

ISSUE 02, SEPTEMBER 2019

# APIARIST'S ADVOCATE



News, Views & Promotions - for Beekeepers - by Beekeepers

## Working Our Way Through A WALL OF WAX



# Wax Market Mirroring Honey



Many New Zealand beekeepers have suffered a double whammy this year. While battling a falling honey market, they were struck another blow when unable to sell their beeswax at season's end. *Apiarist's Advocate* sought insight on the beeswax market from two of the country's leading buyers, processors and sellers and found them reading from a similar page and telling an uncannily familiar story.

**Nick Taylor heads the aptly-named New Zealand Beeswax, a company which dominates the market they are named for. Stuart Ecroyd has over 40 years experience in buying and selling hive products, including wax, with Ecroyd Beekeeping Supplies and, following their 2015 merger with Beetek, Ecrotek.**

Recently their companies have been forced to take similar approaches to incoming beeswax from Kiwi beekeepers - offering store credit, for the most part. The beeswax has been priced at \$10 to \$12 a kilogram - depending on quantity, quality, demand and buyers - where only months prior the offer would have been as much as \$18 cash.

Both buyers are faced with a backlog of wax in their warehouses, bought at those earlier high prices. To clear it, they are appealing to previously-snubbed international buyers who were not required in recent years when domestic wax use offered more lucrative yields.

"[The overseas-buyers] have turned around and said 'well, while your price doubled, we stayed the same. So, when you halve in price give us a call'," says Taylor, adding, "Sound familiar?"

The NZ Beeswax General Manager is referring to the situation facing many New Zealand honeys internationally (detailed in the August issue of *Apiarist's Advocate*) where demand for blending has taken honey out of previously well-established off-shore markets. How the beeswax market got to this very similar situation is a case of supply and demand,

influenced by the Manuka-honey boom. The price for beeswax went from \$8 a kilogram prior to the honey boom, to \$18 at its peak.

Now, following what Taylor deems a "significant correction", it is back to \$10-12, albeit generally offered as store credit.

Traditionally beeswax in New Zealand was bought and sold at prices dictated by the global price of the day. Ecroyd explains how that changed in the honey boom.

"About five years ago there was more demand in New Zealand for comb foundation for frames or wax sprayed on to plastic. It all but exceeded the supply available. Therefore, the New Zealand price went artificially high as New Zealand beekeeping suppliers competed amongst each other to try and buy what wax was available. We got to a level which was around about 50 percent higher than world market price."

Importation of beeswax for use in apiculture is illegal in New Zealand, so industry demand had to be met by a barely-sufficient local supply.

"Now things have changed, we have got a lot more production of beeswax in New Zealand, because we have a lot more hives, and we have a much lower demand than in the last few years because expansion has slowed down," Ecroyd says.

## WHAT A DIFFERENCE A YEAR MAKES

"If I can leave you with one message regarding beeswax, it is this - more please," said NZ Beeswax's General Manager when addressing the National Apiculture Conference in Blenheim during July last year.

"It was the best way I could sum up our situation. Even then and with the change in Manuka standard looming, even with everyone knowing the turn was happening, the demand for beeswax was still at record highs," says Taylor now, before likening the industry to a tanker which has been slow to turn.

Having already made significant capital investment, in such areas as new sheds and vehicles, many beekeepers still needed waxed frames to fully capitalise on that.

**Stuart Ecroyd**  
- Head of Product &  
Strategy for Ecrotek



"From July to October last year we had our head down servicing the normal spring rush and we suddenly looked up in October and had a 50-tonne surplus sitting in the warehouse for the first time I can ever remember. That is when we clicked - things had well and truly turned," says Taylor.

Ecrotek, although not as big a player in the wax market, has also been left staring at a large surplus according to Ecroyd, their Head of Product Strategy.

With the domestic apiculture market mostly dried up, but more wax still being offered from beekeepers, the big players in New Zealand beeswax have been forced to once again look offshore.

### NEW ZEALAND CALLING

"As of the end of last year we started opening up our five-year-old rolodex and we said, 'world markets, New Zealand is open for business again,'" explains Taylor.

The problem both NZ Beeswax and Ecrotek are having is that they are peddling a product purchased at high cost in New Zealand.

"I am carrying a buffer which I did not pay world price for and the current procurement price of \$12 is still significantly above the world price. So if we have to go back to world price there is still a bit of pain to be had," warns Taylor.

Ecroyd amplifies the warning, saying it will take time to rectify the situation.

"It is like what happened to honey. Many honeys got blended into Manuka honey and those individual-floral sourced honeys fell off the shelves overseas. Now we want back on those shelves. Well, it doesn't happen overnight," the 40-year veteran of the industry warns.

### KEEP IT CLEAN

Beeswax from New Zealand is seen as largely free of residues, or low in Varroacide residues, therefore it can fetch a premium on the world market as a food grade product to be used in cosmetics. That is a situation both leading Kiwi exporters are keen to maintain.

"In the last four years, all the wax has gone in a big melting pot and ended up as foundation and sprayed on frames," Ecroyd explains.

"Now it is potentially for export, you want it to be ready for that because you don't want to have to melt it again. Every time you melt beeswax you damage its good properties. Offshore buyers prefer it melted only once."

Therefore, he feels beekeepers should have a renewed focus on ensuring wax quality.



*Nick Taylor, General Manager of New Zealand Beeswax*

"It was gold in the old days, up to six times the price, per kg, than honey and treated as such. Now, some beekeepers have got a bit slack because there has been so much money around. They have been busy and beeswax has only been worth maybe the same per kilo as honey, not six times.

"Burr comb off inside of boxes and top bars and the like, old comb, should be melted and kept separate from their capping wax for export. It could have different residues, be it from varroa treatments, or box treatments. Don't throw it all in together, because it could contaminate your whole line."

Working in New Zealand's favour is the fact that there are minimal residues from agricultural sprays in the wax, and adulteration has not tainted the Kiwi product.

"Other large producers are notorious for manipulating and falsifying documentation and certification," says Taylor.

"Buyers get their fingers burnt and then they look for a trusted source. We have to look after that because we are only one scandal away from being thrown in the same basket."

He is confident New Zealand Beeswax will do their part in maintaining that trust and says beekeepers should not overlook the value of wax.

"Although there has been a significant correction in pricing, it is still a valuable revenue stream that is well worth factoring into their operations. If you focus on it, it can add to your bottom line."

# Best practice for harvesting and processing beeswax


## A BUMPY ROAD

Taylor suggests the parallels to honey are “uncanny” and, like honey, the leverage of “New Zealand Inc.” can be used to market Kiwi beeswax.

“Brand New Zealand has been incredibly successful in other industries, as well as this one for many years and will be for many years more. It is just going to be a bumpy road to get to that point.

“I am confident it can remain above the world price, but it will not be getting 100 percent above like it was two years ago. It will be much closer to where it is now, 10 or 20 percent above.”

Both Taylor and Ecroyd are quick to point out that although there is work to be done, with a high-quality product New Zealand beekeepers are well placed to re-establish lucrative markets given time - proving even the road to recovery could mirror honey’s expected path.

“We just need to keep soldering on and in five to 10 years it will look very different. I am still pretty positive,” adds Taylor. 

1. Keep cappings wax separate from scrapings or old brood-frame wax
2. Do not shift frames from brood boxes to honey boxes
3. Treat wax as a food-grade product at all times
4. Only melt wax once
5. Use effective melting & straining practices to keep the bottom of blocks clean



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# Grafting Towards Varroa Immunity



In Mid-Canterbury there lies a queen-breeding programme with a difference. Bee Smart Breeding is using Kiwi can-do attitude to develop Varroa Sensitive Hygiene (VSH) bees, with the aim of aiding New Zealand apiarists in their fight against a destructive pest.

**Rae Butler has spent a quarter of a century beekeeping in New Zealand and she enters this season with optimism, confident her VSH breeding program will continue to stride forward.**

Bee Smart Breeding has gone from having two queens which expressed the VSH trait two seasons ago, to six last season. Butler has just completed spring checks which have indicated about one third of her 100 hives could be expressing VSH and are worthy of further testing. From this she could find as many as 12 new VSH queens.

Breeding bees has long been a passion of Butler, who took up beekeeping in the 1990s and since 2012 has been at the forefront of VSH breeding in New Zealand. At that time Plant and Food Research had identified the trait in some New Zealand bees, but were seeking to transfer responsibility for breeding up the line to industry. Butler's then employer, Nelson-based Rainbow Honey, stepped in and so her task began.

The program was wound up in 2015, but Butler was keen to continue its development. So, armed with her knowledge of VSH and queen-breeding skills, she founded Bee Smart Breeding in Ashburton.

"It took a year to re-setup, another year to establish myself and now I am getting into a good system," Butler says.

Having monitored her hives for their spring mite levels, she will undertake phenotype testing on the more than 30 that have high VSH potential.



*Rae Butler  
instrumentally  
inseminating a  
queen bee in her  
VSH line.*

"VSH is more than one trait, it is detecting and removing," Butler explains.

"What I do is, look at the decrease in infestation and non-reproduction. I do a count on an infected frame of how many infected cells are in it and put it into a test hive. A time later I take it out and see how many cells, out of 200, are still infected. That is measuring a decrease in infestation at the same time assessing the infected cells for infertility or non-reproducing foundress mites."

Bees with the VSH trait have been shown to suppress varroa mite reproduction by removing the mites and interrupting the normal reproduction cycle. The selective removal of reproductive mites

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from brood cells results in brood cells with non-reproductive or sterile mites, hence assessing the life-stage of the mite is essential to diagnosing VSH.

Butler says beekeepers often confuse hygienic behaviour with VSH, so she would like to see a set of protocols for identifying the trait in New Zealand established.

"In New Zealand we have got tolerance of varroa, but if you really want to call it VSH you have to test for it because it could be a mixture of - hygiene, grooming, you name it.

"Tolerance, is living with something. You might tolerate a cold, it doesn't mean you are 100 percent."

When she first started working to build up the trait, Butler says there was scepticism because it is largely intangible. Now though, the advance of VSH research and breeding programs in many countries has helped dampen much of that scepticism.

Bee Smart Breeding produces instrumentally inseminated and open-mated queens and Butler's goal is to breed a line of bees that are not only proven to have the VSH trait, but also other desirable qualities for commercial beekeeping. High up that list are good bee numbers, brood quality, honey production and temperament.

Her program is unfunded, unlike her days with Rainbow Honey when AgMARDT and the Sustainable Farming Fund backed the project. That has led to the catch-22 situation where Butler must sell some of her best VSH queens to remain financially sustainable, while also trying to maintain the genetics of her program.

For this reason, Bee Smart Breeding is hoping to work with

*Rae Butler on the search for another VSH positive queen*

clients to assess the prominence of VSH in the offspring of queens sold.

Working with the wider industry is important to Butler.

"I am keen to share my ideas for the industry good. It is the only way I am learning, by those overseas sharing ideas."

Some of those international VSH scientists have suggested the Kiwi take her breeding units to more isolated locations or she implement single-drone insemination to control the genetics more closely. Butler likes her approach though, and is taking a Kiwi can-do attitude.

"It might be harder, it might take longer and it might fall over quicker. But I think some of them (international VSH scientists) are impressed with the small results I have sent through."

Small results maybe, but getting bigger each season. 🐝

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# Managing Businesses Not Just Bees



In the first instalment in a series on management tools available to beekeepers, we take an in-depth look into **MyApiary** – software which aims to add value through not only hive-management but across the breadth of a beekeeping business.

**“There is very little value in just replacing the diary,” says MyApiary founder Darren Bainbridge**

“The real value comes in a business tool where you can look at mitigating business risk and act as a single source of knowledge.”

Since founding MyApiary eight years ago, Bainbridge has got to know beekeeping businesses up and down the country, thus shaping his own product and business. The Hamilton-based company was established with the idea of providing a tool for hive-monitoring, but in their third year the direction changed.

“We learnt the state of apiary business-management was really, really poor,” Bainbridge explains.

“So, what if we collect all this extra data? What are beekeepers actually going to do with it? They don’t have the systems and processes in place to look at the data they have already got and turn it into business information. If we give them more information it is only going to be harder for them.”

So the electrical engineer developed a software system, accessed by both beekeepers in the field on tablets and office staff via desktop computers. It takes a business-management approach, as opposed to simply hive-management.



*Founder Darren Bainbridge works closely with all MyApiary’s clients to ensure they get a product to suit their business*

“At a beekeeping business level, we can go from end-to-end. Managing hives and staff right through to harvest declarations and putting labels on drums. Because of the digital nature of the platform there is full trace-back.”

Early adopters were Kerikeri Pollination in Northland, Taylor Pass Honey Company in the South Island and then Oha Honey (formerly Watson & Sons). Not long later Northland-based Manuka Mountain implemented MyApiary to help manage their 3,500 to 4,500 honey-production hives and approximately 10 field staff. Manger of those staff, James Schmidt, says MyApiary has been of huge benefit to him, his team and the business overall.

“In the past we would be working off a paper system. We relied on our beekeepers in the field to provide information on a sheet of paper, that would come back to the office and then we would input all that information into an Excel spreadsheet. It was a messy and time-consuming way of doing it. This way is just so much easier and cleaner,” says Schmidt.

“You have the scheduling system and everything is right there. All the tasks you can setup for the guys during the week. You input the information and it all gets synched up. It eliminated loads of work from the office’s standpoint and it is much more user friendly and auditable. We can just track information a lot easier.”

MyApiary’s founder says the software adds value to a business in multiple ways, not only through staff efficiencies. Information pertaining to inventory, consumables used, honey harvested and from apiary reports is turned into useful data.

“What I am really trying to coach is, where can you make more money? Where are the opportunities you can tap into for revenue growth?” Bainbridge says, adding that MyApiary can deliver this advantage in a number of areas.

“Is it putting hives into better areas? Or, if you are a queen-rearer, actually selling all your queens because you know what is coming in terms of what is being raised and success rates through the year. Can you increase hive ratios because your staff are less tied-up with paper work?”

Last season, in conjunction with Oha Honey, an extraction shed component was added to MyApiary. This helps asses yield data, manage honey batches and aides compliance.

There are three levels of use available, Singles User, Commercial and Enterprise, priced at \$1000, \$1600 and \$2000 per-year respectively.

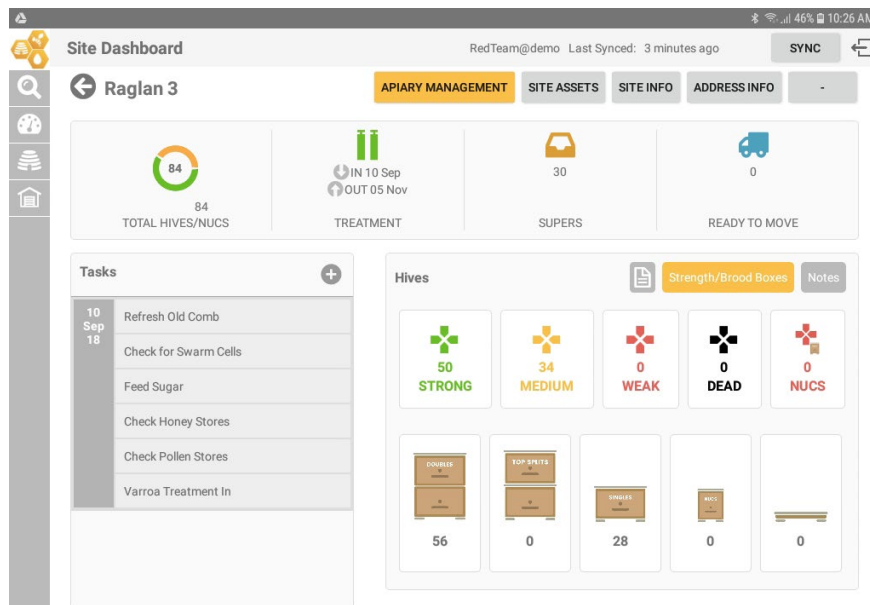
Bainbridge says the biggest benefit to using MyApiary will come to beekeepers with 1500 or more hives and they will see immediate benefits, but the real advantage comes over time as a business

gains more data on its operations. He believes management tools such as his are the way of the future and Kiwi beekeepers should be using them sooner rather than later.

"Most of the big guys have developed their own systems out of necessity. It is time for everyone else, if you really want to manage your business and be professional, to be getting similar benefits from technology."

Up in Northland, Schmidt agrees and says for a honey-production business such as Manuka Mountain, MyApiary definitely adds value.

"Darren seems to have found a system which works for most beekeeping operations, which is very difficult because beekeepers have so many different ways of doing things. He has come up with a platform which, in my opinion, no other platform competes." 🐝



A screenshot of the MyApiary site dashboard



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# Going on a Phage Hunt



A team of Massey University scientists are on a hunt that has included international travel, cocktails and even mention of pavlova, all with the end-goal of creating a “vaccine” against AFB – but they need beekeepers’ help to get there.

**The Active Bacteriophages for AFB Eradication (ABAtE) project is headed by Massey’s Senior Lecturer of Molecular Bioscience, Heather Hendrickson, at her lab in Auckland. She is joined by post-graduate students Danielle Kok and Jo Turnbull and for the last 18 months they have been on a search for bacteriophages which can destroy the American foulbrood-causing bacteria - *Paenibacillus larvae* (*P. larvae*).**

The search is the equivalent of finding a needle in a stack of needles though, with phages (rhymes with cages) the most numerous entity on the planet. There is an estimated 10 to the power of 31 — that’s 10 followed by 30 zeros! Or one trillion phages for every grain of sand on earth.

That is ten times the amount of bacteria in existence and it is their relationship to bacteria that could be hugely beneficial to apiculture.

Phages are viruses and natural parasites to bacteria, such as *P. larvae*. To effectively control the bacteria, specific phages that target the various strains of *P. larvae* must be found. That is where New Zealand’s beekeepers can help.

The ABAtE scientists are calling for beekeepers to submit samples of soil, taken from beneath hives, or bee debris in which the sought after *P. larvae*-destroying phages could be found.

“Processing soil samples to find bacteriophages involves growing the pathogen in our laboratory and determining if there are particles in the soil or bee-debris samples that are able to kill the pathogen,” Hendrickson says.

“When we find these death zones or plaques we isolate the bacteriophages, purify them and create large volumes of these lethal phages.”

ABAtE research has discovered eight different strains of the AFB pathogen *P. larvae*. Danielle and Jo, PHD and master’s students respectively, presented the project to the National Apiculture Conference in Rotorua in June.

At that stage they had discovered phages to control six of the eight strains of AFB pathogen. Since then, with the help of 20 new soil and debris samples submitted, they have been able to isolate two new phages, both of which target the same strain of *P. larvae*. To date, all up they have found 26 novel *P. larvae* bacteriophages in New Zealand.

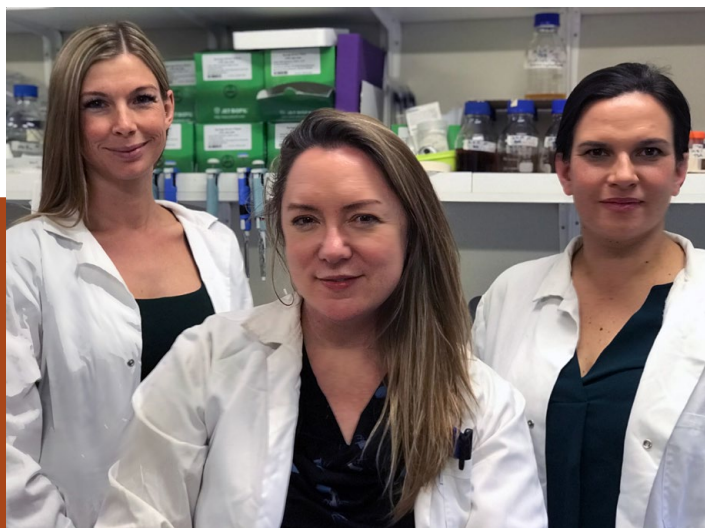
Turnbull’s focus is on finding phages to infect a relative of the AFB bacteria.

The search for phages to target the last *P. larvae* strain and Turnbull’s alternative host is continuing and so even more samples are needed. Hendrickson says if a phage which targets *P. larvae* is found in a beekeeper’s sample then they will get to name it. The two most recent phages are unnamed at this point, and the chief scientist is threatening to title one “Australian Pavlova” if she doesn’t hear from the submitters soon.

Once all the desired phages are discovered, the project will look to combine all the AFB targeting phages into a cocktail as they work towards the end goal of an AFB “vaccine”.

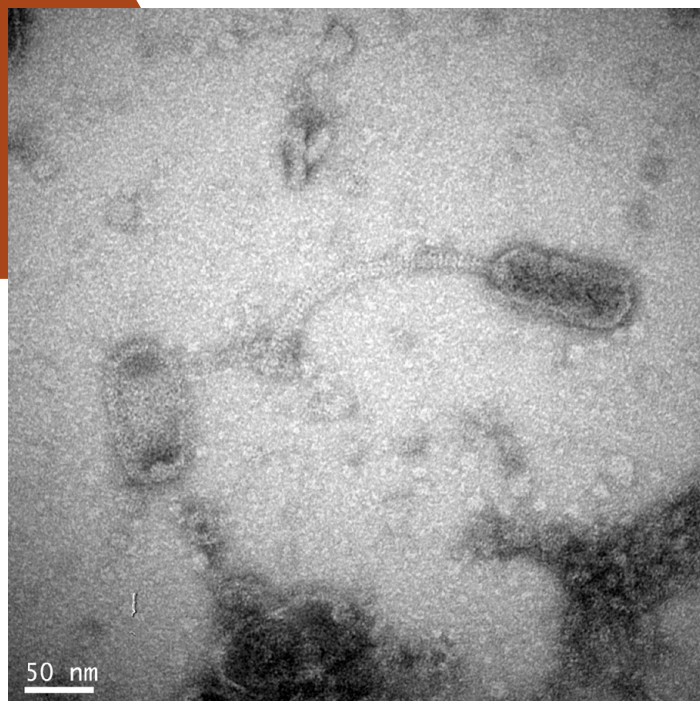
“The purpose of a phage cocktail is, if we are using many different phages we can hopefully stop the resistance. So, even if a bacteria becomes resistant to one phage, there are potentially six other phages in the cocktail that can go on and continue killing the bacteria. We are hoping to have additional phages kept in backup which we can start changing and adding them to the cocktail at a later date,” Danielle Kok explains.

Hendrickson says ABAtE research will continue for at least another two and a half years, but they would like to have a cocktail formulated by early 2021. She is hoping that one day the cocktail of phages could be applied to beehives on a semi-regular basis to effectively destroy *P. larvae* before it started an AFB infection.



The ABAtE project team, left to right, Danielle Kok, Heather Hendrickson and Jo Turnbull

*A Transmission  
Electron Micrograph  
of Paenibacillus  
phage discovered in  
New Zealand.*



Similar research conducted in 2017 in the state of Utah in the USA resulted in prevention of AFB in 100 percent of hives sprayed with a phage-cocktail. There are also similar studies taking place in Poland, Portugal and Belgium, while phages are being used to fight human bacterial infections and create more sustainable food and agriculture the world over.

Danielle recently travelled to the Evergreen Phage Conference in the USA and rubbed shoulders with a large number of international scientists working with phages in their various fields.

Back home in Auckland, the hunt continues. Over 400 samples have been processed so far and more are needed.

"It's easy to help and we need samples from anywhere, whether your hive site is new or old," says Danielle.

"If you email us we can send out a pack with sample containers, an instruction sheet and even a return courier bag."

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# NZBI Look to the Future



Industry body New Zealand Beekeeping Incorporated (NZBI) held its Annual General Meeting on Friday August 23, then a beekeepers' field-day the following day.

Both events took place at the University of Waikato, the location where New Zealand Manuka Honey industry was born as a result of research carried out by Dr Peter Molan.

National President Jane Lorimer outlined her vision for the industry going forward.


"We see our industry facing some tough times at the moment. Small beekeeping businesses are struggling and many are being forced to re-evaluate, but by being proactive and anticipating where gains can be made we can work together for the benefit of all beekeepers," Lorimer said.

The field-day theme was Looking to the Future.

A range of speakers addressed the crowd of almost 200 people

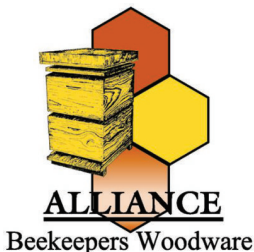
on topics such as biosecurity, pollination, the feasibility of forming a honey producers' co-op, exotic pests and diseases and the industry-led collaboration that is attempting to trademark the term "Manuka Honey" internationally. NZBI adviser Ian Fletcher spoke to the latter subject.

"The protection of the term Manuka Honey for all New Zealanders is vital. It's a Maori word, a treasure that has been used in New Zealand for centuries. To lose this term will result in the commoditising of manuka honey globally and the eventual collapse of the market worldwide," he said.

NZBI Waikato Branch President James Jeffery, in his address, urged fellow beekeepers to "enjoy your bees, your lifestyle and look after each other." 



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# Kiwis Encouraged to Love our Bees



September marks Bee Aware Month in New Zealand, and Apiculture New Zealand has a variety of activities planned for the nation-wide celebration of bees and their importance to our ecosystem, food chain and economy.

**Agriculture Minister, Hon Damien O'Connor, officially launched the 10th annual promotions by inspecting the Prime Minister's beehives, located at Premier House in Wellington, on August 29.**

This year's theme is Love our Bees and Apiculture NZ chief executive Karin Kos is asking New Zealanders to do their bit.

"We are lucky to have a healthy bee population in New Zealand, but we can't be complacent. Bees need our help to stay healthy and Bee Aware Month is all about encouraging people to do those small, but vital things, which make a real difference," Kos says.

Events to celebrate bees will be held across New Zealand, all listed on the Apiculture NZ website.

The annual Bee Aware Month Schools' Competition began prior to September, with students busily creating videos of two-minutes or under on the Love our Bees theme.

Twenty-five councils around the country have signed up for the Bee-Friendly Council Garden Challenge where Apiculture NZ supplies the councils with wildflower seeds so they can transform civic spaces into bee havens or share the seeds with their communities. 🐝

*Agriculture Minister Hon Damien O'Connor gets Bee Aware month underway as he inspects beehives at Premier House in Wellington with Te Aro school children.*  
**Image: Simon Edwards.**





# Practical Beekeeping in New Zealand (5th Ed.)



The Definitive Guide  
ANDREW MATHESON & MURRAY REID

For more than 25 years *Practical Beekeeping in New Zealand* has been the bible for New Zealand beekeepers. The only comprehensive guide to keeping bees in New Zealand, it provides both amateur and professional beekeepers with details on honey bee management throughout the year, advice on handling hive products and information about many other beekeeping subjects. Each month *Apiarist's Advocate* will run a small extract, tailored to the beekeeping calendar.

## EARLY SPRING MANAGEMENT

You can examine your colonies in spring when the bees are flying and have stopped clustering. In most districts a two-storey hive that has been well prepared for winter should not need to be opened before mid-September. Hives wintered as singles or nucs will need to be inspected in August.

Some beekeepers carry out their early spring checks simply by lifting the back of the hive to feel its weight — only particularly light hives need to be examined and fed.

Choose a fine, warm afternoon for your first spring check. Examine the brood for American foulbrood before stripping the hive right down to the floorboard and scraping off the wax and other debris that will have accumulated over winter. It is good hygiene to do this at least a few metres away from the hive site.

Depending on what varroa treatment you used in the autumn, what time in September you are making this inspection, and when the surplus honey flow starts in your area, you may need to consider applying your first varroa treatment at this time.

Remove any damaged hive parts. Mouldy frames don't need to be removed, as the bees will clean them up as the colony gets stronger. If you replace any damaged combs in the bottom brood box, do this with drawn comb rather than foundation. One or two frames of foundation or waxed plastic frames can be placed in the

## Practical BEEKEEPING



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COLOUR

second brood chamber, but only if there is a honey flow on or you are feeding heavily with sugar syrup.

Replace the bottom brood box on the hive stand and check through it. In a normal doublebrood-chamber hive very few bees or stores will be in the bottom box, except in city areas where brood rearing often starts earlier than in rural districts. It is normal to swap the two brood boxes at this point, as part of your swarm-prevention measures.

Carefully examine the frames in each box in turn. Look at the brood to see if the colony has a laying queen (is 'queenright'). If there is no brood, and especially no eggs, the colony is probably queenless and should be united with another colony or nucleus. If there are a lot of domed cappings of drone brood in worker cells, and multiple eggs in cells, then the queen has probably turned into a drone layer or there are laying workers present. As spring is usually too early to purchase queens, the queen should be killed and the colony united with another one.

It is very important to check for food stores. The colony should never have less than the equivalent of three frames of honey. If there is less honey in the hive, start feeding immediately.

The position of honey frames in the hive is also important. The colony will be clustering in the middle of the brood box, with the honey on the outside. If there are several empty frames between the cluster of bees and the honey frames, shift the honey alongside the cluster. But take care never to put the honey frames into where the bees are clustering, as this will split the cluster into two smaller ones. Bees do not readily cluster on honey and the brood may get chilled.

If there is a lot of moisture on the inner cover or on the hive walls, raise the inner cover on matchsticks to allow moist air to escape.

While at the apiary, check that your registered number is displayed, and the fencing is secure.

Control any weed growth around the hives. Scrub cutters and domestic weed clippers do the job, although regular use is necessary. An easy solution is to use a long-lasting herbicide in spray or granular form around the hives. Generally herbicides are not toxic to bees, although you should take care not to spray directly into hive entrances as some wetting agents used in herbicides can be toxic to bees.

Weeds are also kept down if hives are put on sheets of roofing iron, but this may make it difficult to work the hives if you need to stand on the roofing iron to do so. Some beekeepers use weed mats or old pieces of carpet or vinyl to suppress weed growth.

There is no hurry to take off entrance reducers, which can be left on until a later visit in case of continued wasp or rodent activity.

Robbing can be a problem in spring, so take care not to expose honey for longer than necessary and try not to spill any sugar syrup when feeding hives. If robbing does start, close all hives and reduce the entrances of any that are weak or are being badly attacked.

During spring, bee colonies require a lot of water for diluting honey being fed to larvae. Most areas in New Zealand have adequate water for bees, but in unusually dry areas you should provide extra. 🐝

Table 6.1 Nectar and pollen sources in winter and early spring (June to September)

**Key to nectar and pollen values**

N>P used by bees more for nectar than for pollen  
P>N used more for pollen than for nectar  
N=P equally valuable for nectar and pollen  
P pollen source only  
S bees may gather surplus honey from this source in favourable conditions

Name	Final height (m)	Nectar and pollen value	Surplus honey production	Comments
<b>TREES</b>				
<i>Acacia baileyana</i> Cootamundra wattle	10	P	—	Fast-growing, easily cultivated from seed. Ornamental, half-hardy.
<i>Banksia integrifolia</i> banksia	6	N	—	Hardy coastal tree that requires free-draining soil. Found in the Auckland region.
<i>Hakea acicularis</i> spiny hakea	3	N=P	—	Shelter plant, growing wild in the Auckland region and Golden Bay.
<i>Prunus persica</i> peach, nectarine	6	P>N	—	
<i>Prunus</i> species ornamental cherry	5	P>N	—	Ornamental, deciduous. Easily established from cuttings or seedlings.
<i>Pseudopanax arboreus</i> five finger	8	N>P	—	Native, common in regenerating bush. Flowers July–September. Found throughout New Zealand up to 750 m.
<i>Salix caprea</i> pussy willow	12	P>N	—	Early source, important for pollen particularly in areas of pollen shortage.
<i>Salix fragilis</i> common willow	15	N=P	—	Flowers September–October, valuable source of nectar and pollen. Common near swamps and waterways, where it may block water flow.
<i>Salix matsudana</i> Peking willow, matsudana willow	5	N=P	S	Suitable for shelter and erosion control. Very fast-growing; grown from cuttings or poles.
<i>Sophora tetraptera</i> , <i>Sophora microphylla</i> kowhai	10–12	N=P	—	Native plants of bush margins and remnants, often cultivated for ornamental value. Copious nectar August–October. May be narcotic to bees in some areas and some seasons.

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# Editorial



The need to “work together” is banded about a lot in the apiculture industry and for good reason. What this means is probably different to everyone, but this month’s issue of *Apiarist’s Advocate* highlights two projects where the beekeeping community can tangibly chip in to help others – which in the longer run could help the industry tremendously.



**The projects focus on two of our biggest risks to hive health, American foulbrood and varroa.**

The ABAtE research at Massey University is using citizen-science in their search for an AFB vaccine. Being able to spray a hive to prevent AFB is surely an attractive concept to all beekeepers, but such an advance does not come easily or quickly.

Heather Hendrickson’s team is spending a lot of time in the lab searching for the ingredients of the AFB vaccine. So, the least beekeepers should be doing is volunteering to submit some soil samples for the project. The scientists will even supply the sample jars and a return courier bag - so no beekeeper can cry poverty.

Meanwhile, down in Ashburton Rae Butler is working on breeding bees with Varroa Sensitive Hygiene. Much like a preventative for AFB, bees with an ability to detect and remove varroa mites from infected cells will be sought after.

To help speed up advances in her program, Butler is looking to partner with commercial beekeepers who would buy her queens and then work with her to monitor the offspring for the VSH-trait.

Butler’s is a commercial breeding program, and her goals for it can benefit the industry greatly.

There are some areas of apiculture where working together is more attainable than others. However, with apiculture research projects struggling for funding, beekeepers should strive to do what they can when they can to support undertakings such as ABAtE and the Bee Smart Breeding program.

Even if nothing else comes from it, you might get to name a page.

**Patrick Dawkins, Editor.**

## Letter to the editor

### WOUNDS TOO DEEP

A great article from Sean Goodwin’s address to ApiNZ Conference, but I feel there are many holes left - the biggest one of all is the reason why so many voted against the commodity levy.

When Apiculture New Zealand was set up it narrowly got the go-ahead by the board members of the NBA, something like four votes to three. It was clear back then that some people had grandiose plans for ApiNZ - what it could achieve and the support it had.

It was clear that the NBA had to change and something needed to be done. It was the membership of the NBA, of about 600 at the time, who voted to change the structure of the NBA not the general beekeeping population.

Well, the people with the grandiose plans got control and proceeded to put these plans into action - leaving behind many who could see the need for change but not grandiose plans.

So, from the very conception of ApiNZ, it was going to split support and now we have at least four, if not more, beekeeping groups up from the two before ApiNZ.

So, as Sean (who, by the way, was in at the conception of ApiNZ) said - we all need to work together.

To do this the players either have to stand aside or let go of the hate and mistrust. I believe that too many of the wounds are far too deep to heal quickly and for the industry to move forward and trust each other again the players have to stand aside, Sean included.

**Regards, Stephen Black**  
**Former Vice chairman of the NBA**

Apiarist's Advocate is brought to you by Patrick & Laura Dawkins, Marlborough beekeepers.

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Booking deadline is the second to last Friday of the month prior to publication and artwork must be supplied by the final Friday of the month.

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