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APIARIST'S ADVOCATE



News, Views & Promotions - for Beekeepers - by Beekeepers



Can We Thrive Together?

ApiNZ release a new strategy and a new plan for a honey levy



Let's Hear From You



Welcome to issue 56 of the eMagazine and month 34 of online content at www.apiaristsadvocate.com. This month's stories are particularly pertinent for the future of New Zealand beekeeping, with the long-debated issue of a honey levy again taking centre stage following the release of the New Zealand Honey Strategy 2024-30 by Apiculture New Zealand.

It has already created some debate, as you will see in some of our coverage this month, and there is sure to be plenty more – which the authors are encouraging as they head towards a consultation process with the apiculture industry. We look forward to being a platform where some of that can play out.

This month's content is very much based around the strategy itself and some of the top office holders in apiculture's stakeholder groups. That's by design, it's only fair they get to present the strategy and be the first to set their position regarding the topics introduced.

Going forward, we welcome feedback on the strategy, a levy and any of the other issues the strategy has brought forward – just like we always have on all our stories. Right from first publishing in August 2019 (soon after the last honey levy was voted down)

Apiarist's Advocate has been fiercely independent of all industry groups. That puts us in a position to offer constructive news, views and promotions, for beekeepers, by beekeepers just as our masthead has promised for the past 56 months.

All that to say, we encourage your educated and thought-through opinions on any and all of the stories we publish. They can be in "letters to the editor" (they tend to be emails these days!) intended for publishing, topics or angles you think we should investigate, have missed, or got right or wrong. Feedback of any kind is always welcome here at *Apiarist's Advocate* and never more so than on issues that effect every beekeeper in New Zealand, such as honey levies and the formation of industry bodies to represent us.

And to leave on something a little more light-hearted – get in touch and send us your best caption for the caption comp on page 21!

ApiNZ's New Zealand Honey Strategy 2024-30 Thriving Together: Futureproofing New Zealand Apiculture can be viewed [here](#).

Patrick Dawkins, editor.

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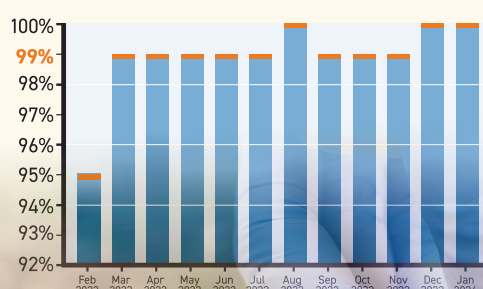
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Honey Levy Back on the Table



“Ambitious”, “bold” and “challenging” was how Apiculture New Zealand’s Honey Strategy 2024-2030 was described by those presenting it on the ground floor of ‘The Beehive’ in Wellington on February 20. The strategy suggests three pillars for success; *Sustainability, Quality-Led* and *Customer Focus*, and to get there a levy on mānuka honey exports and potentially a new industry body will be advanced for further scrutiny.

The beekeepers of New Zealand were resounding in their rejection of a proposed 10c a kilogram levy on honey produced when Apiculture New Zealand (ApiNZ) last officially floated such an idea in 2018-19, with 76% of apiarists with 26 hives or more against the concept. Now discussions on how to formulate a new levy, this time on mānuka honey only and paid by exporters, will take place in 2024, before potentially again going to a beekeeper vote.



“As an industry we have matured and progressed,” ApiNZ chief executive Karin Kos said when presenting the 20 page *Thriving Together: Futureproofing New Zealand Apiculture* strategy to an audience of around 40 industry stakeholders, including MPs, Ministry for Primary Industry (MPI) personal, honey exporters and even a few beekeepers.

“We have a lot to do though. We are still fractured in our voice. It’s frustrating and it holds us back. Equally, the biggest thing for us is we don’t have the funding mechanisms other primary sectors have.”

The strategy document was written following consultation with various sectors of the apiculture industry following \$225,000 of funding through MPI’s Sustainable Food and Fibres Future Fund and industry co investment of \$158,500 from ApiNZ, Honey Industry Trust, Comvita and Mānuka Health. The project was initially scheduled for 14 months, from March 2022 and consultation with beekeepers largely took place that year, while consultations with other industry stakeholders has taken place since.

Among those supporting the strategy are, most notably, MPI and the Unique Mānuka Factor Honey Association UMFHA), whose membership is made up of many mānuka honey exporters, Minister for Agriculture Todd McClay was present at the Strategy announcement.

“It reflects the combination of 18 months of diligent and hard work, but also a collective vision of an industry that is so important to New Zealand’s economy and identity,” the Minister said of the strategy.

He made it clear that the Strategy’s goal of doubling New Zealand’s honey export value, which was about \$400million in 2023, “is an ambitious target that is going to be very challenging to do”.

“Achieving the growth potential of the New Zealand honey industry and overcoming some of the historical challenges faced requires a collective effort and joint support. By standing together, industry and government can forge a strong and sustainable pathway that delivers sustainable benefits to all,” McClay said.

The strategy proposes “legislative changes” to assist in the development of a “Horticulture Export Authority-type model” (this is described in more detail in *What is the Horticulture Export Authority?*, page 12 this issue). This is where mānuka honey exports could face not only a levy, but also stricter export standards.

Running to 20 pages, Apiculture New Zealand’s new strategy for the honey industry is nearly two-years in the making and, at its heart, proposes the need for a levy on mānuka honey exports and a new “empowered” peak industry body.

Therefore, when the Minister labelled UMFHA the "Unique Money Association", his words were equally as fitting as his hasty correction to replace "money" with "mānuka".

"This strategy has a clear focus on mānuka honey," Kos told those at the Strategy launch.

"We are not dismissing the rest of the honeys, but as we know it drives 84% of all industry revenue and 91% of our honey exports. It makes economic sense for us to get that right and consolidate and grow mānuka honey. That will put us in a better position to secure success for the rest of our honeys as well."

The strategy puts a "strong industry voice" forward as an "essential" enabler of the overall strategy, and states that the current voluntary participation model of industry representation provides "no ability for the industry to speak to, or for itself collectively".

"This is a point in time to start afresh and really look at our leadership and governance. We need government support and we need all the industry to work with us. We won't always get it right, but we are encouraged by the support to get it to this stage," Kos says.

However, the strategy was quick to be admonished by fellow industry body New Zealand Beekeeping Inc (NZBI), who were among those leading the pushback against a honey levy in 2018-19. NZBI has labelled ApiNZ's strategy "dead on arrival" and president and Waikato beekeeper Jane Lorimer says it "needs to be taken out to sea and sunk". While the strategy doesn't specifically call for more than the mānuka honey export levy, NZBI

have concerns it could open up the potential for up to four levies on beekeepers.

Of particular concern to NZBI is a proposal in the strategy where the current National Pest Management Plan which covers American foulbrood could be evolved "to cover varroa reporting and mandatory management protocols". It also calls for strengthening of the industry's biosecurity framework, including the introduction of a Government Industry Agreement on biosecurity.

Lorimer says they saw the strategy only a week before it was publicly announced in Wellington and, after almost two years in the making, they would have liked more input in the later stages.

At the announcement ApiNZ chair Nathan Guy was clear in pointing out that the strategy was a first step.

"This strategy is a living document, it is ambitious and we may not have everything right for everyone, but it is certainly a starting point to further the discussion, to work with industry on the future and constructively engage with government," Guy said.

On that note, UMFHA chair Rob Chemaly also addressed those gathered at the country's biggest 'beehive' to stress the importance of the actions that follow the strategy, over and above its ambitions.

"Strategy in my world is about execution of the ambition. There is still a lot to be done to deliver what this document is asking us to do," Chemaly said.

"It aligns very, very well with the purpose of our organisation. That is to protect and enable the sustainable growth of mānuka

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Mānuka Charitable Trust (MCT) chair Pita Tipene also took to the lectern and echoed some of Chemaly's sentiment, stating "the actions are going to be the important part. That is not to take away from the vision and the mission though."

The Trust has been tasked with protecting the term 'mānuka honey' through trademarking and geographic indicators, and has received funding from government and the mānuka honey industry to this point. The Strategy puts "developing a mātauranga Māori mānuka story in partnership with MCT" as a priority action. This, it states, will protect against exporters undermining a collective industry position and it will set a precedent for other indigenous New Zealand honeys to follow.

That is an area where MCT and Tipene, who is also chairman of the Waitangi National Trust, have thrown support.

"Working with the others in this room on this strategy really emphasised what is at the core of Te Tiriti o Waitangi, be it the principles or actual words, it's the relationships between organisations and also personal relationships. Those have gone a long way towards working together and putting this strategy in front of us," Tipene told the gathering.

Identifying an appropriate "legislative route" to introduce a domestic standard for mānuka honey is another of the strategy's proposals, with the current standard set by MPI in 2018 only



ApiNZ chair Nathan Guy presents *The New Zealand Honey Strategy 2024-2030, Thriving Together: Futureproofing New Zealand Apiculture*, at 'The Beehive' in Wellington and labels it a "living" document and a "starting point to further discussion".

applicable to exported honey.

"The boon times have come and I wouldn't say they have gone, because we have set a target of doubling the value of exports by 2030," Guy said.

"There is significant potential, particularly with mānuka, but that is going to require collaboration."

The show of strength from various industry groups in Wellington provided a level of that collaboration. However, funding the ambitions of *Thriving Together: Futureproofing New Zealand Apiculture* begins now with work on a more detailed mānuka honey levy proposal which will extend, or end, depending on how it is received by beekeepers. 🐝

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Industry Leaders Weigh in on Honey Strategy



The New Zealand **Honey Strategy 2024-2030** announced on February 20 touches on many areas of beekeeping and honey selling and is set to influence all in the apiculture industry. We dive deeper into what it could mean to different sectors of apiculture with some of the industry's leaders.



Karin Kos – Apiculture New Zealand (ApiNZ) chief executive

Karin Kos has been chief executive of ApiNZ since its inception in 2016, meaning she has already seen one attempt at a commodity levy fail. "Now is the time to do something" she says and 2024 looks set to be a year where, guided by the Honey Strategy, much of her time will be spent fleshing out the model which a mānuka honey export levy and fresh industry body can operate through.

"We want to be able to go to industry and consult with a strategy, but to also say what the platforms are which might come out of that strategy," Kos says.

"Having a strawman's industry organisation and asking what is the best structure? What is the best funding model? That piece of work needs to happen and that is what we need to go out to our industry with. That still needs some work and needs some independent advice. That is the sort of thing we need to get on and do with some of the funding we will, hopefully, get."

The strategy points to government funding to support set up costs for a new industry body. Ongoing funding would come through a mānuka honey levy.

"It's an export levy, borne by exporters and that is where we see the first funding coming from."

As for other levies, Kos says that is nothing but speculation.

"In the strategy we have some thinking [on wider industry issues], based around the feedback we got from the industry-engagement process, but there is a long way to go yet. We have to get ourselves organised. The priority for this year is to get a proposed structure in place and take it out to engage with the sector."

She calls the Strategy presented "a combination of systemic analysis of the apiculture industry and the engagement we had with the industry in meetings we had around the country" and despite calls from New Zealand Beekeeping Inc (NZBI) for further

discussions and adaptations to the strategy prior to release, that was never part of the plan.

"The process was always going to be to put together a document using the evidence gathered. The suggestion of a second round of consultation, once the document was written, was never part of the process. We do have a plan, it may not be perfect, but we have some urgency to get going and get something done. That is what the industry needs and wants. That is the next step. We will flesh out some of the detail around what's the structure, what's the enabling legislation we might need to gain funding to deliver that, then go out through our national industry summit and a roadshow, to our members and industry, to discuss that."

As for other issues introduced in the strategy, such as a Government Industry Agreement (GIA) on biosecurity, introducing varroa management into a National Pest Management Plan, or a decarbonisation plan for apiculture, they are not the immediate priority Kos reinforces.

"We will be directed by getting organisational models and funding structures sorted first. We don't want to go too far down the track until that is sorted because it will direct the thinking on the other stuff. Realistically – despite being priorities in the strategy – they are still some time off."



Nathan Guy – ApiNZ independent chair

While failed honey levies might be in apiculture's past, Nathan Guy's view is firmly forward-facing and the Honey Strategy is a pivotal point on the road he believes the industry needs to travel.

"This is a living document. We may not have everything right for everyone in the industry, but in my view it is a bloody good

starting point to create the discussions we need to have. Now is not the time to look over shoulders, now is the time to look forward," Guy says.

Having been in his role with ApiNZ for 18 months now, he is "pretty confident" they can get the money required to advance their plans for a mandated industry body. Discussions with MPI, UMFHA, and the Mānuka Charitable Trust as to funding have already begun.

"Any legislative change will take two to three years and is a medium-term proposition" Guy points out.

"We realise it is tough times for beekeepers and that is why some have jumped on some of the levy options in the strategy and wrongly believe they are going to have to cough up immediately and that is not the case at all. We are mindful it is very tough times and the cost on beekeepers right through the supply chain is difficult. The first approach is to work with those three groups and start on the low hanging fruit, build momentum, build confidence in the strategy, and then go hard to implement it."

As for NZBI's concerns, he is not willing to take them seriously and says he is disappointed in their "emotive language".

"We discussed these issues with NZ Beekeeping Inc. That this was export levy focused, that we are not looking to levy or tax beekeepers. I was very clear on all of that with our discussions."

There is a strong need for a new form of revenue to implement the industry-good proposals set out in the strategy and beekeepers should embrace the changes, Guy believes.

"If you don't like change, you are going to like irrelevance even less. That is something the honey industry should be very aware of."



Jane Lorimer – New Zealand Beekeeping Inc president

NZBI were immediately unimpressed with the strategy and president Jane Lorimer, herself an owner-beekeeper of Hillcrest Apiaries in the Waikato, is concerned there was not more consultation with beekeeping groups.

"They conducted an initial roadshow fairly well and got reasonable feedback from beekeepers, although I do understand

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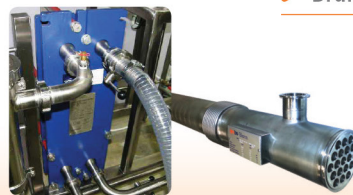


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that differed from area to area. From then we never saw anything until we saw their draft document on February 12," Lorimer says.

That was eight days before the official Strategy release.

"The only ones I know who had input as an industry group were UMFHA. That is primarily because, following our discussions with them, they were keen to have an export levy to increase the exports of mānuka. They either didn't know or didn't care about the rest of the document."

While only a "Horticulture Export Authority-type" (HEA) levy is specifically mentioned in the strategy document, Lorimer says they are concerned there could be at least four "other" levies on the table based off what is outlined.

"This document is such that we think it should be sunk and start again and based off the information they got from the initial consultation round, so we can find out what was discussed at each of those meetings to get an overall feel for what people thought to be the perceived issues for each sector of the industry. We then need to sit around the table as a full industry group to discuss whether we agree that those are the issues and where we should go to address them," Lorimer says.

"There is no detail, no costings, no timeline to do things. So, at the moment we just see it as a wish list. Until you get detail around it and more input from beekeepers it is just wishful."

Regarding a mānuka honey export levy, Lorimer believes it will ultimately be borne by the honey producers.

"An export levy is still going to affect beekeepers. Exporters will just take that off their price offered to beekeepers for their product."

NZBI are not opposed to an export levy in principle, but they want to be involved in shaping any proposal and Lorimer says, until there is more detail, they can't say whether they will support an "HEA-type levy".

"It sounds like it still operates under something similar to a commodity levy, so there would still have to be industry buy-in to the whole thing before it is approved and could go ahead. It would depend on how the whole proposal is put forward.

"What is in the document is so big it could put beekeepers out of business if they have to pay four or five levies. If it had just been a proposal to get the industry moving in a positive direction again by putting an export levy in place, we might have been in favour of an export levy, depending on the structure. But, should it be on mānuka only? I don't think so. It should also be looking to move our other honeys."

What's the future of the Honey Strategy and an export levy on mānuka honey in Lorimer's eyes? She's already on the record saying the Strategy "needs to be taken out to sea and sunk". Whether that happens or not, NZBI want to be more closely involved in any plans going forward.

"Whether it will get as far as a vote I am not sure, because we have pushed for – and I think MPI are in agreement – that we need a round-table discussion to determine whether this strategy goes ahead as is, whether it is thrown out, or changed again."



Tony Wright – Unique Mānuka Factor Honey Association (UMFHA) chief executive, and ApiNZ board member for market sector.

While beekeeper consultation might have formed much of the early thinking on the Honey Strategy, discussions between ApiNZ, UMFHA and associated honey exporters have given the strategy much of its final shape. Tony Wright has therefore been heavily involved.

From the perspective of UMFHA – who hold the heavy majority of New Zealand's mānuka honey exporters among their levy-paying membership – the Honey Strategy and a HEA-type model for exporters has two key benefits. Firstly, it outlines an approach for "formalising what we have been doing voluntarily through UMF for the last 25-odd years", Wright says. Secondly, it means all mānuka honey exporters would be required to fund industry-good work, much of which has been conducted through UMFHA's voluntary membership up until now.

"We really love the idea that, within the strategy, there is a way to formalise how you would have a standards regime to ensure that product going in to the markets is meeting consistent standards for quality. That is the basis for why UMF™ was started in the first place. It is a standards organisation at heart," Wright says.

UMFHA members pay a levy per unit of mānuka honey sold, which gives them the right to display the UMF brand and rating on their honey, should they meet the association's standards.

"We think all product leaving New Zealand should be of the same standard and quality so the consumer experience of mānuka honey in the markets shouldn't be left up to the brands themselves. There should be a common standard across the industry."

While they have got close to achieving that with UMF, the voluntary model "leaves some gaps" which MPI and New Zealand Food Safety's standards don't meet and thus the honey industry should take on.

"I don't think anyone has a concern about the safety of product leaving New Zealand. It is more about what the consumer experience is and, are we protecting our reputation overseas?" Wright says.

In practicality that means compositional standards, labelling standards, guidelines about how the New Zealand honey story is expressed on packaging and how the connection back to culture is told while recognising mānuka as a taonga species of Māori, Wright points out.

"There is a whole bunch of things we need to tidy up and get some consistency around ... We don't want anyone letting us down from a reputational point of view."

And as for the money...

"At the moment the UMF model is those that licence the use of the UMF trademark pay a levy on the basis of the product they sell. That is a model that has been shown to work and if we could make that an enforceable model across all of the product being exported, not just the product going out with the UMF mark on it, but if all mānuka honey was contributing into a levy type of arrangement, similar to UMF, then happy days. Everyone would be paying their fair share."

"We are putting money into improving the category, but only those who are members of the UMFHA are paying their fair share towards that work. Yet, the broader industry is getting benefit for it. We think it is time that got cleaned up."

A wider levy could end up lightening the financial load on UMFHA members, but Wright says it is far too early to speculate on whether this would be the case. The same goes for the role of the UMF brand in any export standard, but Wright says use of it is "not a deal breaker" in any arrangement.

"A good discussion to come in the future is, maybe everyone should be lining up behind a common visual standard which consumers recognise. I don't think it needs to be part of the consideration matrix just now though."

While the levy proposed would be paid by mānuka honey exporters, beekeepers have already expressed concern this cost would be handed on to honey producers. However, Wright says that may not necessarily be the case as those "who are already in the UMF supply chain" have long been subject to a levy of sorts, through UMFHA, on their honey's road to market. For those outside the UMF supply model, it could be different, but Wright says, "to be frank, they have been getting a free ride for a long time anyway".

Having a foot in both the ApiNZ and UMFHA camp Wright will continue to be heavily involved in progressing the strategy. He offers a succinct view of the plan of attack as he sees it.

"Implementing enforceable standards and an enforceable levy are absolute no-brainers which we need to be executing with priority in the short term. Then, once we have got that sorted, we can turn our attention to some of the other things, such as what our approach should be to broader research and development in the production centre, bee health and biosecurity. There are ideas in the strategy about how to do some of that stuff, but we are a long way from firming that up. There has been some concern about all of that turning to extra costs, but that is a bit premature. We don't actually know what any of that needs to look like yet. If we can focus on getting the fundamentals right from the export side of things, then when all of that is ticking along we will have the financial engine-room to enable the other stuff to be looked at with a bit more rigor." 🐝

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What is the Horticulture Export Authority?



The Honey Industry Strategy released in February calls for the implementation of a model similar to that of the Horticulture Export Authority (HEA) to capture a mānuka honey export levy. We get an overview of what the HEA is and who is included.

One could dine rather well on the array of horticultural products which fall into the existing HEA. Avocados, summerfruits (apricots, nectarines, cherries, peaches and plums), blackcurrants, boysenberries, buttercup squash, kiwifruit destined for Australia, walnuts and even truffles are among the 10 product groups included.

The Honey Strategy puts mānuka honey exports, the cash cow of New Zealand apiculture, as suited to the HEA-type model. Whether that means honey joins that long list of products, or looks to replicate the structure, remains to be seen.

The HEA was established as a statutory authority under the New Zealand Horticulture Export Authority Act 1987. It operates as a body corporate reporting to the Ministry for Primary Industries and

each of the industry product groups have undergone a vote to join the HEA.


Its framework is based on two key tools, an Export Marketing Strategy (EMS) and on licensing of exporters. Complying with each is required to export the products operating under the HEA structure.

Each product group's EMS sets out the rules for exporting and includes things like export grade standards, and labelling and packaging requirements. Licensing includes levies on exporters based on value of product sent offshore.

Its work is funded entirely by the various industry group members and by two streams, levies paid by those 10 product groups, plus the fees on the export licence holders themselves. In 2021 the HEA claimed to have collected only 97c for every \$1000 of product sent offshore.

The groups use the HEA system for a variety of reasons that include the ability:

- to apply minimum grade standards across the industry
- to apply programmes to reduce risk to market access and undertake activities that benefit the development of the industry
- to capture industry information that can assist with better industry planning and decision making
- to provide an environment that encourages exporting co-operation and collaboration.

The HEA is governed by a board of five and currently headed by – perhaps appropriately named – Stephanie Honey, a trade policy consultant. It is based in Wellington and has one full time staff member, chief executive Simon Hegarty, and a part-time administrator. 

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Mānuka Health Ads Draw Ire



A social media advertising campaign from major mānuka honey producer, packer and exporter Mānuka Health which unfavourably compares “regular” honey to mānuka honey has provoked the ire of several other honey sellers who are questioning the legality of some of the claims.

Details of the extent of Mānuka Health's advertising campaign could not be confirmed, with the honey exporter not answering questions regarding the advertisements which were, at a minimum, hosted on both Facebook and Instagram in February. They included a slide-show of images, one with honey falling from a spoon and titled “regular honey” and another with honey holding to a spoon and a glowing “mānuka honey” alongside. The words *superfood*, *raw* and *unpasteurized*, *rare New Zealand origin* and *uniquely potent* accompanied the mānuka slide, whereas the terms *mass produced*, *processed*, *sweetener* and *basic* accompanied the “regular” honey falling from the spoon.



The Manuka Health ads appeared, at a minimum, as sponsored posts on both Facebook and Instagram.

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"What is concerning about this ad are the words used to describe and infer the non-mānuka honey is inferior quality, adulterated and less nutritious than mānuka honey, then go on to make a number of health claims which fall outside the New Zealand Food Safety Act label claims for New Zealand honey," says John Smart, general manager sales for Airborne Honey.

He says the ad shows a lack of knowledge on Mānuka Health's part in regard to the composition of honey.

"It is possible to make the same batch of honey display high or low viscosity characteristics depending on the temperature, including multi-floral or mono-floral mānuka, and therefore misleading. The challenge to Mānuka Health is to submit the batches of honey in the ad to independent analysis."

The social-media ads did not go unnoticed by another Canterbury honey packer, and producer. Hantz Honey director Carolyn McMahon says a better definition of what was meant by "regular honey" was required.

"Mānuka Health are trying to up peoples' consumption of mānuka honey versus non-mānuka honey. That's fine, but they shouldn't imply things that simply are not true regarding New Zealand honey, such as that sweetener is added, which is totally illegal in New Zealand," McMahon says.

Honey adulteration by adding artificial sweeteners, most commonly rice, corn or sugar cane syrups, is a huge problem the world-over for beekeepers as it devalues honey. The Honey Authenticity Network estimates a third of all honey in the world is adulterated.



"The challenge to Mānuka Health is to submit the batches of honey in the ad to independent analysis," says Airborne Honey's John Smart as he throws down the gauntlet.

The Mānuka Health promotions do not elaborate on the term 'sweetener' and what is meant by it in the context of their advertisements.

"In my opinion this is a matter for the Ministry for Primary Industries and Apiculture New Zealand, as the guardians of the honey industry and the primary products produced in New Zealand," Smart says, adding, "individuals who view the ad can also file a complaint via Facebook or Instagram".

That might be difficult to achieve though, with the advertisement appearing to have only been published as a temporary paid post and potentially no-longer active. 🐝



Chalkbrood Explained



With anecdotes of more chalkbrood presenting in beehives this season, we check in with leading bee scientist Dr Mark Goodwin to find out what causes chalkbrood infections, what beekeepers can do to prevent the disease and, should it strike, what can be done to help a colony recover.

New Zealand's Journal of Agriculture published an article offering beekeepers advice on managing chalkbrood infections in 1957, however Goodwin says the fungal disease of honey bee brood first displayed widely in the 1990s.

"It was a major problem for a couple of years," Goodwin says.

"When it first came into New Zealand for about two years almost every hive I looked in, anywhere in New Zealand, had quite bad chalkbrood. Three or five years after that, it was very rare to see it and now it is usually a symptom of something going wrong with the colony, rather than being there all the time."

When varroa entered the country around the year 2000 the parasite killed off many of the feral bee populations, which in turn greatly assisted in reducing chalkbrood infections. The 'British Black Bee', which most feral colonies were descended from, were particularly susceptible to chalkbrood infection. Once they were largely removed from the breeding population, and queen breeding programs advanced genetics which were more inclined to resist chalkbrood, the disease's prevalence reduced greatly.

"I think the combination of varroa, plus beekeepers being careful what they breed from, took us from almost every hive having chalkbrood, to it becoming reasonably rare," Goodwin says.

That is the clinical signs of chalkbrood being rare though, as the former long-time Plant and Food Research scientist points out that most colonies probably have the fungus (*Ascosphaera apis*) present to some level.

"There is probably a whole lot more chalkbrood these days than what we know about, but most colonies have pretty good hygienic behavior and as soon as the larvae is looking sick, they will remove it."

Therefore, preventing chalkbrood from significantly impacting hive health and productivity is a matter of maintaining colony nutrition, health and strength, and making sure climatic conditions are not supportive of the fungal disease. Therefore, sunny, well-ventilated and dry hive sites are better than shaded and damp.

"If a colony has good hygienic behavior, and lots of nurse bees, they can remove infected brood very

quickly.
It's
only

Dr Mark Goodwin says when chalkbrood first started presenting in New Zealand in the 1990s it was a significant problem, but that is no longer the case.

when something's going wrong that chalkbrood usually presents, such as conditions for foraging are really bad, or because of really cold temperatures and they are not able to keep the brood up to the temperatures they would like to," Goodwin explains.

Chalkbrood displays as hard, shrunken chalk-like mummies in the brood and in and around the entrance to the hive. The mummies will be white to grey-black in colour. Infected hives also show a scattered brood pattern or appearance. The cell caps of dead larvae may contain small holes, appear slightly flattened or have been chewed away by the honey bees. Worker bees will usually uncapped the cells of dead larvae, making mummies clearly visible, before sometimes removing the mummified larvae and depositing them on the hive floor or at the entrance to the hive. In heavily infected colonies the worker bees will not be able to uncapped all of the affected cells. Mummies still in uncapped cells may fall from the comb when it is inspected.

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Once infected, larva and fungus swells until it fills the cell it is contained in, then after a few days the white fungal growth hardens, adopting the cell's hexagon shape, to form a white, chalk-like 'mummy' which gives the disease its name. The mummified larva will transition from a white to grey-black colour, which shows the completion of the fungal life cycle and the creation of new spores capable of infecting a new larval host. Therefore, it is only when the black or grey larval 'mummies' are present in a hive that the disease is capable of spreading.

Drift of bees between colonies, or transfer of infected equipment between hives aids the spread. Therefore, cleaning off baseboards of infected larvae and culling diseased frames is an important preventative.

"It's probably a good idea to cull combs that don't look healthy in any case," Goodwin points out.

"Also, anything you can do to boost the colony's strength, such as adding shakes of healthy bees, will increase the chance of tidying the infection up."

Most of the time there is one other management practice which Goodwin recommends to be undertaken to clear up chalkbrood infections, which should be used in conjunction with ensuring hive health, nutrition and good siting of hives.

"Usually, most beekeepers can get chalkbrood to disappear again by requeening the hive. That is on the condition that they check where the queens are coming from, and I'm assuming most queen producers are not going to graft from a colony that looks sick in any way. Then that should make chalkbrood go away." 🐝



Chalkbrood mummies removed from a brood frame. The black and grey mummies contain the fungal spores that can be spread to cause new infections.



Chalkbrood presenting on a brood frame.



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The Foster Method™: A Game-Changer in Beekeeping's War Against AFB

New Zealand beekeepers have had the benefit of using the Foster Method™ to assist in identifying American Foulbrood (AFB) in beehives since 2021, when dnature diagnostics and research released the ingenious swab eDNA test to the industry. Now, following **publishing** of dnature's work in the Journal of Apicultural Research, the international scientific community has caught up with what Kiwi beekeepers have learned over the last three years – the Foster Method™ is not only a quick and easy test for AFB, but accurate and with the potential to save beekeepers much strife and money.

While dnature technical director John Mackay is proud to have the ingenuity and research of their lab peer-reviewed, published and therefore accepted by the scientific community, it's seeing the Foster Method™ in practice and reaping tangible benefits to beekeepers which he says brings the most satisfaction.

"We have had numerous instances of beekeepers using the Foster Method™ to identify AFB-infected honeybee colonies

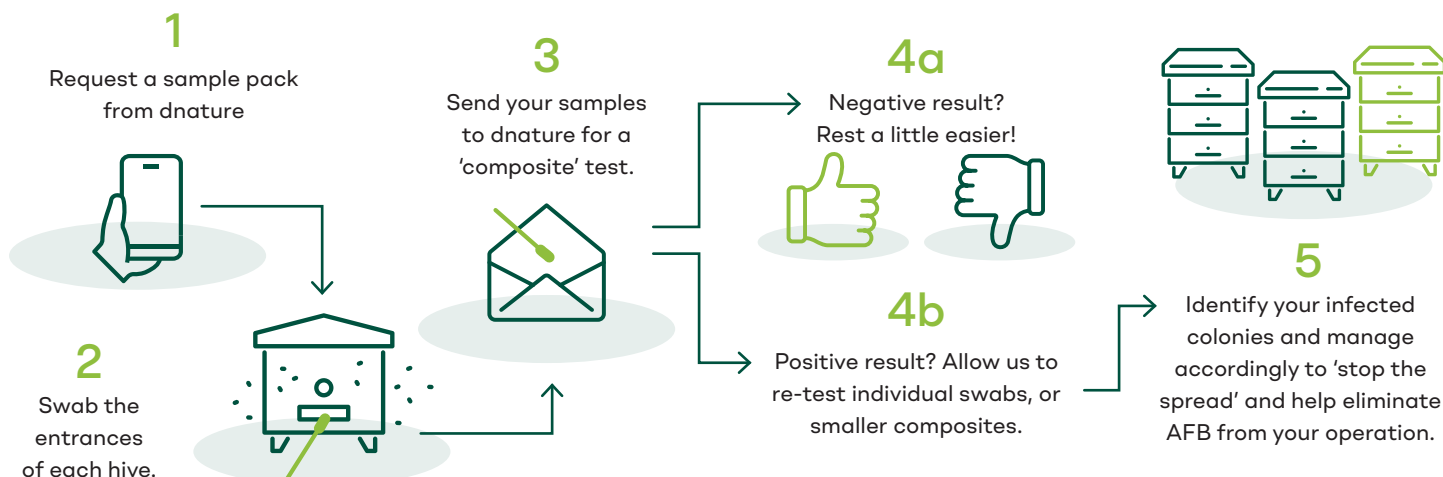
before clinical symptoms present themselves." Mackay says.

"This allows them to focus attention on individual hives or apiaries, and remove what would otherwise be a super-spreader from their operations."

A recent example was a concerned beekeeper who conducted two inspections on an apiary a week apart and was not able to identify any infected colonies, but at the completion of their second visit they took a couple

of minutes to run Foster Method™ swabs (provided by dnature) along the entrance of each hive. They sent them off to the lab and just a few days later were contacted and informed that the composite sample had high levels of AFB detected. From there, the decision was made to conduct further tests on individual hive samples and one hive only was found to be the culprit. The beekeeper revisited the hive out of curiosity and, sure enough, visual

Concerned about AFB in your hives? Want to prevent more bees and equipment from becoming infected?...



*The whole process can take less than a week and each hive swab sample just a matter of seconds!

symptoms had begun to present.

"With the knowledge provided by the Foster Method™, this hive – which otherwise could have caused widespread infection to not only their own beekeeping operation, but neighbouring beehives – was destroyed," Mackay points out.

So, should more beekeepers be embracing such a quick, easy – and now widely-accepted accurate – method of detecting the scourge that is AFB? Mackay is not in a hurry to tell beekeepers how to do their job, but the Foster Method certainly has its uses he says.

"It depends on the beekeeper's circumstances. If they suspect they have more AFB in their hives, this method is excellent at detecting it without occupying a lot of beekeeper-time. If they want to put their mind at ease when releasing hives from quarantine, then whole apiary swabs are again excellent, and not at all costly. Also, when buying beehives and/or beekeeping equipment and wanting to ensure AFB levels are low, I think the Foster Method is a no-

brainer and could save serious costs and heartache in the future."

Any beekeepers wanting to explore use of the method should call dnature's lab and discuss the best 'plan of attack' Mackay says, that way they can map out what needs testing, likely costs, and any further action required following either positive or negative test results.

While the genesis of the Foster Method™ (which is named after Tairāwhiti beekeeper Barry Foster who was instrumental in its development) came before Covid-19 hit the world, the pandemic made the use of swab testing more common, taking what was initially a "left-field" idea to swab beehives and make it more understandable.

"From a beekeeper's perspective, there is nothing complicated about the process, and test results can be turned around in a couple of days. The best way to start is by picking up the phone, or emailing, to discuss whether it is worth us sending out a test pack of swabs. There's no obligation, but any beekeeper wanting

help identifying AFB in their hives, or equipment – whether that's one hive or tens of thousands – should probably get in touch with us to at least discuss what the Foster Method™ can offer. We can then determine if, and how, we can help prevent an AFB problem from getting worse, and eliminate it altogether," Mackay says.

dnature can be contacted via phone: 0800 362 887 or email info@dnature.co.nz

The full published article on the Foster Method can be viewed online [here](#). ■



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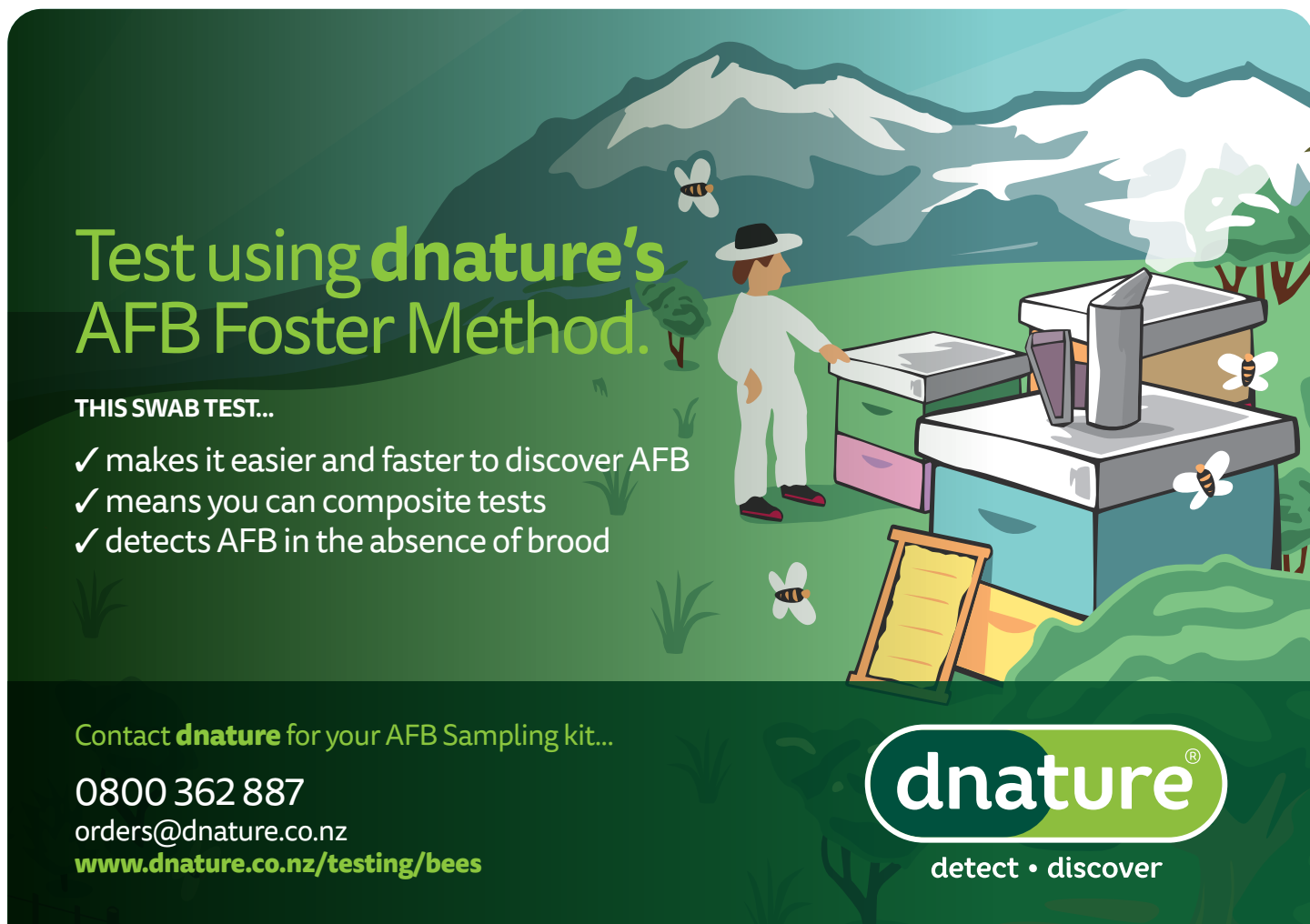
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Rotorua Honey Bee Club: “Every Club Needs It’s Members, but a Club Without Volunteers is Nothing”



This month, Maggie James chats with the Rotorua Honey Bee Club (RHBC), which has a major emphasis on mentoring, all aspects of bee education, a swarm hotline, and a well organised system to supply honey bee colonies to new members at minimal cost. The hardworking innovative committee keen on community involvement is supported with input from well-known beekeepers.

BY MAGGIE JAMES

“Every club needs it’s members, but a club without volunteers is nothing,” RHBC chair Pauline Spear says.

Established in 2011, and averaging 125 members a year – many of whom make a two-hour round-trip to meetings – the Rotorua based group has a solid foundation of both members and volunteers.

The apiary site, leased off the Rotorua Lakes Council is located at Ngongotaha, holding two hives. These hives are purely for teaching purposes – spring buildup, swarm control, queen production and wintering down. Therefore, honey production is minimal. The apiary is surrounded by many lifestyle blocks, and consequently good relations with neighbours is paramount. Other meetings and workshops are held in the Ngongotaha Hall.

SWARM COLLECTION

In spring swarm collection plays a big part of club activities, and they have developed an inventive method for capturing swarmed colonies.

“We are a high swarm area, and we have a Club swarm line. The Lakes District Council and InfraCore (the local reserves and parks



The Club’s swarm-bucket design technique in operation. If a new Club member at Rotorua Honey Bee Club is supplied a swarm, they are mentored for at least nine to 12 months by an existing Club member.

maintenance group), regularly notify our hotline,” Spear explains.

The club hosts a swarm bin workshop where members get to build and keep their swarm bins, in exchange for koha.

The bins are two 20L plastic buckets joined together with a cut out wooden ring. The bucket bases are cut out leaving a rim, then a piece of mesh. A propolis mat works well. The wooden ring is placed between both buckets and screwed to hold in place.

The top bucket has a solid bucket lid. The bottom bucket lid is cut out and replaced with a removable mesh lid, again with a second wood ring screwed on to hold it in place. The mesh divider and mesh bottom provide adequate ventilation for a swarm. To avoid overheating with the volume of bees, the bin must not be left in sunlight with bees in, or whilst waiting for the remainder to go in. This concept is ideal for smaller catches.

When the swarm is captured in the top compartment, the complete plastic bin is placed, and the unit gently laid on its side. This holds the queen pheromone within the top bucket, with any remaining swarm marching into the open-end bottom bucket.



The Rotorua Honey Bee Club nuc box used for display and advertising purposes.

This method also gives a very good idea as to whether the queen is captured in the top bucket, as the bees will be fanning in the open end. Once the colony is all in, the mesh lid can go on the bottom bucket. Then keeping the bin level, the swarm is transported to its new site and rehoused as soon as possible.

Whenever feasible, the new member to receive the swarm accompanies the senior club member in capture of their swarm.



The Rotorua club's apiary site in Ngongotaha is used for teaching purposes, with some club members making a two hour round trip to attend meetings.

When the swarm is housed at its new site, an immediate treatment of Bayvarol is installed. The colony has a health and food store check a week later. A committee member then mentors the new beekeeper for the first nine to 12 months.

The new beekeeper must immediately register themselves on the apiary register. A prerequisite for swarm receipt is a newly built hive on hand, with frames of mainly undrawn foundation.

In 2021 the Apiculture New Zealand (ApiNZ) swarm video competition was won by RHBC, and can be viewed on the ApiNZ website.

HONEY COMPETITION


Annually in May, the RHBC honey competition takes place. Main honey varietals are urban multifloral and, further out, some members produce their own bush blend. Due to being in a high tutin area, entry prerequisite for honey harvested after 31 December is a tutin test.

This competition is judged by club member Fiona O'Brien. Fiona and husband Jeremy have been commercial beekeepers 30 and 45 years respectively; based in the Northern King Country.

Fiona was on the NBA executive briefly, served a few years as editor of *The New Zealand Beekeeper Journal*, plus a long stint on the Bee Products Standards Council. The couple have previously undertaken AP2 inspecting for the AFB PMP and are active members of the Southern North Island Beekeeping Group.

"We love being involved with a great bunch of people at the RHBC. They are a very progressive group. We tag along, so to

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speak," Fiona O'Brien remarks.

Winners in the Club honey competition are encouraged to enter the National Honey Competition, and on a number of occasions individual members have been successful in winning various categories. Twice RHBC have scooped the Club Honey category.

"I have enjoyed achieving lots of awards in the New Zealand National Honey Competition over the years, due in most part to the amazing foraging opportunities of my bees. The human had to do a fair bit too!" RHBC member Kim Poynter says.

"I started as a hobbyist, becoming semi-commercial for a few years and have now returned to being a hobbyist and passing the mantle to others to continue the good work of educating and supporting members of the Rotorua Honey Bee Club."

Poynter was a founding member of RHBC. A member of the Waikato Branch of the National Beekeepers Association (NBA), and in 2014 was seconded onto the NBA Interim Working Group looking at options for unification of the industry. Following this she was a member of the interim ApiNZ board.

At the same time Poynter was appointed to the AFB PMP board, representing non-commercial beekeepers, for five years. The thoroughly busy Poynter was also on the initial ApiNZ conference organising committee for four years.

GETTING OUT THERE

The RHBC routinely volunteers at ApiNZ, Rotorua based, conferences – dealing with ticket entries, assisting the honey judges, plus receiving postal and couriered honey entries.

Other RHBC community involvement includes talks in schools and working in closely with the L3 apiculture course. Senior club members visit Toi Ohomai Institute of Technology, Rotorua branch, speaking with students at the beginning and the end of the course. Educational stands are manned at both the local Palmers Garden Centre during Bee Awareness Month and at the biennial Rotorua Festival of Gardens.

"The more you are out there, the easier it is for people to approach you with queries or joining the club," Spear says.

"In the North Island, Rotorua is located centrally. Some of our members are from Taupo, Tauranga and Bay of Plenty; making a two hour round trip to meetings. Because of this distance some miss our monthly meeting, and to help cater for this the details of every meeting are included in our monthly electronic newsletter."



Rotorua Honey Bee Club chair Pauline Spear makes a visit to a local school to educate kids about beekeeping. "The more you are out there, the easier it is for people to approach you with queries or joining the Club."

A broad range of club activities can be viewed on the Club Photo tab of the club website, and the RHBC Facebook page.

ALERT TO AFB

"We have a good relationship with our local AP1, Dwayne Hill. He recently gave a good talk, specifically for our club, and members were reluctant to let him go," Spear says.

Recently the club were notified of AFB within 2km of the club site and immediately sent an email to all members, encouraging increased vigilance with hive checks. All new members are encouraged to obtain their DECA within the first 1-3 years.

Annually in spring the club runs an "Introduction to Beekeeping" course, consisting of two theory days, followed by a practical session in the hives. Approximately 18 participants are tutored by long term senior Club members.

"We are very big on promoting local support of the club, and an education to get members to do the correct and safe beekeeping procedures," Spear says.

As with several beekeeping clubs interviewed by this writer, it is refreshing to see not only hobbyist members, but those from different political persuasions in the beekeeping sector combining their skills at grass roots level, ensuring not only succession plans in their club, but innovative and progressive management, with a passion for beekeeping.

Any enquiries regarding this article can be directed to Sharron Pope, Secretary rotoruahoneybeeclub@gmail.com 🐝

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Caption Comp!



There's a bit going on in this photo captured by Jody Mitchell of Kaimai Range Honey in the Bay of Plenty of her husband Ralph and submitted to us. So, send in your best caption ideas to editor@apiadvocate.co.nz and the winner, as chosen by the editor, will win a two-dose pack of Formic Pro and a Pyramid Apiaries mated queen bee.

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A Pollen Puzzle



Opening up a bee hive to see the variety of different pollens collected is something all beekeepers experience at certain times of the year. However, what drives these diverse pollen foraging activities remains a 'puzzle' to science, explains science writer Dave Black.

BY DAVE BLACK

There are many things we don't fully understand about honey bee foraging, but here is one puzzle most people assume has already been worked out. We know that honey bees are particularly good at returning to, and recruiting nestmates to, abundant floral sources of pollen and nectar. We call this 'patch fidelity'. Honey bees are also known for their 'floral constancy', that is, once they learn a rewarding flower the tendency is to keep visiting that type, even when other flowers might prove a better prize.

ISN'T ENOUGH, ENOUGH?

Viewed from a nutritional perspective patch fidelity and floral constancy might actually be counter-productive. For bees harvesting nectar to an extent one flower is much like another, for honey bees it's essentially just 'sweet' water. That's not the case for the bees collecting pollen. There are large differences in the nutritional composition across the many varieties of pollen available on any occasion. From their harvest, the right recipe for half-a-dozen or so amino acids and several minerals and fatty acids from pollens is essential to 'bake' a balanced diet for their nestmates. If the bees, between them, can collect and store enough of all the different types of pollen around them, then surely they will have enough of what they need to prepare a healthy meal?

There is another observation. If the bees are randomly 'sampling' all the pollen sources that surround them then, while some might be fiddly or unwanted for some reason, what they collect should mirror the proportions of what we can find in the landscape surrounding the hive? Plenty of studies have shown that's not

the case. When I open a hive, look at the pollen cells, and congratulate my bees on the expansive variety of pollen colours on show it's quite encouraging, but it isn't happening by chance, and they aren't just collecting what's out there. They don't just collect a little bit of everything.

So far, there has been no indication from scientific research that bees choose pollen on the basis of its nutritional value. It has been shown that they can train to detect particular amino acids (in the laboratory) but these foragers are not consuming the pollen, they don't appear to know what its nutritional value is, and it's not obvious how they could know what is needed by the colony even if they did. Honey bees are not like other bees; how does the 'shopper' know what the cook needs?

NUTRIENT BALANCING

In both natural and artificial situations, where monotonous diets occur, bees find a way to supplement their diet with other pollens, and it appears that they actively compensate by collecting the 'right' pollen, not just any old pollen. If the crop lacks the particular amino acids needed they go and collect pollen that has the missing compounds, it's called a 'compensatory behavioural shift', which leads to 'nutrient balancing'. For example, pollen analysis suggests bees restricted to foraging for kiwifruit pollen could face a shortage of lipids, and of the amino acid isoleucine. This constituent has also been shown to be missing for foragers on blueberries. These nutrients, if the hive's store is exhausted, has to come from plants away from the crops.

One test of this idea¹ prepared three pollen substitute diets for colonies to choose from. One, lacking a particular essential amino acid (EAA), was fed exclusively at the outset for a week. Another diet was similar, but still lacked the same EAA, but the other was 'complimentary' – it contained the missing EAA. The bees had the choice to pick them all, favour the 'new' ones to diversify their diet, or if they knew there was an EAA missing, they could prefer the food that contained the missing EAA. It turned out that while they collected some of all the diets, they collected much more of the complimentary diet that rebalanced their nutritional requirement.

That's the puzzle. While honey bees manage their dietary requirements somewhat passively with a 'little of everything' strategy, they also actively compensate for missing ingredients by changing what they are foraging for. How? In 1998 the suggestion was that the ability of nurse bees to feed foraging bees could be acting to regulate pollen quantity, but the question of regulating *quality* did not arise². To work out how they might be doing that we have to look at research from other insects, because for most of the last 20 years honey bee research has been concerned with things other than nutrition.



How do honey bees know what pollen to collect for optimal performance and why do they often collect such a wide variety? Science still doesn't have a resounding answer.



Choices, choices ... there have been several theories put forward by scientists to determine how field bees choose what flowers to collect pollen from, but none are conclusive.

NEW IDEAS

Two other insects are popular candidates as study animals, locusts, and drosophila flies. For both of these several studies^{3,4}, suggest that the amino acids circulating in the haemolymph (their 'blood' supply) modify the sensitivity of the taste receptors in their mouthparts, increasing their preference for the amino acids they were missing, and reducing their appetite for the ones that were present. It doesn't just happen with amino acids, but with other nutritional compounds too, and similar mechanisms had been suggested in some bumble bee research⁵. In 2019 a study published in *Nature* identified the amino acid receptors in the mouthparts of honey bees⁶. These were already known in *Drosophila* so they compared the genomes, identified the most likely candidate, worked out where the genes were being expressed, and confirmed by measuring electrical signals from the neurons that the receptor responded to different amino acids.

In the case of honey bees, foraging bees are older workers so their need for protein (made from amino acids) is less than a growing bee, but it's not negligible. Foragers have quite low levels of the enzymes needed to digest pollen, but still need some proteins to repair tissues, so they rely on hive bees to feed them. Twenty-five percent of the worker jelly the nurse bees produce, using amino acids in the pollen the foragers collect, is fed back to foragers⁷, so potentially this allows some 'feedback' about the colony's nutritional status. While stored pollen enables some 'buffering' of EAAs, eventually the foraging force will be affected by a deficiency and that (if the theory is right) will bias them to preferably forage for pollen containing more of the missing EAA.

All we need now is someone to try and disprove it. And figure out how amino acids interact with the fatty acids that coat pollen grains.

Dave Black is a commercial-beekeeper-turned-hobbyist, now working in the kiwifruit industry. He is a regular science writer providing commentary on "what the books don't tell you", via his Substack Beyond Bee Books, to which you can subscribe [here](#). 🐝

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A Beekeeping Horror Story...



This month's look *Inside Pyramid Apiaries* in Marlborough takes a satirical turn to the dark side writes owner-beekeeper Patrick Dawkins.

BY PATRICK DAWKINS

The beekeeper's day started about as well as they can, up before dawn he wiped the sleep from his eyes while chowing down his toast, sweetened with that literal nectar of nature – honey – and sided by a hot cup of 'Joe'. Six slices of honey toast today. One must support the beekeeper...

Fuelled for the day's activity of escaping as many honey supers as can be borne before the bees get too robbly, or the beekeeper's trusty flat-deck steed is depleted of 'stickey' boxes to under-super with, he heads to the shed to retrieve that ute. 'Thanks yesterday me' he mumbles to himself as he opens the door to the already-set-for-action vehicle, before turning the key and

heading for the bush. Sun peaking over the hills and through his passenger window as the edifying tones of Radio New Zealand's 'Country Life' transport him to Taihape, Balclutha and other such distinguished locations, he has no inclination of the horrors which await on this perilous off-road adventure...

He steps from the truck to his first apiary as the sun glints through the kānuka trees standing tall around the collective of beehives, stacked three, four and five boxes high. 'Perfect-timing' he thinks as the day slowly warms and the first honey bees poke their heads out to explore the morning light.

His mind turning to the scores of hives in the day's work-plan, he takes a deep breath, grabs a hive tool from the driver's-door pocket of the truck and starts the smoker. 'We are all going to earn our keep today' he tells his tools before unsuspectingly striking a match and blowing the contents of the smoker to a slight flame, then ember.

The hive-tool slides between the first two honey boxes with ease as it has done countless times before, then the pressure comes on. "Oh, difficult to crack are yee" he mutters to the hive and himself (long hours alone in the bush and the bees with depressing thoughts of honey prices can do funny things to a man's mind...) "well that's fine by me thankyou very much, there must be some honey here". Then, *bang, crackle, POP!* The hive tool takes its turn to speak up, saying 'no more!' before snapping in two under the strain of yet another stack of boxes, giving up on a hard day's yakka at the first hurdle.

"Hmmmm never done that before," says the beekeeper as he surveys the results of his own brute strength, not unimpressed. 'Argh yes, this hive tool. A free-bee, as it were, a give-away somewhere along the lines. Clearly its not made of the sternest steel. My top girl, hive-tool *numero-uno* must still be in the door pocket of the truck...'

His hand fossicks around the tool's usual lodging place, to no avail. Standing alone in the bush scene the beekeeper's mind flashes back to the workbench of his shed, back at base, where the cold steel implement sits having scraped down a stack of hive-mats some 12 hours prior (cue the camera panning out shot by shot to confer the vast distance between the inanimate but reliable hive tool and the apiary site high in the hills as the beekeeper falls to his knees, half a blade of useless steel in each hand ...)

"Noooooooooooo" and every living creature within ear shot



Well that's less than ideal, with few other options and scores of boxes still to go in a day high-up in the bush...



scarpers from the desperate scene. That is all except the millions of hard-of-hearing bees who carry on unmoved.

After some time – minutes? hours? – trapped in the foetal position, sobbing at the thought of the shame in returning home, hours after initially departing, with no honey to his name, the beekeeper gasps. "The children," he cries aloud "what will the children eat!?". Then, that's it...

"The children! I have the kids' hive tool in the truck," he mutters to himself. Gaining a renewed strength he bounds towards the vehicle and throws open the centre console, tossing queen cages, Posca pens and that secret loot of pie money, which the Mrs can't track, aside – it can't save him now, only one thing can...

There it is, eight inches in length, curved at one end, a flat steel blade at the other, and replete with a block in the middle to stop an uncoordinated child's hand from slipping to danger. He grasps the implement and holds it aloft as the sun glints on its redeeming blade. "You might be tiny, but today you shall be mighty" ...

Cut

Anyway... turns out it wasn't. If boxes are so stuck together a 10" hive tool snaps upon the strain, the kids' tool ain't much good to ya either. However, it also turns out that I keep a spare full-size hive-tool in the pocket of the passenger door for just such occasions. Unfortunately for me, that tool was also not of the strongest steel (I think the morale is probably something to do with buying quality equipment...).

The first attempt to crack a box saw about a 40° bend in the steel form. No worries though, I just flipped her over and pried the boxes apart by pushing against the bend. I thought for sure after enough of this method the flimsy tool's life would go the way of the morning's first weapon of choice, but it battled on all day and about 60 hives.

So initial horrors were ultimately averted and now at the end of February we have got around all our hives, escaped the honey, collected it, and have it off to our contract extractor, Rainbow Honey in Nelson. We await the return of our last batch of stickeys and the honey test results.

Marlborough is in the midst of a drought, with less than 50% of our usual rainfall having hit the ground since June. My rain gauge has seen but 23mm in December, 15mm in January and 14mm in February. Combine that with plenty of 25°C-plus and nor-west windy days and there is nary a flower to be seen in the pastures. The largely clear weather has made for decent flying conditions for bees though, so the crop is about average, despite the parched landscaped.

As you might imagine, with hive populations still near their season's peak, it is getting robbey. Our front-line autumn treatments for varroa are now in most of the hives before the bee populations drop off. Wish me luck for the next month keeping starvation and varroa at bay while bees become increasingly aggravated at our presence... I'm sure many of you know the feeling though. 🐝



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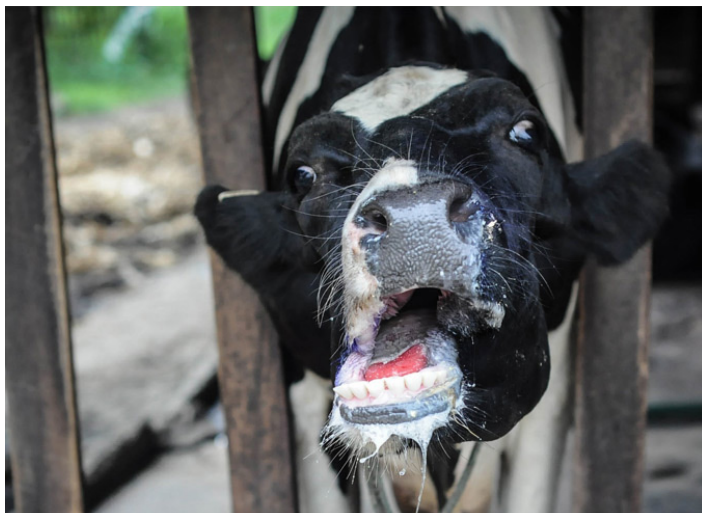


BY IAN FLETCHER

I was struck by a recent conversation with a financial adviser (a good one, who I've known for some time, from a big-name firm). He commented at the end of a wider conversation about US politics and China that he thought New Zealand was a poor longer-term investment prospect because of the risks – he mentioned earthquakes, and foot and mouth disease.

At the same time, I have been reading the recently-published brief for the incoming Government prepared by the National Emergency Management Agency. It's a sobering read: essentially, it says catastrophic events (big earthquakes) are certain to happen over time; severe weather events will increase, and other stuff (like major cyber attacks) will come along too.

Against that bleak forecast, the response system is weak ("even moderate weather events can easily overwhelm the response system"). Local government resources are thin, there is no really professional workforce, there's limited ability to collate information. And so on. In the event the Beehive building in unusable, you will be pleased to know that the government will be run from hired rooms at the Ellerslie racecourse. I kid you not.



There are few risks to New Zealand's economy greater than that of foot and mouth disease (which affects all cloven-hoofed animals) entering the country. "Weak borders and almost no response capacity" to an incursion are a huge concern says Ian Fletcher.



Catastrophic events, such as the 2011 Christchurch earthquake, are certain to happen over time in New Zealand, and our lack of preparedness is scaring off investors warns Ian Fletcher.

Then there's foot and mouth disease (and as beekeepers know, that's just one of the pests and diseases we face). MPI's painfully slow and appallingly expensive response to Mycoplasma Bovis gives me little confidence that MPI could mount the swift response a severe, infectious viral disease would require. The GIA funding mechanism (which they're trying to foist on beekeepers) lacks flexibility, or speed. In a big, thinly populated country like ours, biosecurity only works with a really strong border or pre-border system, and a willingness to have big enough 'standing army' of responders ready to move. It'd be expensive, and require serious effort. No sign of either.

Instead, we have weak borders, a lot of showing-off at airports by MPI staff, and almost no response capacity. I take no comfort from that, and nor should you.

These issues are all features of our level of resilience – in this case our ability to cope with the known risks we face. Earthquakes, storms and biosecurity incursions aren't theoretical risks; they're certainties. Only the timing of each event is uncertain. There's no excuse for being unprepared.

To which we can add infrastructure, and culture. Infrastructure is the big stuff: electricity, telecoms, water. Electricity is the bright spot, with TransPower getting approval this week to invest more in grid resilience. Water is now a political football, with Three Waters gone (and so no funding mechanism), and local governments unable to pay for what's needed. Telecoms might be OK; cyber resilience is probably not. The roads are a constant distraction (I recently saw a huge pothole on a national highway being fixed by local residents, without safety equipment, because they couldn't wait).

The recent decision to ditch the plans for new Cook Strait ferries is an incredible blunder. The loss of cross-Strait connectivity is now a real prospect: history shows that ships sink in Cook Strait regularly, and resilient ferries are both essential and expensive to avoid that outcome.

And then there's culture. A senior official in Fire and Emergency told me some years ago that he was struck by the difference between Australia and New Zealand: In Australia, disasters were expected, and governments invested in systems, equipment and people to be ready. In New Zealand, we seemed to wait for the disaster then try to work out what to do. He found that frustrating; I find it alarming.



So, against that bleak canvas, what would it take for my financial adviser to change his view that New Zealand is too risky for longer term investment? The first, biggest answer is to take the problem of our resilience seriously, and resource it accordingly.

That's a matter of money, but also people, institutions and physical preparedness. What would that mean?

First, reinforce local government. In a big country like ours, they're always in the front line. They need to have core teams of professionals and a strong body of volunteers. Volunteers should be paid for their time, and have their employment protected (like Army reserves). Equipment needs to be procured in advance and stored around the country.

Secondly, a strong national system of coordination and information sharing. That exists in outline now, but it's vulnerable and may fail on the day. That's unacceptable and needs fixing.

Finally, imagine the worst, and prepare against that with exercises and public information. The biggest failure here is a failure of political imagination. The officials writing briefs for the new Government have sounded the alarm; has anyone in power bothered to read the material?

And to support that, fix biosecurity and infrastructure. Biosecurity needs decent funding (not cost recovered) and a sense of mission. Wait and see is not a plan; hope is not a policy, and funding by industry contributions is just laughable given the costs of failure and the fact that costs will mount suddenly when incursions occur – and producers are least able to pay.

Infrastructure is another whole topic. But whatever happens, a funding plan for resilient water investment and a funded, timetabled plan for new ferries are both gaping holes in the Government's thinking. That's irresponsible, and inexcusable.

None of this sits well with a swaggering, tax-cutting, deregulating Government. It's expensive, time-consuming, detailed work. It means more public servants, and more money. It means building up local government (something the Wellington machine hates doing). It means being clear with the community that we live in an exceptionally hazardous part of the world, and that our luck will run out, soon.

Of course, as well as saving lives and sustaining our communities, a serious effort on resilience would improve the economy: investors would see less risk to their investments, and be prepared for a greater commitment over a longer period of time in an obviously well-managed country (think Finland, or Switzerland). That's good policy and would be a great outcome.

Will any of this happen? I fear not.

Ian Fletcher is a former head of New Zealand's security agency, the GCSB, chief executive of the UK Patents Office, free trade negotiator with the European Commission and biosecurity expert for the Queensland government. These days he is a commercial flower grower in the Wairarapa and consultant to the apiculture industry with NZ Beekeeping Inc. 🐝



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