.

Full marks to Zespri, which was especially concerned about the pollinator losses. Zespri hired a private investigator (Peter McLeod) to investigate all the incidents. To date the AITFG has attended one meeting that involved representatives from Zespri, Bayer and other consultants. We have requested an interim report for this edition of *The New Zealand BeeKeeper,* but as of 8 January nothing has been made available.

Pollinator incident reporting

Beekeepers: if you lose hives, please report them to the EPA. You can find the incident reporting form at http://www.epa.govt.nz/about-us/monitoring/Pages/Pollinator-Incidents.aspx

This process is extremely important in our work to make sure we have a safer environment for our bees. At the Poncho VOTiVO hearing on 3 December 2015 (reported below), I spoke to EPA staff who said that they have received only one report since the Apiculture Conference in June 2015 at Wairakei. Yet I am aware of a number of incidents where beekeepers have lost hives (e.g., the five apiary losses reported above).

To repeat, please report your losses; it is important for our credibility as beekeepers in arguing our case for safer environmental conditions for our bees.

APP202077 Poncho VOTiVO hearing

Poncho® VOTiVO® is a new seed treatment product developed by Bayer CropScience. The AITFG (under our old name) made a written submission on this product in November 2014 and appeared at the hearing hosted by EPA on 3 December 2015.

Poncho VOTiVO contains 502 g/L clothianidin and 102 g/L *Bacillus firmus* for use as a seed

continued...

treatment in wheat, maize, forage brassicas and grass seed. This is the first time in recent years a neonicotinoid seed treatment product has come up for public scrutiny at an EPA hearing.

The AITFG's presentation at the hearing focused on three main issues:

1. the use of the imported live viable micro-organism *Bacillus firmus* presents a potential biosecurity risk to bees if other organisms can hitchhike on the formulation.

2. there has been no monitoring and review process by the EPA on the use of hazardous substances in the environment. Clothianidin has been used widely in New Zealand since 2003. All the data presented by Bayer New Zealand Ltd for this application has been generated overseas: there was no relevant report on New Zealand experience and knowledge gained from use of clothianidin.

   This is a complete failure of the Risk Management Process ANZ/ISO31000-2009 followed by the EPA. We pointed out to them that it was unsatisfactory to have no local data on environmental effects after 11 years' experience in New Zealand.

3. our presentation included maize harvest bee kills and our beekeepers' experience to date, plus our own soil analysis data of clothianidin analysed in soil samples taken 11 months after harvest. At the moment we can only identify a problem with neonicotinoid chemicals having a long persistent life in soils. To date we have not demonstrated how the environment is killing the bees—the AITFG is proposing that this research be conducted in 2016.

Table 1. 'Jump the fence' sample survey, 29 June 2015.

Sample	Analysis	Clothianidin	Imidacloprid
Stubble	Hills Labs #1444176	< 0.02 mg/kg	
Soil 1	AUT – Dr Chris Pook	35 ng/g wet weight	20 ng/g wet weight
Soil 2	AUT – Dr Chris Pook	30 ng/g wet weight	20 ng/g wet weight
Soil 3	AUT – Dr Chris Pook	30 ng/g wet weight	23 ng/g wet weight

If the EPA cannot monitor and measure what is happening in the environment, then perhaps beekeepers should consider supplying the EPA with that data. (The AITFG is proposing that research be undertaken into hive deaths at the time of maize harvest, as outlined in the next section of this report.)

As of 8 January 2016, the EPA has not published its decision on APP202077 (Poncho® VOTiVO®).

Details of the application and submissions/presentations made are available at http://www.epa.govt.nz/search-databases/Pages/applications-details.aspx?appID=APP202077#

Maize harvest hive deaths

Beekeepers have been aware for some years that hives in close proximity to maize crops die out at the time of harvest and for some months afterwards. At the NBA Conference in Napier (2012), Neil Mossop asked me if I could look at the issue, as they had lost numerous hives to this problem.

I didn't study this problem until I returned home from the 2015 Apiculture Conference in Wairakei by travelling via Whakatane. On the way, I jumped the fence and took some maize stubble samples for analysis. Hills Laboratories tested a stubble and detected clothianidin in the stubble at close to their detection level limits. After discussion with Dr Chris Pook, he elected to test three soil samples from around the stubble and identified both imidacloprid and clothiandin in all the samples (see Table 1 above).

Dr Chris Pook subsequently obtained $4000 of funding from AUT for more research. I visited the Eastern Bay of Plenty on 29–30 September (three months later than the tests referred to above) and removed five soil samples from nine paddocks of maize stubble. (Note that this was approximately 11 months after the chemicals were used and some of the paddocks had just been cultivated prior to planting for the 2015/16 season.) Some of the paddocks sampled had been cultivated for sowing back into maize.

Almost every soil sample tested contained measurable concentrations of clothianidin and imidacloprid, at concentrations that have been shown to be chronically toxic to bees if present in pollen or nectar. The testing conducted by Dr Pook and his team showed their ability to detect these pesticides at low levels in the environment (refer to Table 2 below).

Table 2 – Maize calendar

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct
Maize Crop	Planting Treated Seed		Crop growing				Grain Harvest Time of bee hive losses			Stubble			Planting
2015 Survey									29/6/15 sample n = 4			29–30/9/15 Sample n = 45	
2016 New Research				Raise $20,000 for the analytical research.		Sampling and analysis to begin immediately before and after harvest. Use placed hives so we can observe and sample bees for analysis.						Soil samples	

Sampling Dates 2015

First Survey: 29 June – Stubble and soil samples n = 4

Second Survey: 29–30 September – Soil samples n = 45

n = number of samples tested

What this data shows is that the neonicotinoid seed treatment insecticides clothianidin and imidacloprid have a very long life in the environment. It is a certainty, we believe, that residues of the chemical used last season are still present when the subsequent crop is planted. What we have not yet done is show the causative link between the maize crop and the hive deaths at the time of harvest and thereafter. That will be the target of our 2016 research, which will commence during maize harvest and focus on the period directly afterwards. We now have some clues of what is happening and what we need to look for.

Mary and Ash Kerei of Whai Hua Bees in Edgecumbe managed to obtain for me some information from various family beekeepers who have lost beehives at the time of harvest of the crop. Their comments are very interesting and identify a number of analysis points for further study.

- "After the paddock is harvested from the first wet day is when the bee deaths start."
- "If the hives are not moved out of the apiary then the hives continue to dwindle until they are unable to survive the winter and die out. They will die out with boxes of honey on and nothing will rob it out."
- He has also observed bees drinking the sap from the cut maize stubble many times.
- S. told us get our hives away from maize he had talked to our other brothers in Northland (all beekeepers) who on group discussions came to the conclusion that there was high hive losses by maize so the family advice to us was keep away from maize when it is cut.
- Sites such as A's home farm he always phones us that he is harvesting and we move the bees out.
- "In all we would have had about 8 sites in this area with bad results by maize."

In Gisborne, Paul Badger has documented significant hive losses of apiary sites near maize paddocks at harvest between 2004 and 2007. His data clearly shows the losses occurring at the time of maize harvest.

This history is very worthwhile and helpful as it gives a significant leg up for a full research programme.

Please, beekeepers, if you have data such as diary records of hive losses, photos of bees feeding on maize stubble, experience with unexplained hive losses near maize crops, document it and send it to us at the AITFG. This is very important information and I believe if you had talked about it earlier, it would have been researched much earlier than now.

We are now aware of a number of locations where beekeepers have faced this problem: Bay of Plenty, Waikato, Gisborne and Northland.

OUR RESEARCH PROPOSAL

During this season's maize harvest, we propose to conduct a more thorough research programme to try and identify the link between the maize crop harvest and the hives dying out. This could be the first documented and researched link showing how neonicotinoid use can lead to beehive losses. To date, researchers worldwide have not demonstrated this clear linkage between the environmental factors and the hive loss.

For this work we require funding of approximately $20,000, primarily to cover the costs of the analysis.

If you can provide help with funding, contact the e-mail address below. A written research proposal will be forwarded to you describing the work plan.

If you have documented experience of hive losses at maize harvest time, please contact me.

My e-mail is macleod2@xtra.co.nz

Maize sample site #151, 30 September 2015. Note cultivation has begun in strips. Tractor had got stuck and left stubble standing. Photo: Don MacLeod.

RESEARCH FOCUS GROUP REPORT

RESEARCH FOCUS GROUP REPORT

Barry Foster, Chairman

At their respective AGMs in June 2015, the members of the Federated Farmers Bee Industry Group (BIG) and the NBA delivered their support of a fundamental change in the direction of our industry. With this commitment to change came the requirement to work together in all aspects of our industry, none more so than in the area of research.

It has been long recognised that a key driver for unity within our industry is to enhance the funding and delivery of apicultural research. The current level of research and its funding is inadequate relative to the importance of our industry and its comparative wealth.

Formation and purpose of the Research Focus Group

In late June 2015, I was asked to form the Apiculture Industry Research Focus Group (AIRFG, but called the Research Focus Group in this journal). The group now has six members comprising four scientists (Dr John McLean, who also describes himself as a "virtual beekeeper", Dr Oksana Borowik, Dr Christine Byrch and molecular biologist John Mackay) and two beekeepers (Jane Lorimer and Barry Foster).

The group's purpose is to "ensure that the New Zealand Apicultural Industry benefits from relevant research undertaken both in New Zealand and overseas, by facilitating and directing funding to research priorities, and communicating relevant research outcomes".

Our focus is on what may be termed public good research, as opposed to in-house research conducted by various companies connected with our industry.

Support for research applications

In July the focus group was involved with supporting and helping to get sufficient pledges of co-funding support for applications to the Sustainable Farming Fund (SFF) for Giant Willow Aphid Research and a further round of funding for the Trees for Bees Research.

Our focus is on what may be termed public good research

Both of these applications were due to be lodged in early August 2015. These were lodged just in time and as of December 2015 were shortlisted for funding by the SFF.

A decision on funding is due by April 2016, as SFF needs to further assess the shortlisted applications against the funds available. According to the Ministry for Primary Industries website ("Sustainable Farming Fund," 2015), approximately $8 million is made available to SFF annually.

Further pledges of co-funding could likely make these two projects more acceptable for SFF funding. ***Please let me know if you would like to contribute to these vital projects. My contact details are under the East Coast Ward on page 39.***

Terrific Tairawhiti trio. Left to right: Prof. Emeritus John McLean, Barry Foster (Research Focus Group Chairman) and John Mackay (molecular biologist—and beekeeper).

Formation of a work plan

By September 2015 we had formed a work plan that was accepted, among other work plans, at a joint meeting of the executives of NBA and BIG in October.

The plan broadly covers:

- building an effective focus group representative of a unified industry, identifying research needs (results from the NZ Colony Loss and Survival Survey currently being conducted by Landcare Research Ltd will help in this regard)
- building a plan for research
- making a stocktake of who is doing what, and
- facilitating greater connections with scientists and researchers in New Zealand and overseas.

With respect to the last dot point above, we also are assisting the Apiculture Industry Conference steering committee by identifying keynote speakers and calling for abstracts from a wide range of research organisations, universities, Crown Research Institutes and others from around New Zealand. From this we hope to get a pretty good line-up of speakers and posters on science and research at the Apiculture Industry Conference in June 2016.

In addition, by this means we hope to facilitate a much broader support and connection with the science community in New Zealand and overseas that we can build on for the future.

Communicating research, and adequately funding it

Research needs to be regularly communicated to the public and others who fund it. In this regard, it is pleasing to see recent articles in *The New Zealand Beekeeper* from the Trees for Bees team, Dr Peter Dearden, Dr Oksana Borowik, Dr Mark Goodwin, Dr John McLean, the team at Analytica Laboratories and Dr Ronny Groenteman. We would be pleased to help in facilitating any future articles if needed.

Research needs to be regularly communicated to the public and others who fund it.

Funding for apicultural research under current conditions is a perennial issue of inadequacy.

The Ministry of Business, Innovation and Employment (MBIE) recently published a National Statement of Science Investment (2015, October 5). The statement outlines the Government's vision to 2025 of "A highly dynamic science system that enriches New Zealand, making a more visible, measurable contribution to our productivity and wellbeing through excellent science."

We could choose to be part of this vision, and indeed we are making a start by following in the footsteps of those who went before us with apicultural research. However, the consistent theme we have received from our stocktake of scientists, researchers and from within our industry is that funding for apicultural research under current conditions is a perennial issue of inadequacy.

Replies to our stocktake are identifying new opportunities for research that could make us leaders in the apicultural world. By way of example, the three issues below (among others) could be worked on if adequate funding could be sourced for them.

1. New viruses (Lake Sinai Viruses) and pathogens (*Lotmaria passim*) now found in New Zealand but with no industry funding for research. Ongoing work on this issue is limited by lack of funding.
2. Australia is investing heavily into active honeys looking for their own manuka (or a honey close enough to directly call manuka). We risk setting up an industry for Australia to reap benefits, as has been seen in other agricultural industries.
3. We also risk others coming into New Zealand—or paying for collaborations—whereby our knowledge (e.g., markers for manuka cultivars as a guess) may be used offshore.

We have huge opportunities given the professional nature and wealth of our industry by comparison with others overseas.

The work conducted over many years by the late Dr Peter Molan helped to turn our industry on its head. Let's make 2016 the year that we as an industry truly recognise his legacy, and begin to build on the foundation that this great man gave to us.

Sources

National Statement of Science Investment. (2015, October 5). Ministry of Business, Innovation and Employment. Retrieved January 8, 2016 from http://www.mbie.govt.nz/info-services/science-innovation/national-statement-science-investment

Sustainable Farming Fund. (2015, October 22). Ministry for Primary Industries. Retrieved January 8, 2016 from http://www.mpi.govt.nz/funding-and-programmes/farming/sustainable-farming-fund/

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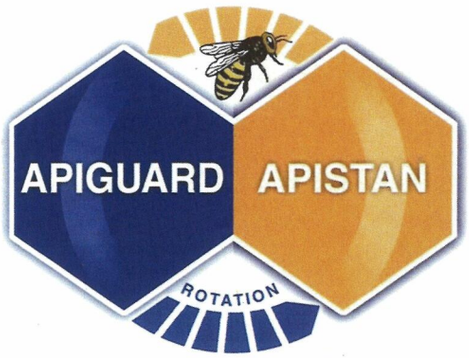

When to use Apistan and Apiguard?

Apistan can be used at any time of year, with best results when applied during a build up of brood prior to the honey flow, or after the honey flow.

Apiguard is best used when the weather is warm and consistently over 15ºC so not early in the spring. Place the trays or spread some gel on the cards provided and place on the top of the brood box frames as per the instructions on the packet, with room for the bees to get at the material. The concentrated natural ingredient encourages the bees to try and move the product out of the hive. This distributes the vapours of the thymol based **Apiguard** throughout the hive killing up to 97% of varroa mites.

In ten to fourteen days, check the hive and add another tray or more gel. This will complete the treatment. If you want to be sure to cover two full worker brood cycles, treat again in fourteen days. Use the full recommended dosage each time. Don't skimp - your bees and hives and honey crop are too valuable to try and save a dollar or two on an incorrect treatment.

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

Safety?

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

Apiguard, being a natural product derived from thyme is non-toxic to humans and does not affect honey or wax. It is approved in Europe as a varroa treatment for hives in organic honey production.

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AFB can be eliminated from NZ if it is identified and those infected hives are burnt. But you don't want to burn false positives.

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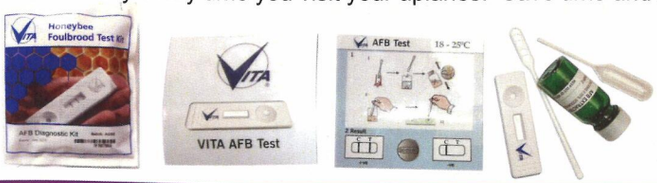

For more information and videos demonstrating how to use their products visit **Vita-Europe's** website, www.vita-europe.com

RESEARCH

Bee on blackberry. Photo: Frank Lindsay.

HAVE YOUR SAY ON **BEES AND POLLINATION**

Plant & Food Research

To better understand current use of pollination across the horticultural and agricultural sectors and help design research projects that address industry trends and needs, Plant & Food Research is asking growers and beekeepers to share their current practices and their thoughts on future pollination requirements.

"New research into pollination relies on having a full picture of how growers and beekeepers are using bees and other methods for pollinating crops, as well as what they feel are the major issues that need addressing in the future," says Dr David Pattemore. "Current research tends to be based on overseas findings and anecdotal evidence, but there is little scientific evidence to allow scientists to develop research programmes designed to fill gaps in knowledge or directly address issues identified by growers and apiarists as fundamental to their needs."

Growers, farmers and beekeepers from across Australia and New Zealand are asked to fill in the online questionnaire at www.pollinationsurvey.com

"We know that pollination services are becoming more expensive due to the effort required to manage beehives in the wake of diseases such as varroa and colony collapse disorder, and that growers employ a variety of methods that may promote pollination by wild bees and other insects," says Dr Brad Howlett. "By understanding what methods are currently employed in different crops and regions, we will have a better understanding of how pollination is used now, the barriers for ensuring optimal pollination, and how we can best tailor our research programme to make sure growers, and apiarists, are getting what they need to sustain their businesses."

The pollination survey is part of the European Union's SUPER-B programme and is administered, under strict confidentiality, by the University of Reading in the UK, with additional funding in New Zealand from the Ministry of Business, Innovation & Employment. SUPER-B is bringing together scientific and societal communities from more than 30 countries across Europe and the globe to develop conservation strategies for crop pollinators.

EDUCATION

NEW GRANTS FOR IN-MARKET **AGRIBUSINESS IMMERSION**

AGMARDT

THE AGRICULTURAL AND MARKETING RESEARCH AND DEVELOPMENT TRUST

AGMARDT press release, 10 December 2015

The best way to understand an international market is to be in it, says AGMARDT chairman Barry Brook.

That's why AGMARDT has launched a new internship programme for five talented young people a year to work first-hand in overseas markets.

"There's a significant benefit to New Zealand agribusiness from encouraging young emerging leaders having international experience in the market place at an early stage in their careers," he says.

"This is an outstanding opportunity to place star performers in a chosen international market place for a sufficient time to develop their understanding and skills in customer perspectives and the market end of the value chain."

Up to $50,000 will be available for each In-Market Immersion Programme internship, which could last from six to 12 months.

"When someone goes to live and work in the market and really gets to grips with the culture they get a different perspective, and it does take time," he says.

The programme is targeted at attracting and retaining high-achieving individuals who have identified potential.

"They will bring this experience back to your business, giving you a level of insight into your customers and market that you've never had before."

Applications will be accepted throughout the year at www.agmardt.org.nz/applications

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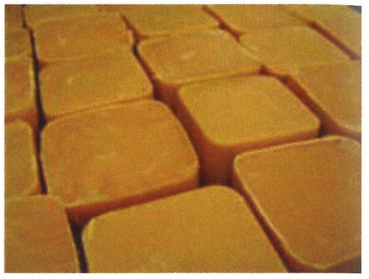

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OBITUARY

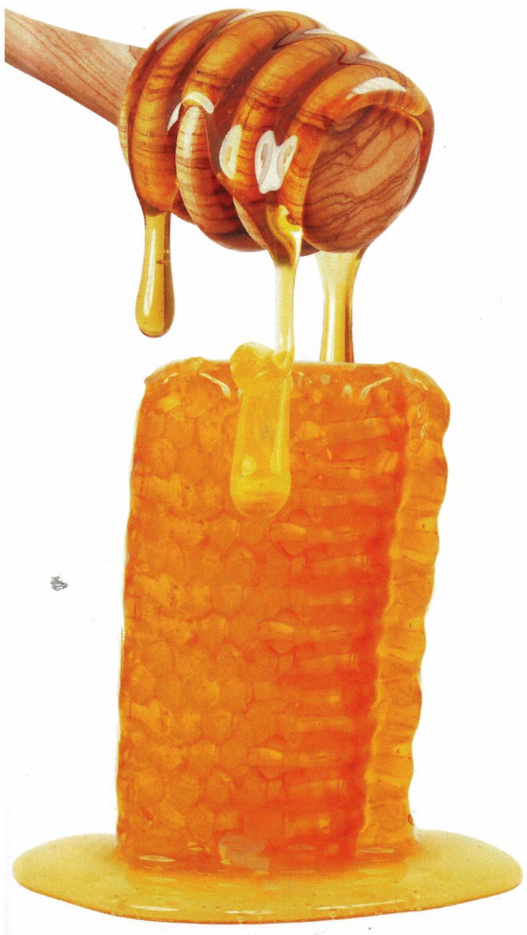
TRIBUTE TO GERARD MARTIN

8 NOVEMBER 1936 – 31 AUGUST 2015

Jane Lorimer and Bob Blair, NBA Life Members, in association with Cameron Martin

At the age of 13, Gerard started working after school and on Saturdays for the late Jim Ballantyne, a beekeeper in Auckland. Gerard's father Les had a woodworking business making folding clothes dryers. Evidently Gerard did not like schoolwork, so he left as soon as he could. He worked part time for both Jim and Les, which gave Gerard full-time employment helping to make clothes dryers in the winter and autumn and helping Jim with the bees in spring and summer.

In 1954, Gerard and his father bought hives from Jim Ballantyne, who was exporting 'cut comb' honey. Interestingly, they were offered a very low price for their first crop of liquid honey by the IMD (Internal Marketing Division) due to detection of manuka honey in it. As a result, Gerard and his father decided to concentrate on cut comb honey, exporting it and also supplying it to the Auckland market.



The first exporting of comb honey began through Jim Ballantyne's acquaintance with a Scottish warehouse owner who had a branch in London. They wanted some samples of honey sent over to London to see if the honey was what they required, but the Department of Agriculture would not give them a permit to do so and the warehouse would not buy until they had seen the samples.

So with Jim being a person who knew his way around the shipping business, he drove to the Auckland wharf to talk to the purser of the Rangitera to get the samples to London. The deal was sweetened by giving the purser and his mates a few cartons of the mānuka comb honey to pay for the delivery. While this discussion was taking place, Gerard was guarding the honey in the truck. From then on, Bob Blair referred to Gerard as the 'Security Agent' for the first honey to be smuggled out of New Zealand.

Gerard also supplied honey to the Honey Marketing Authority (HMA) and then later to the Honey Producers Co-op when that organisation took over from the HMA.

Gerard went down to Galatea in 1962 to manage about 350–400 hives for Bert Godfrey and went on to purchase the business in 1968. From 1962–1974, Gerard worked his hives in both the Auckland and Galatea areas. When he met and married Patricia, they made Galatea their home from 1972 and raised their two sons. It was at this time that Gerard stopped producing comb honey. The business continues to be run in Galatea by their youngest son Cameron and his wife Rose.

Gerard became heavily involved in local politics. He was the councillor of the Galatea Ward of Whakatane District Council for 21 years, fighting to improve roading and replace one-lane bridges with two-lane ones. He also got himself involved on the local primary school committee.

He moved into beekeeping politics in 1988 when he was elected to the Executive of the National Beekeepers' Association. Gerard became Vice President in 1990 with Dudley Ward being President at the time.

Gerard Martin

Gerard retired from the Executive in 1994, but then stood again in 2001 until 2003 when the split occurred with some beekeepers joining Federated Farmers. He was also a foundation member of the Comb Honey Association in 1962 and its second chairman.

Jane's first encounter with Gerard at Executive meetings was over the need for Standing Orders so that meetings were run correctly! Procedures MUST be followed. Sadly the standing orders were voted out, and meetings only proceeded according to how well the chairperson conducted the meeting.

Since his semi-retirement from beekeeping, Gerard and Patricia spent a great deal of time touring overseas. During his second visit to Switzerland (a place he dearly loved to visit), he suffered a fatal heart attack. During this trip he had hoped to see the Matterhorn but this was not to be.

Gerard was buried at the Hillcrest Cemetery just out of Whakatane in an area full of birdsong (tui), and a solitary bee flew over the grave during the service. May he rest in peace.

APIMONDIA

APITOURISM IN JAPAN

Maureen Conquer, Apimondia Oceania Commission New Zealand representative

Apitourism is a unique approach to travel, giving beekeepers inspiration, education and enrichment.

Many of you have heard me promoting the opportunities that Apimondia's biennial congresses offer to New Zealand beekeepers to travel, network and learn about the latest research around bees and beekeeping.

The history and culture of beekeeping is rich and diverse. Before the Apimondia Congress in South Korea in September 2015, we joined a group of Australian beekeepers for a fascinating week in Japan.

Carefully prepared itineraries with local guides, with prepaid and arranged visits made travelling easy and enjoyable. This allowed us to embrace the local customs, culture and history whilst visiting the countryside, working apiaries and honey houses—tasting, talking and learning from other like-minded professionals.

A visit to a bee equipment manufacturer was an eye opener for me. On viewing their wasp traps, I was unsure how they would work until I met the local wasps!

Japanese wasp!

Inspecting some nucleus hives.

Japanese uncapping knife.

We visited some massive honey centres. Honey is big business in Japan.

Japan greatly values honey, so it was enlightening to visit speciality honey shops where you could taste over 40 different honeys, as well as a diverse range of value-added products.

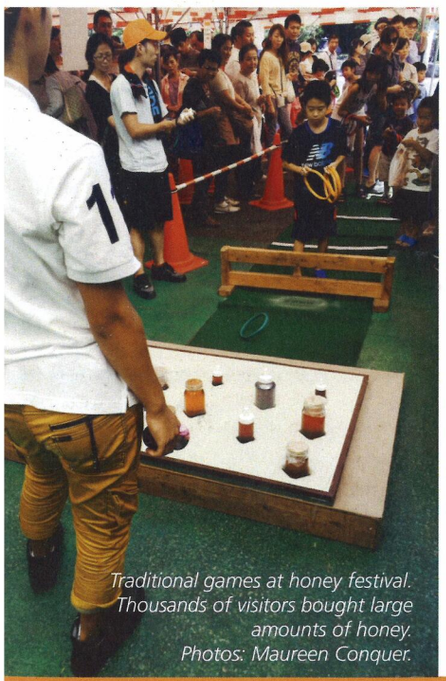
We visited a range of businesses from smaller pollination-based operations through to large-scale migratory beekeepers who move from the southwest of Kyushu up to Hokkaido. One large-scale operator has an alternative income stream in bumble bee package breeding (sorry, no photos were allowed here).

In historic Kyoto, we met with pheromone researchers who also run hives in the very beautiful Royal Palace and on the green rooftop garden project of the town hall. Council staff meet weekly in the bee garden to exchange ideas and strategise.

Other exciting experiences included a large weekend honey festival and a large commercial bee farm tourist operation located on a mountainside. We got more than our money's worth when heavy volcano ash came raining down on us, prompting a very rapid civil defence area evacuation. It was fascinating to watch the bees' mood change as the volcanic activity suddenly erupted!

Japanese honey in fancy packaging.

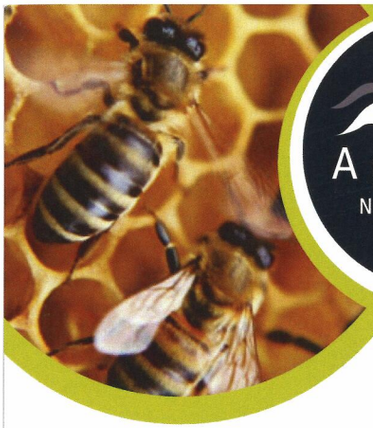

Hives in Royal Gardens, Kyoto.


Traditional games at honey festival. Thousands of visitors bought large amounts of honey. Photos: Maureen Conquer.

APIMONDIA 2017 TOURS

The Apimondia Congress for 2017 will be held in Istanbul, Turkey. Turkey is the second largest honey producer in the world. I will be planning both pre- and post-congress tours around Turkey (including Anzac Cove), as well as to neighbouring Slovenia and Slovakia. These latter two countries have rich beekeeping heritage and thriving industries, including key elements in the new green economy.

All expressions of interest are welcome. Please e-mail Maureen@wildforage.co.nz



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When used in high concentrations 30ml per litre of syrup I have seen brood rearing mid winter and believe that the nutrients in agrisea go along way in assisting brood development."

Cheers Stu Ferguson (The Hive Doctor)

Research: Recent research suggests polysaccharides in Seaweeds could be used to prevent or control Bee nosemosis. (Roussel 2015)

PRODUCT ANALYSIS

Minerals and Trace Elements (mg/L - ppm)

Nitrogen 50.35	Phosphorus 10.07	Potassium 2134.84
Sulphur 271.89	Calcium 90.63	Magnesium 211.47
Sodium 1701.83	Iron 0.703	Copper 0.064
Manganese 0.041	Iodine 454.50	Molybdenum 0.01
Selenium 0.01	Zinc 0.360	Boron 6.060
Cobalt 0.010		

Vitamins Vitamin A, Vitamin C, Vitamin E, Vitamins B1, B2, B3, B5, B12, Fucoxanthin, Choline, Folic Acid

Amino Acid (mg/100gm)

Aspartic Acid 7.17	Threonine 1.72	Serine 1.91
Glutamic Acid 19.19	Prolin 0.90	Glycine 2.62
Alanine 8.64	Valine 1.90	Isoleucine 0.87
Leucine 1.71	Tyrosine 1.41	Phenylalanine 1.31
Lysine 1.85	Histidine 0.68	
Arginine 1.50	Cystine 2.05	
Methionine 0.47	Tryptophan 0.21	

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BURNING QUESTIONS

ROBBING EXPLAINED

Frank Lindsay, NBA Life Member

A Wellington beekeeper asked me to explain some of my comments posted on the Wellington Beekeepers Association website. The beekeeper inquired,

> *"Your page on the Wellington beekeepers site makes a few references to robbing. I tend to think that means thieving—the bees want to steal the wax/honey mixture back. Thing is, your article speaks of it as spreading disease. If they weren't sick in the first place, why would they be spreading disease?*
>
> *And considering beeswax can be used in candles or furniture wax, why is it a concern about throwing this wax away and not using it?"*

I replied,

Robbing is the term most beekeepers use universally but yes, it's thieving.

In his book *A dictionary of scientific and practical beekeeping*, published in 2001, Robert B Gulliford defined 'robbing' as "the act of stealing honey and taking it back to their hive".

At the end of the honey flow, as many as 20,000 workers have very little to do in each hive but they are out looking for nectar. They will also test any hive in the area to see if it's defended. If not closed down to a small winter entrance, some will sneak in, just as wasps do. Once they obtain the hive's scent, they can walk in unchallenged. They go back to their own hive, recruit more foragers and the battle starts.

We can unconsciously assist these robber bees by taking surplus honey off in the middle of the day after the honey flow has finished. We break down the hive's defence by applying smoke to the entrance, preventing the alarm pheromone being detected by other bees in the hive. We split the hives to inspect the brood before removing any honey supers, as any broken cells put a plume of nectar in the air, attracting robber bees to the hive. Robbing bees can detect nectar two kilometres away.

Once robbers start, they usually strip a hive in a couple of days

Because the bees concentrate their defences at the entrance, any honey in the honey supers not defended or covered is fair game. Once robbers start, they usually strip a hive in a couple of days and you end up with a dead, empty hive, capped brood, and pollen, but no honey.

To stop robbing in a suburban setting, close the hives with grass and turn on the sprinkler to water everything down. This usually discourages the robbers but hives should be closed down to just one or two bee-widths, as the robbers will try getting in again for the next week before giving up.

I have had some very good production hives: those that outperform others in the same apiary, only to find they were 'robbers' that went into different hives in the apiary, robbing even when the honey flow is on.

You can identify robbing bees when they leave the hive. Their abdomens are full (translucent against the sun because they are full of nectar), and they have to climb up the front of the hive 50–100 mm before they take off because of the weight they are carrying. Normal foragers flop on to the landing board, go into the hive and disgorge their load to waiting bees, then are off again within five minutes, taking off immediately as they leave.

Robber bees only take liquid nectar or honey. It doesn't necessarily mean that the hive being robbed was diseased, but it could be weakened with nosema, chalkbrood and if the beekeeper misses it, AFB.

Bees could have robbed a diseased hive but not show any clinical signs of AFB until they perhaps start using that honey. That's is why you have to put an 18-month quarantine on an apiary if a diseased hive is found. Generally where there's one diseased hive, there are more. However, the extent of disease may not show up until the following spring, when hives become stressed by shortages of pollen and nectar and bad weather.

Nosema ceranae is spreading amongst New Zealand hives just by bees sharing the same drinking water. Beekeepers spread most diseases when they exchange frames of brood and honey between a weak and a strong hive to boost the weak hive in the spring.

This is the photo of bees robbing a hive that we published in the June 2015 journal.

The bees I referred to in my apiary article in the June 2015 journal (Lindsay, 2015) started with a swarm in a roof cavity 100 metres away. The robbers overwhelmed the hive because varroa had weakened it. But then, just like wasps, robbers will move on to good hives, fighting with the defenders, killing most of them, then robbing out the reserves by uncapping the honey cells. They discard the wax cappings. Bees never take wax back to their hive, preferring to make their own or, when nectar is short, remoulding old comb. It's probably a hygiene thing.

Beeswax is very attractive to bees that will investigate it looking for nectar. It's not good practice to discard any brace comb on the ground when inspecting and cleaning hives. It's a valuable resource that can be turned into candles or cash. Any nectar in this wax attracts bees.

I trust this answers your questions.

Source

Lindsay, F. (2015, June). Preparing for winter. *The New Zealand BeeKeeper*, 23(5), 21–25.

A **LAND** OF **MILK AND HONEY: BEES** AS 'POLLINATOR-COLONISTS'

Roseanna M. Spiers, Geographer at the School of Environment, The University of Auckland.
E-mail: roseanna.spiers@auckland.ac.nz

In the nineteenth and early twentieth centuries, the honey bee *(Apis mellifera)* was gathered into the political project of colonising New Zealand. The first honey bees introduced were *A. m. mellifera,* the dark-coloured European honey bees. They travelled with early colonial settler-invaders on the long sea voyage to New Zealand. In this brief discussion, I position bees as key to effecting the colonisation and environmental transformation of New Zealand into a productive 'land of milk and honey'.

In this article I introduce the honey bee as a pollinator-colonist; that is, a pollinator species that accompanied colonists to New Zealand to propagate what Brooking and Pawson (2013) have called the 'seeds of empire'. Bees pollinated the agricultural seeds of the British Empire, the cocksfoot, Italian ryegrass, paspalum, perennial ryegrass, timothy, and red, white and alsike clover, thereby enabling the spread of associated imperial agents such as mice, rabbits, pine and willow.

Beekeeping was unknown in New Zealand before European arrival in the nineteenth century.

Sheep and dairy cows were enrolled as more-than-human labour in the conversion of grasslands into marketable commodities; i.e., wool, meat, butter, cheese, skins and tallow. They are measured, documented and valued in official accounts. Bees therefore facilitated the spread of other markers of Empire including particular modes of agriculture, industry, and ways of valuing and utilising landscapes.

Two projects are of particular relevance to a history of honey bees as pollinator-colonists: specifically, land appropriation and pastoral enclosure; and 'improvement' through the replacing of 'inferior' native people, flora and fauna with 'superior' varieties.

Beekeeping was unknown in New Zealand before European arrival in the nineteenth-century. Twenty-eight species of bee are reported to have been living in Aotearoa prior to then: 27 endemic, and one indigenous of Australian origin (Donovan, 2007). None produce surplus honey or are amenable to human management. Following European settlement, the same logic that classified Māori-occupied land as 'waste' lands was applied to similarly devalue and render invisible native bees.

The absence of surplus honey-producing bees was interpreted by colonials as indicative of 'nature' and 'man' in their 'savage' states. The 'introduction' of bees (remember there were already 28 species present) became

Roseanna M. Spiers

part of narratives of New Zealand as Britain's food basket and a civilized South Sea idyll, albeit one in progress (Barrett, 1996; Cotton, 1848a; 1848b; Hopkins, 1886; 1916). These transformations mirrored efforts to construct new landscapes out of 'unimproved' territories elsewhere in the Empire (Pawson & Brooking, 2002; 2013; Simon, et al., 2001; Samson, 2003).

A. mellifera as pollinator-colonists had particular connections with practices of 'humane' colonisation, biocultural and socio-

cultural improvement, and value-adding labour. This can be seen in the 'improving' work of bees with reference to one of New Zealand's most famous beekeepers, the Reverend William Charles Cotton.

'Improvement' through beekeeping

Cotton arrived in the Bay of Islands on 20 June 1842, as Chaplain to George Augustus Selwyn, the first Anglican Bishop of New Zealand. He took up residence at the Waimate Mission Station located 24 kilometres inland from Paihia (Smith, 2006: 65-66).

Reverend Cotton's *My Bee Book* published in 1848 sets out an ideological, material and technical project for 'improvement' in and through beekeeping. He details elaborate technologies for introducing and keeping bees in New Zealand, and links the material resources and resourcefulness of the honey bee (specifically *Apis mellifera*) to ideological projects of God and country.

In material terms, improvement meant greater economic and agricultural productivity. Ideologically, it privileged narratives of settler-invasion in which colonists were completing God's creation by redeeming 'unproductive' or 'waste' lands, where barrenness was confirmed by godlessness and the apparent absence of land title and extractive resource management (Samson, 2003; Smith, 2006). Missionary-beekeepers such as the Reverend Cotton connected the work of bees to divine mandates for improvement (see Barrett, 1996; 1999; Cotton, 1838; 1848a; 1848b).

For Cotton and other missionaries and administrators, bee colonies provided a model for illustrating 'superior' social organisation, morality, and industry, especially to indigenous populations. Reverend Cotton (1813–1879) challenges himself accordingly in the final section of *My Bee Book*:

> As a disciple in the school of others, and above all, in the school which the schoolmistress Bee keeps for all who will learn of her, I believe that I may be able to confer on the natives of New Zealand the pleasure and the profits of Bees of their own.
>
> The Bee of England, like the man of England, if he be but good of his kind, is, I think, surpassed by none in the world. I will not get Bees from India—nor Bees from South America—nor Bees from New Holland, but carry them direct from England, sixteen thousand miles over the sea. (Cotton, 1848b: 357)

Cotton's book (1848b) is in the nature of a scrapbook containing his letters to cottagers, bee verses, mottos, and reprints of books, the rules to the Oxford Apiarian Society, and details of Cotton's plans to introduce bees to New Zealand. Reverend Cotton sought to introduce the 'English Bee' and 'modern' and 'humane' hive technologies and management practices, including the use of a puff ball narcotic to spare the lives of the bees in harvesting practices. For Cotton, the introduced bees were to be 'superior' honey bees (i.e., *A. mellifera* from England) and moralising colonisers:

> I hope a Bee will never be killed in New Zealand, for I shall start the native Bee keeper on the no killing way, and when they have learned to be kind to them, they will learn to be more kind to one another. (Cotton, 1848b: 356).

William Cotton (missionary). Source: Wikimedia. https://upload.wikimedia.org/wikipedia/commons/d/d3/William_Cotton_1.jpg

A passionate beekeeper from a very young age (Barrett, 1996; 1999; Cotton, 1838; 1848a; 1848b), beekeeping offered Cotton a meaningful occupation in the unfamiliar context of a remote missionary station (Smith, 2006). His religious and apiarian vocations were closely related, and his beekeeping was to offer self-sufficiency, a financial return, and a resource for the improvement of indigenous Māori populations and the 'poor cottager' class through education and conversion to Christian sensitivities (Cotton, 1848a; 1848b).

Role of bees in land transformation

Perhaps the most transformational work of bees, however, was their value-adding labour which facilitated the conversion of native forest to pasture. Nineteenth-century justifications of colonial occupation as the addition of labour to improve colonial 'wastelands' were underpinned by John Locke's conception of improvement as an imperial territoriality, the aim of which was 'the recovery of Earth's edenic fruitfulness' (Brooking & Pawson, 2011: 9). This labour was generally understood to be human, but was commonly performed by more-than-human actors such as the horse, dog, rat, grass, and, of course, the honey bee (Samson, 2003). For example, the labour of honey bees was crucial to the pollination of introduced 'improved' grasses, food crops and ornamental flowering plants (Barrett, 1996; 1999; Cotton, 1848a; b; Donovan, 2007; Hopkins, 1916; Rader, et al., 2009). This labour enabled the propagation, spread and establishing of introduced crops, and the populations they supported, and was understood by the colonials at least as improvement:

continued...

[T]he Indians of America consider the same insect [honey bee] as the harbinger of the white man, and say that, in proportion as the bee advances, the red man and the buffalo retire (Thomas, 1852: 58).

Honey bees were gathered into political projects of environmental and ideological transformation, land appropriation and pastoral enclosure, and performed a key role narrating these. In New Zealand, as elsewhere, these actions had substantial and more or less unplanned environmental, economic and social consequences, including the displacement by technical, 'legal', financial, and military means of indigenous peoples identified as living in 'unimproved' and thus 'unused' environments (Brooking & Pawson, 2011; Cant, et al., 2005; Gauray & Nair, 2005; Samson, 2003; Simon, et al., 2001). The wasteland thesis informed the extensive appropriation of land from Māori, while improvement performed 'an act of geographical violence' on landscapes, 'through which space was explored, reconstructed, renamed and controlled' (Brooking & Pawson, 2011: 8).

"The wasteland thesis informed the extensive appropriation of land from Maori, while improvement performed 'an act of geographical violence' on landscapes..."

The histories touched on confirm that this colonising experience involved multiple political projects, and that the introduction of honey bees was neither politically innocent nor an inevitable outcome. Long valued as efficient pollinators, bees were enrolled as pollinator-colonists and wove socio-ecological fabrics that were pivotal to the grassland transformations that distinguished New Zealand's colonisation. Today the everyday practices of honey bees in New Zealand agriculture sustain these inherited landscapes.

LETTER TO THE EDITOR

EVIDENCE NEEDED FOR NEONIC CLAIMS

Roger Bray

Articles about neonicotinoid chemicals and bee demise are pretty common, and I wonder if the integrity of the beekeeping industry may be compromised by what has become political spin.

The neonic bandwagon has been leapt onto by people with positions. Is this out of a genuine concern for the beekeeping industry, or is it more the case of furthering the position of those hitting the headlines?

Perhaps the state of fluctuation of bee numbers is more related to the profitability of beekeeping and the adequate abundance of food as well as healthy bees to sustain profitable beekeeping. The price of 'genuine' honey has risen worldwide, leading to beekeepers being able to maintain beehive numbers or increasing bee numbers because it is profitable to do so. The 'demise' in beekeeping in some countries is similar to the demise in sheep farming in New Zealand where nobody is asking, "Why are sheep numbers continually dropping?" The answer is pretty obvious: people do not continue to farm sheep if there are inadequate financial returns.

There is no doubt that neonics are potentially damaging to the health of insects (bees included). However, when these chemicals are used in accordance with the controls placed on the products, we should assume that the approval process has been sufficiently robust to protect beneficial organisms such as bees.

We see reports that US President Obama is concerned about the health of bees, and now the New Zealand Green Party is calling for the EPA to reassess their approval of neonics. While it is great for the industry to gain support in high places, it could be very damaging to bee industry integrity if these claims of bee demise due to neonics are unfounded.

Whilst we have no idea if our bees are actually being harmed by neonics to the extent that it is leading to hive deaths, I do, along with a number of other Canterbury beekeepers, keep bees in an area where the farmers choose to plant seed coated with neonics. Of course our bees then feed on the pollen and nectar of the plants that have been treated. I do acknowledge that crop pollination hives often become a casualty due to the pollination conditions the bees are forced to endure. I have noticed that beehives on permanent sites that have access to pollen and nectar from neonic-treated seed plants appear to suffer no ill effects from the food they collect and consume.

This season, some Canterbury beekeepers are collecting samples of honey directly from beehives known to be collecting honey from neonic-treated crops. These will be analysed for neonic residues. If there are harmful residues of neonics, then we will have some 'evidence' to consider further action or investigation. However, as I and other Canterbury beekeepers have been unable to observe adverse effects of pollen and honey from treated seed plants on their hives, we wonder why so many people with positions such as President Obama appear concerned about the welfare of (our) bees from neonics when we fail to spot a link between neonics-treated seed and bee deaths.

What can we do to solve the issue? For a start, we need evidence that the chemicals are causing damage in the hive, or at least are present in a hive that would suggest that bees may have been exposed to a (lethal) dose of neonics. Then, if there is sufficient evidence of harm, there is sufficient basis to seek a reassessment of the chemicals concerned—a relatively simple and straightforward process.

Politicians and those who wish to make political statements are missing the point that we need evidence and solutions: 'feel good' politics does not provide evidence or solutions.

BRANCH REPORTS

FROM THE COLONIES

Waikato Branch

[Editor's note: Barbara Cahalane is very busy with business interests in the apiculture sector, so has had to give away the scribe work. Thanks, Barb, for a great job in providing these reports. Best wishes for your business ventures!]

Bay of Plenty Branch

BOP beekeepers have been busy with pollination and moving hives into honey crops. Pollination had a pretty good run of weather but there are reports of under-strength hives being used; not a good look considering the actual standard required is not that hard to achieve.

Another area that is being brought to attention is beekeepers using petrol stations with no scrim and leaving bees on forecourts. I have now heard of stations that have been shut in order to remove bees. We are going to get banned from service stations and once again it is a few people stuffing it up for everyone. *[Editor's note: refer to the article 'Travelling with bees' in the December 2015 journal for some useful advice.]*

Honey is certainly flowing now and so long as the weather looks after us in the next month it looks like this year will be all right.

- Bruce Lowe

Hawke's Bay Branch

There's not much to report from Hawke's Bay at this time of year. I could talk about the weather (we have certainly had four seasons in one week) or the El Niño drought that is affecting some parts of the Bay and not others. Looking at the forecasts from around the country, I think we can say that we haven't had the worst of it.

The only thing I have been asked to pass on is a concern from a fellow beekeeper about inappropriately sited hives way too close to a busy road. I can personally think of at least three within 10 kilometres of my home that are a threat to public safety. If beekeepers do not get their act together then councils or government will force us to.

I took this photo of bee art (right) in Havelock North, only about half a kilometre from home. The painter is Mary Bagnall and it's a good job. I had been pretty hot under the collar about really inappropriately placed hives until I got a closer look. When I go for a walk I still can't help keeping away from the entrances.

- John Berry, Branch President

Southern North Island Branch

The weather has been very changeable but honey has rolled in (in some areas). I've received reports from beekeepers in Manawatu and Wanganui that extraction has started. Beekeepers have run out of honey supers: what a great problem to have.

Queen matings have been variable, even purchasing mated queens has not always proved successful.

Mānuka is flowering now, but the short, wet, cold spells have reduced crops. Rewarewa flows have been excellent and bush honeys have also been very good. Clover is in full swing.

Some beekeepers, including me, are off in January for the VCC International Rally in Dunedin. It is amazing how many beekeepers have old vehicles: cars, utes and trucks that have belonged to family from the 1930s on. I look forward to meeting up with them in Dunedin.

So 2016 is here—it is going to be an interesting year.

- Neil Farrer, NBA Life Member

Camp Rangi training weekend

The branch is running a training weekend for more experienced beekeepers at Camp Rangi Woods, Pohangina Valley (in from Ashhurst) on 26–28 February 2016. We will be covering mostly queen rearing and over-wintering of nucs. Guest speakers will be John McLean (Gisborne) and Mike Palmer from Vermont, USA. Branch members will also be passing on their experiences. We have a small number of day and overnight places available. **For more information, contact Mary-Ann Lindsay: 04 478 3367.**

continued...

Nelson Branch

The start of 2016 has been good from a grower point of view, with some much needed rain in the first couple weeks of January. Prior to that it has been very dry, with councils imposing water restrictions over much of the region.

Bloom has been a bit sporadic, possibly explaining why some beekeepers have had good honey flows where others very poor. Clover has definitely been low or behind other seasons, most likely due to the lack of rain. Kānuka and mānuka definitely are patchy.

There were a few swarms in late December, and some hives have struggled to build during the season. Varroa numbers appear low, which is excellent, but some AFB is still turning up so continued vigilance on that disease is needed. We have several new beekeepers (large and small operations) in the region. How they all will fit into the same area will be interesting, and I hope respect is shown to other people's property.

- Jason Smith

Canterbury Branch

Rain and drizzle in recent weeks has been very welcome, with a good rain on 3 January. Soil moisture records from the National Institute of Water and Atmospheric Research (NIWA) indicate that fields throughout the region are significantly drier than usual for this time of the year. Sites north of Timaru received rainfall in the lowest 10% of cases in October, November and December combined, the record suggests. Rainfall in the last 30 days has been around normal in much of South Canterbury. *[Editor: Written before the recent heavy rains there.]* Farmers are still on a knife edge.

Despite beehive strength being well below normal, early spring hives are up to full strength now. This is due mostly to a very good dandelion flow, which has also contributed to an easy spring feeding round, although in some areas beekeepers had their syrup tanks on until early December.

Flowering brassica crops have been flowering from mid-spring onwards. These crops have provided additional nectar flows, which help over the normal dearth period of November. This does cause some hive congestion problems, so must be dealt with promptly to keep ahead of honey granulation and plugging hives out. Hives near these crops have had a super of honey on by December or earlier. It is also one of the best years for radish honey for those pollinating this crop, with two queen hives with three supers of this honey.

Swarming doesn't seem to be any worse than normal and the weather has been favourable for good matings.

The foothills native bush has yielded well. Pasture clover has been visible for a while but really has come through in early January. Small seed crop pollination charges have had to lift with the increase of honey prices.

With the surge of new entrants into beekeeping, a reminder that respect for fellow beekeepers needs to be kept in mind. A good deed done might beget one in return: who wants to go the other way?

Hope everyone has had some rest over the festive season—now the real work begins. Best of luck for a good crop.

- Noel Trezise

ATTENTION ALL DUNEDIN-AREA BEEKEEPERS

Sarah Hight, a film student at the Centre for Science Communication at Otago University, is making a film about American foulbrood.

Sarah is looking to film beekeepers searching their hives, detecting disease and eliminating infection.

If you are a beekeeper in or near Dunedin with an infected hive(s) and are willing to be filmed, or if you are interested in learning more about the project, please contact Sarah at sarah.hight1@gmail.com

The BeeKeeper NEW ZEALAND
April 2016 | VOLUME 24 No. 3

APRIL JOURNAL DEADLINES

NB: The deadline for the April journal is Tuesday, 1 March 2016.

Please supply articles to editor@nba.org.nz

Accompanying photographs must be of high resolution (300 dpi) at the size they are to be used.

This journal is sent to all registered beekeepers in New Zealand, and space is keenly sought. We will do our best to accommodate requests but we cannot guarantee that your article or advertisement will be published in the April edition.

Advertisements must be booked by 1 March: contact sales@southcityprint.co.nz

ABOUT THE APIARY

REQUEENING AND MAKING NUCLEUS HIVES

Frank Lindsay, NBA Life Member

As I write this in mid-January, the weather has been perfect for honey production, with rain showers once a week followed by hot, sunny, still days.

Although the pasture is drying out now, the clover is flowering well and is being visited by bees. The mānuka is halfway through flowering (it's later than normal) but isn't being fully worked by honey bees in my area as several native bush species, including whiteywood (mahoe: *Melicytus ramiflorus*), are in full flower.

Although the honey bees may not have been visiting mānuka, it's covered with thousands of visiting native bees. Because the bees are offered alternative sources to mānuka, they tend to visit these first. Those areas with just mānuka will have a greater content of mānuka nectar. Koromiko (the last of the flowering sources) now has tiny flower buds, so the end of the season is not too far away.

Time to requeen

Now is the time to undertake one of the major aspects of overwintering by providing all hives with a young queen (i.e., less than two years old with a good laying pattern). You can see this process happening in some of the dud hives, which are now superseding their old queens.

Now is the time to undertake one of the major aspects of overwintering by providing all hives with a young queen

Most commercial beekeepers requeen all their hives during the honey flow by placing a 10-day-old protected queen cell somewhere in the hive that is covered by bees. This method of requeening was developed here in New Zealand by Murray Reid, who used to be an Apicultural Advisory Officer for the Ministry of Agriculture and Forestry (now AsureQuality).

The queen cell is placed in the middle of the third or fourth super (for those who don't use queen excluders) or in the first super for those who do. This requires a lot of work for those using queen excluders. One of the largest beekeepers in our region places the cells in amongst the bees where they are clustered down on to the floor, as it's far less work and only takes a minute to do. Queens in cells just before they emerge can tolerate somewhat cooler temperatures at night without too much trouble, although it can delay their emergence slightly.

Queen cells are fragile and should be rejected if dropped or jarred on the eleventh day just before emergence, as this is likely to damage the newly formed wing buds. Success with the queen cells is likely to result in an 80% change of queen so is cost effective for a commercial beekeeper, but generally these cells are not readily available to hobby beekeepers unless they live close to the queen producer. Hobbyists mainly have to rely on obtaining mated queens or making queen cells themselves, which requires a little expertise and practice.

There are a number of ways to produce a small number of queens without adversely affecting the donor colony or needing specialised equipment.

continued...

Requeen with a protected queen cell. The cell has a piece of irrigation tubing wrapped around it to stop the bees tearing down the queen cell.

The Miller method

C. C. Miller (USA) developed a method by making the hive queenless and cutting away 'V' sections of new comb (removing the bottom from some of the comb) containing eggs. With no bottom to the cells, the bees will develop the larvae into a queen cell, provided other conditions are also met:

- there must be a flow on. Feed the hive sugar syrup with an inverted bottle with half a dozen holes in the lid if the flow has finished
- the hive should be crowded with bees and ample pollen coming into the hive. (In other words, spring conditions in the hive.)
- the section of the hive with the cut-away frame must be queenless.

Find the queen and make a nucleus colony. To do this, take her and the frame she is on, as well as another frame of brood and a couple of frames of honey (covered in bees) and put these in another super above the hive using a split board. For further information, go to Dave Cushman's website at http://www.dave-cushman.net/bee/millermethod.html

You could also refer to the book *Queen rearing simplified* by Vince Cooke (a former New Zealand Apicultural Officer), which is available from the NBA Library.

The Cloake Board

Another method is the Cloake Board, developed in New Zealand by Harry Cloake. It's used mainly to raise large numbers of queen cells but it can also be used to raise a few cells. You can find the plans for this at http://www.dave-cushman.net/bee/cloake.html and how to use the board on Dave Cushman's website at http://www.dave-cushman.net/bee/method2.html

If you want to raise just a couple of cells, you can use the Miller method or a technique called 'notching', which basically uses the principles of the Miller method. There's no need to dequeen the hive if it's headed by an old queen.

The 'notching' technique is used along the bottom edge of the frame. Taking a very sharp blade, cut away the bottom of a few cells containing eggs (this works better with a newly drawn frame). With no bottom, the bees will make these into queen cells. It may require several attempts before the bees get the idea but as the hive will be crowded and nectar will be coming in, it shouldn't take the bees long to draw out queen cells.

Equally important is to have mature drones around for the virgin queens to mate with.

If there's not much room for the cells to lie straight down, the bees turn the cells to follow along the bottom of the frame. Now you can understand why you missed some queen cells in the spring that caused your best hive to swarm. When covered with bees, these cells are hard to spot.

Equally important is to have mature drones around for the virgin queens to mate with. There should be a lot of drones at this time of the year, but it won't hurt to put an empty frame in the middle of the brood nest a month earlier so the bees can produce some drones. Use another colony to produce your drones, preferably from one that is a very good honey producer, quiet to handle and wintered well last year.

Putting a new queen into a full-sized hive is also a waste.

For those who cannot make queen cells, you are best to purchase a mated queen. Queen introduction is a bit of a science and requires observation of the bees on the cage to see the queen has been accepted before she is released. Too often beekeepers find and remove the old queen, then put in the caged queen with the protective candy exposed for a quick exit. This is a waste of a good queen if there are eggs in the brood cells, as the bees prefer to raise their own and often kill the new queen. Any queen cells the bees have started (cells around the brood area with lots of royal jelly in the bottom) should be scratched out so the bees have no option but to accept the new queen.

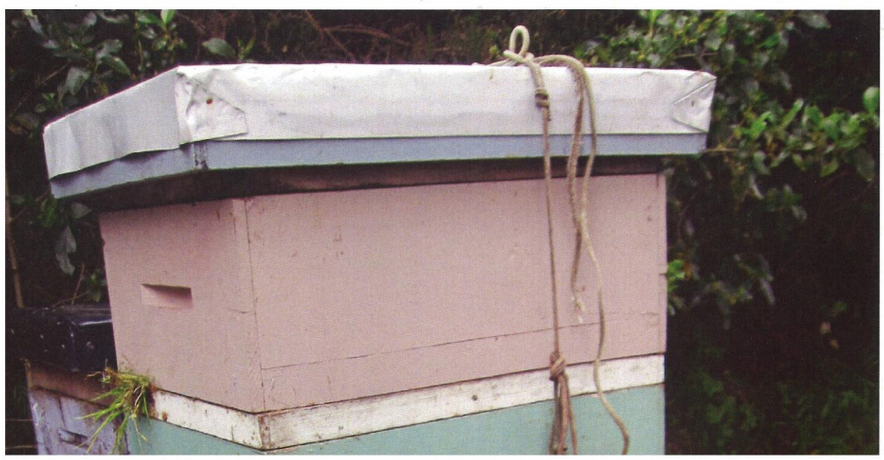
Putting a new queen into a full-sized hive is also a waste. The field bees recognise their old queen and will often kill the intruder. You can see this if you put the caged queen on the top bars of a brood super. They will generally ball the cage and grab at the queen, often eating off the queen's tarsal pads. These pads leave a chemical pheromone wherever the queen walks and is one of the requirements of a good queen. Without these pads, the new queen will be quickly superseded. You can prevent this by putting a piece of tape around half of the mailing cage, so the queen can withdraw to a space where the bees outside can't get at her feet.

A mated queen in a cage can also be used to identify a queenless hive. The bees will roar when disturbed and will rush to the cage when it's placed on top of brood frames. Queenless bees are eager to see the queen and react quite differently to a hive with an existing queen. Have a look at the short YouTube video 'Mike Palmer Queenlessness Test', at https://www.youtube.com/watch?v=RX3BgnOkozs

Making up nucs

The best and most successful way to requeen a hive is to make a nucleus colony. If the nuc is placed in the same apiary, the older field bees will fly back to the main hive, which will make it easier to introduce a new queen. Hives are

Pictured is a nuc on top of a hive, separated with a split board whose entrance has been closed with grass to allow a slow release to retain most of the bees.



A push-in cage.

more likely to accept the new queen if there are only young nurse bees in the nuc.

To make a nucleus colony without finding the queen, take two frames of brood with emerging bees or bees about to emerge. Sort through the honey frames and select one of honey and another with honey and pollen. Shake 'all' the bees off the frames and place these together in the middle of a new super, with the frames of brood in the centre. Fill in the gaps where the frames were in the super below with drawn frames or foundation. Put on a queen excluder on and then the new super with the bee-less nuc and leave overnight or for three to four hours. The nurse bees will come up through the excluder to look after the brood and the queen is kept below the queen excluder.

Next, take a split board (a crown board with a 25-mm entrance) and put this in place of the queen excluder, thus isolating the top super containing the nuc. Turn the entrance of the split board to the back or side of the hive.

Now take the queen's mailing cage and place it against the window inside your house, then open the cage slightly and release the escorts. If the queen tries to get out, cover the open part of the cage with your thumb until she moves to the other end of the cage, then uncover the gap and allow more escorts to escape until they are all out.

If the queen gets out, shake out all the escorts and catch her by the wings and put her back into the mailing cage. Don't try and do this in a car or truck, as the queen will disappear down the air vents, never to be seen again. This happened to me, so now I use a wire queen muff to remove escorts in the field. You can purchase one from the USA firm Kelley Beekeeping. Go to https://www.kelleybees.com/Shop/21/Queens-Bees/Queen-Rearing/4055/Queen-Muff

The best and most successful way to requeen a hive is to make a nucleus colony.

Now open the nuc, move the brood frames apart slightly and place the queen cage (candy end up) between the frames of brood and push these together. Three days later, open the nuc and look for queen cell development around the edge of the brood where eggs may have been (i.e., any cells with lots of royal jelly and being build out should be removed). Now the hive is totally reliant on the new queen, and you can release the plastic tab covering the candy plug.

If you are putting these queens into a full-size hive (not making a nuc), observe the bees on the cage after three days. If all the bees are quiet and feeding the queen, you can release the tab. But if just one bee is aggressive (e.g., acting as if it is glued to the cage), don't remove the tab. Do another inspection for queen cells and leave the queen for another three days, then observe the bees on the cage. Usually you can release the tab at this time and thereafter you shouldn't open the hive for another two weeks to let the queen and bees settle and allow the queen to start laying.

Push-in cages

Releasing the queen as I've described requires a lot of work, so I prefer to use a push-in cage. I select a frame with emerging brood and shake off all the bees. Press in the push-in cage over some emerging brood and a little nectar in the corner. Lift the edge of the cage and release the queen under the side. If she gets away and flies, leave the hive open with the queen cage on the top bars for half an hour, then look for a ball of bees trying to kill the queen. Remove the bees or drop them in water, retrieve the queen and then put her under the cage. Lift up the cage (it was pushed into the surface of the frame) and release the queen under from the edge of the cage, then press the cage firmly back into the frame surface again.

Leave for nine days, check for any capped queen cells and remove these and remove the cage, thus releasing the queen. She should then take over the colony.

continued...

Should I be overwintering nucleus colonies?

I have looked at the long-term weather forecast in *Ken Ring's New Zealand Weather Almanac 2016*, and it looks like October this year is going to be wetter than usual for the Wellington district. I have noticed over the years that we get only a two-week period in October that is warm enough (20ºC) to mate queens before the equinoctial winds start and the temperature drops again.

Those wanting nucs for spring should consider making them now so these bees can carry hives through the winter. Put aside six frames of honey with pollen, freeze to kill any wax moth larvae and seal in a plastic bag to prevent atmospheric moisture fermenting the honey. This provides the extra food the nuc will need during the winter. Exchange the outside frames when they are nearly empty; i.e., June and September.

Make up nucs consisting of four or five frames and fill them with bees. Feed sugar syrup so eventually there is only brood on the lower parts of the middle frames. Don't feed during the robbing season when the flow has finished, as your stronger hives will clean them out without entrance protectors in place.

Remove your honey and place the first varroa treatments in the hive

It's very important that bees producing winter bees are free from varroa and viruses. Randy Oliver estimated that we should all be starting our varroa treatments on 18 February. That means every hive within a five-kilometre radius of your hive should be treated at the same time; otherwise you will get mite reinvasion later in the season when untreated hives start to break down and are robbed.

Nearly all treatments require the honey to be removed first but the honey can be left on the hive if you are not ready, provided it has been isolated from the brood supers. Use a clearer board (one fitted with one-way bee escape), or cover the top of the board with newsprint when the majority of bees are below.

It's also very important that these honey supers are totally sealed in. With no bees to guard the cracks, other bees and perhaps the hive below will rob the honey in a few days.

I'm not going to recommend what type of mite treatment beekeepers use, but just make sure you alternate treatments to prevent mites becoming resistant to the treatment (for example, don't alternate Bayvarol® with Apistan®, as these are basically the same family). Whatever is used, monitor a couple of weeks later after the treatment has finished to make sure it has been effective. Use some sort of wash, as this allows for more accurate mite counts. As you can see from page 45 of the *Control of Varroa* manual (Goodwin & Taylor, 2007), washing 300 bees with either soapy water (e.g., window washer fluid) or 25% alcohol or methylated spirits is still one of the most accurate methods to determining mite numbers.

Randy Oliver (a Californian beekeeper who has presented at the NBA Conference and at a Waikato field day) also provides information on how to make a shaker bottle: see http://scientificbeekeeping.com/an-improved-but-not-yet-perfect-varroa-mite-washer/

Tips for removing bees from honey houses

Commercial beekeepers sometimes can't help bringing in a few bees with their honey supers. These tend to collect on the windows.

Roger Bray figured out the answer to this problem and installed modern sash-type windows in his honey house. These open at the top as well as at the bottom, allowing the bees to fly out.

For those that haven't figured out an easy way to collect the bees, you could staple a small piece of queen bee pheromone to some cloth and hang this in the window. The bees will readily congregate on the cloth and can be easily removed. This tip came from the Eastern Apicultural Society (EAS) conference 2015 held at Guelph, Canada.

THINGS TO DO THIS MONTH

Check for AFB before removing any honey. Extract honey and if you are in a built-up area, place the wet supers back on the hives after dark for the bees to clean out or refill. Remove comb honey as soon as it's capped to prevent travel stain: bees have dirty feet.

Rear autumn queens, introduce purchased queens and produce replacement nuclei. Put on entrance closures to make the hive easier to defend. Don't allow robbing to start when the flow finishes by leaving honey exposed for too long.

Treat for varroa with an alternative to your spring treatment. Treat to knock numbers down if you are going to do a full treatment later.

Keep an eye out for wasps. I haven't seen many yet but they are out there. Nests are found in ditches and in banks within 500 metres. Kill them with a little insecticide powder down the entrance before they start producing new queens.

It's also a good idea to put out mice baits in a plastic bottle so birds can't get at them. Rats and mice can do a lot of damage in a hive, so keep their numbers around the apiaries low.

Reference

Goodwin, M., & Taylor, M. (2007). *Control of Varroa – A guide for New Zealand beekeepers. Revised edition.* Published by the National Beekeepers Association of New Zealand, MAF and HortResearch.

Whiteywood (mahoe: Melicytus ramiflorus*). Photos: Frank Lindsay.*

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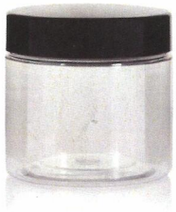


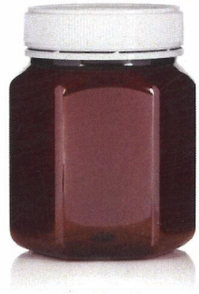
360ml Round Pot

500gm Round Jar

340gm Round Jar
(coming soon)

250gm Round Jar

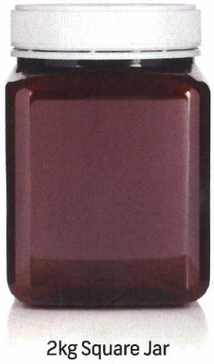
2kg Hex Jar



1kg Hex Jar

500gm Hex Jar

250gm Hex Jar



2kg Square Jar

1kg Square Jar

500gm Square Jar

250gm Square Jar

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No supply contracts are required.

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