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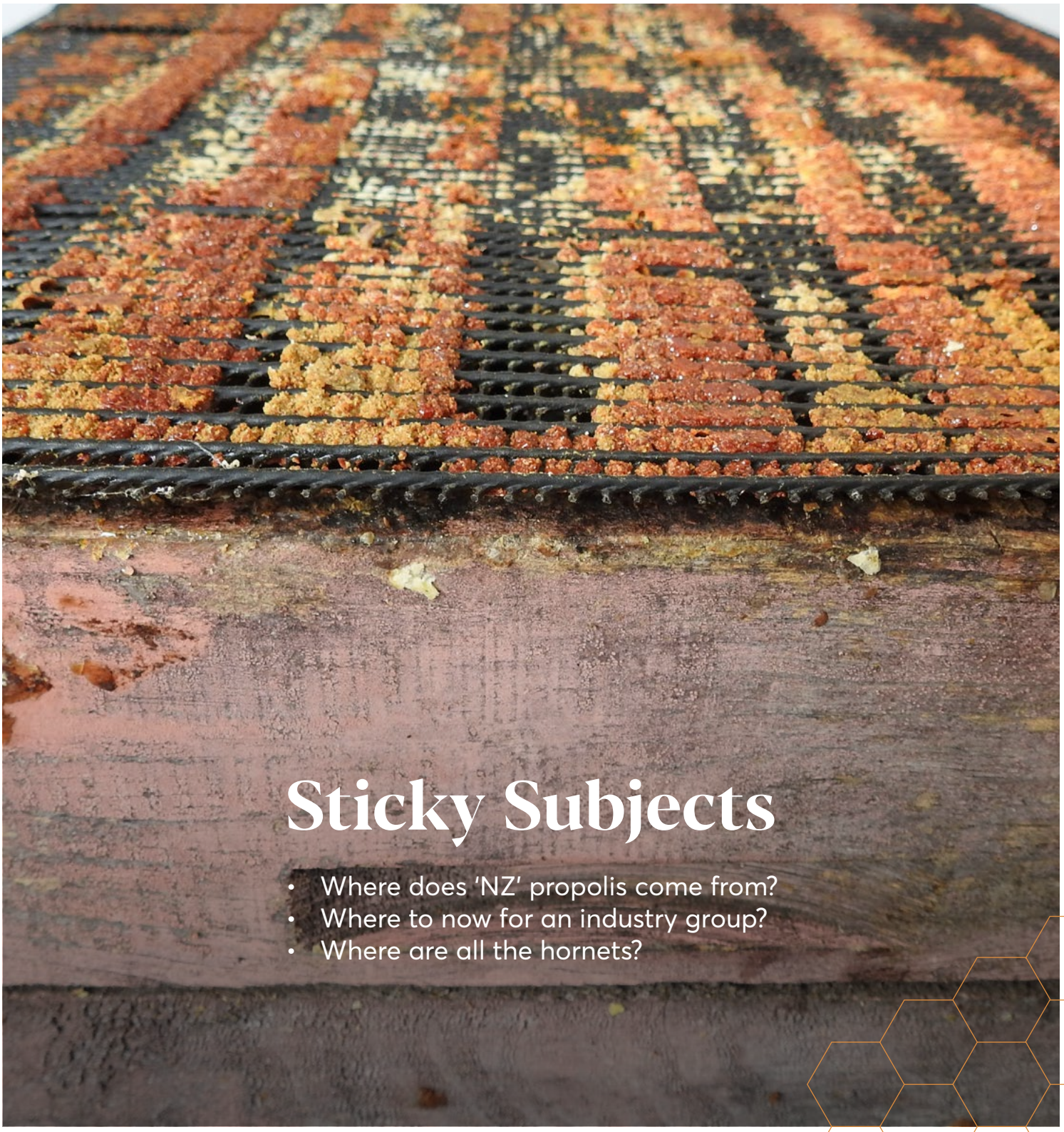
Apiarist's Advocate

News, Views & Promotions – for Beekeepers – by Beekeepers



Sticky Subjects

- Where does 'NZ' propolis come from?
- Where to now for an industry group?
- Where are all the hornets?

The Great Secret of Where 'New Zealand' Propolis is Sourced

BY ELOISE MARTYN AND PATRICK DAWKINS

For many New Zealand beekeepers propolis has long sat in the background as an easy add-on, a modest earner, something that can be collected with relatively little extra effort. But in recent years, it has also become a source of frustaration, as global supply chains and shifting demand reshape the market in ways that don't always favour local producers.

Despite New Zealand's reputation for high-quality bee products, and the consistency of its propolis, much of the value at scale is increasingly disconnected from local supply. The country's largest apiculture brand, Comvita, is understood to rely on imported propolis rather than sourcing from New Zealand beekeepers – raising questions within the industry about why a product that can be produced domestically is being brought offshore. Those are questions both Comvita and fellow propolis giant Mānuka Health are not willing to answer though, having shunned requests from *Apiarist's Advocate* to shed light on their propolis buying and selling practices.

A BEEKEEPER'S PERSPECTIVE

Few people have seen the evolution of the New Zealand apiculture industry as closely as Russell Berry of Arataki Honey. A beekeeper since the age of eight, working alongside his apiarist father, Berry has spent a lifetime in the sector. Today, he continues to work closely with more than a hundred beekeepers and has been deeply involved in both the production and processing side of propolis. In recent years Berry's Arataki Honey has been the most active buyer of raw propolis from beekeepers.

Annette and Russell Berry with a load of package bees which, along with propolis production and processing, helps form their Arataki Honey business's diverse range of income streams. "It's good fun in our old age." Russell Berry says of buying and collecting propolis. "We get to drive from all the way up to Kaitaia, right down to the south of the South Island, to Greenvale Waikaka (Gore). We get to visit a lot of beekeepers, have a chat, and even buy some honey."

"At Arataki Honey, we have a processing plant for propolis where we clean the mats. We do trips around the North Island and trips around the South Island and collect the mats, clean them, and then deliver the mats back again." Berry explains.

"To process the propolis, we have a geothermal steam bore, which helps keep our costs down. Our products in New Zealand, including propolis, are considered better than anywhere else in the world."

Berry says almost all of their propolis stays close to home.

"Most of our propolis is sold to outlets in New Zealand who sell it both domestically and abroad. We do export a small volume of our own propolis"

However, he points to a shift in the market that has made it harder for local producers to compete.

"The problem was, one or two larger companies started importing cheaper propolis, and we couldn't compete on price.

"We slowed down the purchasing of propolis around three years ago. We had three shipping containers chock-a-block. We invested in buying propolis back then and hoped it would help the beekeeper carry on beekeeping."

Despite this, processing volumes remain strong.

"Annually, we pack an awful lot of bottles of propolis. Sometimes I ask my son Mark, 'how much did you bottle today?' And some days they've bottled 7,000 units."

Berry's connection to beekeeping spans generations. He began helping his beekeeping father at just eight years old, and by around 12 was already driving beekeeping trucks. At 18, he helped his father build the Waiotapu facilities that would become the foundation of the business seen today at Arataki Honey's Rotorua plant. Diversification – including propolis production and processing – he says, has been key to survival.

"We have developed a lot of sidelines, which has saved us. We were very fortunate not to have invested only in mānuka, but instead invested in other things, such as sending bees to Canada, propolis, pollen, and pollination for kiwifruit." Berry explains.

"There are seven million bees in an airline pallet, and last year we exported 77 million bees to the Canada market."

Today, Arataki's Rotorua division employs 60 staff and works with more than a hundred beekeepers, with propolis continuing to play an important role in the business.

Berry estimates that of all of the commercial beekeepers nationwide, around half of them are making some income off propolis and that, while it is not a huge money earner, it is still an earner. He says it's not much work to put a mat on a hive, and it is income that beekeepers can be making.

He also notes that "propolis varies a lot in different areas. For example, on the West Coast in the South Island, there's very little propolis as it's all native trees."

THE WIDER CONCERN

Berry draws a broader comparison with other parts of New Zealand's primary sector, seeing clear parallels with what is now happening in the propolis market as imported product undercuts New Zealand supply – it's the part of free trade that he doesn't like at all.

"We've got a problem here in New Zealand. We have peas that growers can grow well, but then someone comes and imports peas. It's the same with peaches, we're ripping peaches out. We're losing our ability to look after ourselves if something goes wrong."

MARKET DYNAMICS AND DEMAND

Chris McNaull, marketing manager and director at Arataki Honey Ltd's Rotorua Division, says the fundamentals of propolis remain strong, even if the market has softened.

An almost full propolis mat. Veteran beekeeper and propolis buyer and seller Russell Berry estimates around half of commercial beekeepers in New Zealand undertake some form of propolis collection.

"Unlike honey, propolis can be imported into New Zealand." McNaull says.

"Imported propolis has always been present in the market, but as demand has weakened its availability has become more noticeable and has added additional competition for New Zealand beekeepers and producers. At Arataki we choose to work solely with New Zealand origin propolis. One of the advantages of New Zealand propolis is the consistency. In some countries, China and Brazil, flavonoid levels can vary significantly depending on the region and plant sources, whereas New Zealand propolis tends to be far more consistent."

Demand has shifted significantly in recent years.

"Demand was strong prior to Covid, surged during the pandemic, and has since eased back considerably. At present we are sitting below what we would consider normal demand levels," McNaull says.

Consumer use remains, particularly in health-focused products.

"Most consumers are using propolis for immune support and oral health. We are seeing good demand in lower strength formats like tinctures and extracts, as well as value-added products such as sprays and lozenges where consumers are looking for a balance between efficacy, convenience and price."

However, challenges persist, with McNaull elaborating, "regulatory and contamination requirements remain one of the biggest challenges in the propolis sector and compliance expectations continue to tighten across multiple markets".

GLOBAL SUPPLY AND SHIFTING BALANCE

Globally, propolis is a well-developed industry in several countries, such as Brazil, which is one of the world's largest producers. In the major market of Japan, propolis products are widely available across a range of price points, reflecting strong consumer demand.

Against this backdrop, questions remain about sourcing decisions by major New Zealand brands. Propolis is Comvita's stated second priority after mānuka honey, yet its historical investment in Uruguay-based supplier Apiter – and subsequent write-down – highlights the complexity of global supply chains.

Comvita's propolis range includes capsules and sprays and, while New Zealand based research is touted in helping create the products, the ingredients list does not include source country. The Comvita website states 'we source our raw propolis from Comvita beekeepers and trusted beekeeping partners'.

Further specifics of Comvita's propolis sourcing remains unclear as the country's largest exporter of beehive products has been unwilling to answer *Apiarist's Advocate*'s questions on the matter. However, the Apiter investment in 2018 coincided with a slowdown in buying on the New Zealand market. At the time Apiter chief operating officer Laura Roth called their business "the major (propolis) producer in South America".

Back then Comvita CEO Scott Coulter was not hiding the fact that South American propolis made a worthy substitute to that which could be produced in New Zealand and bought from Kiwi beekeepers.

"Uruguayan propolis has the high levels of phenolics and flavonoids which match the profile of New Zealand propolis," Coulter said in a statement to the NZX – the country's stock exchange where companies make official public disclosures.

"Certain plants produce higher levels of these protective compounds when exposed to climatic conditions that are from a similar latitude to New Zealand. Not only does our investment in Apiter secure our supply base it also provides access to the leading intellectual property around propolis extraction, value-added wound care, and potentially pharmaceutical and nutraceutical products derived from propolis."

Mānuka Health was also once a prominent buyer of New Zealand beekeepers' propolis, but that has seemingly slowed, or come to a complete halt. Like Comvita, they have not responded to request for comment. Their products retailed online state 'New Zealand Propolis' as a core ingredient though.

Propolis New Zealand, based in the Nelson region and still a registered company, has also slowed their buying behaviour in recent years. Their website is down and they also have not responded to a request for comment.

THE FUTURE OF SUPPLY

As the propolis market continues to evolve, the question remains whether New Zealand's biggest brands will further integrate local supply into their sourcing strategies, or continue to lean heavily on offshore product.

'Brand New Zealand' continues to feature prominently in propolis marketing, yet Kiwi beekeepers appear increasingly sidelined – or, in some cases, excluded altogether.

Extracted, raw propolis. How much of the propolis in New Zealand products is actually sourced in the country is hard to know, with major marketers Comvita and Mānuka Health both avoiding questions on the matter.

Balancing Act Required as New Organisation's Constitution is Finalised

Plans for a new industry group to represent commercial beekeepers are marching forward, with consultation having closed and made plans to circulate a written constitution in May. Emerging as a key consideration is a delicate balancing act between pricing membership fees attainably, with achieving adequate funding.

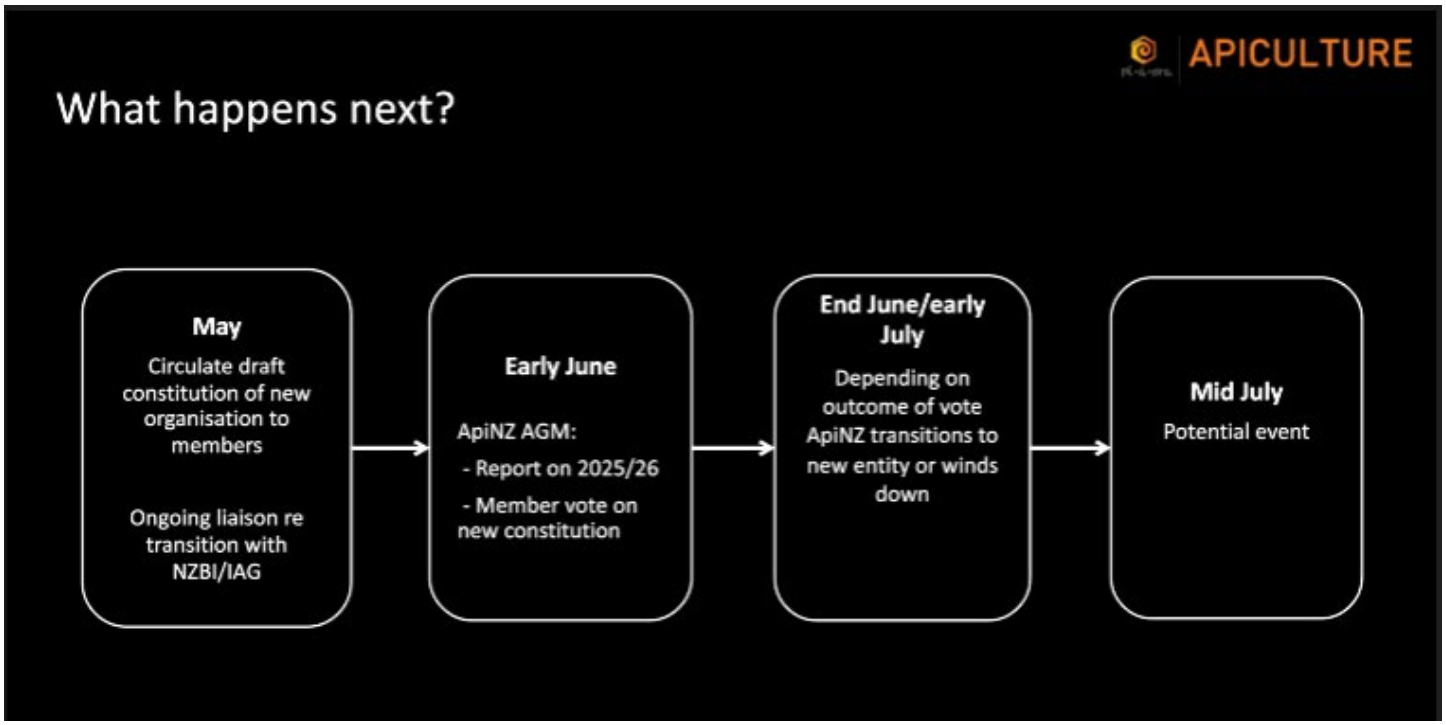
April saw Apiculture New Zealand (ApiNZ) and New Zealand Beekeeping Inc (NZBI) receive 27 submissions to an earlier-released 'framework' as to what a new and improved industry group might look like. Those submissions were analysed and consultation with a smaller "industry advisory group" of commercial beekeepers followed. The result has been a decision to extend the proposed base fee for membership of the group, from $400 per annum to $600, and to award one vote per full member, regardless of their financial contribution. ApiNZ chief executive Karin Kos and NZBI advisor Ian Fletcher explained the thinking to an online meeting of around 40 ApiNZ members on April 30.

"There was near consensus for a single national body, with a strong commercial beekeeper focus," Kos says.

"What came through as a point of difference was around the voting. While there is broad support that the voting should be reserved for commercial beekeepers, those with skin in the game, there was definitely diverging views around who should vote and the structure of membership."

As it stands, the constitution which is expected to be disseminated in May will put "commercial" beekeepers as full members, while "non-commercial" beekeepers will have an avenue to join as an "associate member", albeit without voting rights. However, the threshold for a commercial beekeeper will not be set in writing, with the $600 base fee expected to dissuade any apiarist who is not deriving significant commercial gain from their bees.

That base fee will be supplemented by an additional per-hive fee of somewhere in the order of $1 per hive for hive ownership over a commercial level, with the initial framework stating 500 hives. That per-hive money is expected to be capped though, with payment on 4000 hives framed as the limit. That would mean a member with 501 hives would be expected to pay $601 a year, and someone with 4,000 hives or more $4100.



MAKING THE NUMBERS WORK

Wherever the fees are set, getting the money together to fund an organisation to a level which will provide services that appeal to potential members is going to be a challenge. That very challenge is a major reason why both ApiNZ and NZBI find themselves in the position of both too low memberships and finances to be optimally effective in their beekeeper representation and seeking to unite.

The rough budget sent out in the consultation documents forecast incomes of $140,000 in year one and then $200,000 in year two, from a membership base of 120 and then 200 commercial beekeepers. Summing up the challenge in setting fees and budgets for a new group, Kos told members "Even though many participants felt the funding proposed was inadequate, there was little appetite for a significantly higher membership fee. It has been a difficult few years, and that is certainly the feeling we get out there."

Fletcher dealt the April 30 meeting a dose of reality regarding what the early days, at least, of any new group will look like. "Any future single, national organisation will be voluntary at point of set-up. That is the funding framework we need to face up to and deal with," he says.

WHAT'S NEXT?

"In two or three months time we have a very important decision to make because we can't carry on," ApiNZ chair Nathan Guy told members, the organisation having relied on funding from the Honey Industry Trust to stay afloat for much of the last year.

A date for an ApiNZ AGM has yet to be set, but "early-June" has been touted. There, members will vote on whether to transfer assets to any new organisation, or wind up. After that, in July, it is hoped that an event will be held to help herald a new beginning for apicultural representation in New Zealand.

After significant consultation, in person and via correspondence, over the past year, Kos says the recent feedback she has received has been "can we just get on with it", while Fletcher warns of "consultation fatigue".

"While it might not be perfect, beekeepers are probably never going to agree on one way to do things. There will be a difference of opinions, but at least if we get something going that will be better than trying to tweak things and come up with yet another alternative. The point was made by several people that, if things need to change, they can and it is up to the membership and governance to work through those changes," Kos says.

That was a sentiment reinforced by Guy.

"We are not going to get members on day one. What we are doing is setting up a structure and getting something we can move on. It will take time to build the membership. It will be an exciting opportunity," Guy says, adding "Yes, funding will be an issue, but I believe starting small and starting is better than more talking".

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Comvita Wins Reprieve from New Shareholders

BY BRUCE ROSCOE

Comvita Ltd has attracted two new cornerstone shareholders — Fraser and Neave Ltd, a Singaporean food and beverage enterprise, and PHC Investments Ltd, an Auckland-based company whose holdings focus on the aged care sector. If Comvita's current effort to raise up to NZD30m in new equity succeeds, Fraser and Neave (F&N) will own about 20.0% of the company. PHC Investments has already disclosed a holding of 13.1%.

Although an amount of NZD30m will stall foreclosure by its two main banks, Comvita will remain a heavily indebted company, and the reprieve may represent more a stay of execution without uninterrupted profit growth or asset sales – or both. Asset sales seem the more likely scenario, given the roller-coaster profit performance over the past 25 years.

Under the Comvita capital raise plan announced 15 April, shareholders will receive rights to purchase 1 new share per 1.53 shares owned for NZD0.65 per share. The price represents a discount of 7.1%-29.3% to the NZD0.70-0.92 fair value calculated by Comvita adviser Grant Samuel in September 2025 for the unsuccessful Florenz takeover bid.

A full take-up of the rights would create 46.1m new shares (calculated by dividing existing shares of 70.6m by 1.53). The number of shares in issue therefore would increase to 116.7m. At NZD0.65 per new share, about NZD30m would be raised. But Comvita expects a take-up of only about half. That's where Fraser and Neave (or rather its wholly owned subsidiary F&N Ventures Pte Ltd) comes in.

F&N has committed to purchase the shares that Comvita shareholders do not. Which means that Comvita shareholders and F&N would each outlay about NZD15.0m and each acquire 23m new shares, if Comvita's 50.0% take-up bears out. But there's a catch. F&N has limited its investment to 19.99% of total Comvita shares in issue after the rights offer. (A holding above 20.0% would trigger the need for shareholder approval under the New Zealand Takeovers Code.)

In a presentation released to NZX, Comvita has outlined three other take-up scenarios. Under a 36% take-up, NZD25m would be raised (F&N's outlay: NZD14m); at 80.0%, NZD44m would be raised (F&N's outlay: NZD6m). In this scenario, the higher take-up would mean that remaining available shares would not take F&N's holding to 19.99%. To avert such an outcome, Comvita has worked into the offer a top-up provision that allows the placement of additional shares to F&N for NZD0.80c per share. The fourth scenario for a take-up of 100% is theoretical.

In its 15 April announcement to the Singapore Stock Exchange, F&N cautioned: "There is no certainty or assurance that the proposed transaction will be completed". Comvita has reserved the right to cancel the offer at any time. A raise of less than NZD25m likely would trigger cancelation or require a renegotiation with banks over the amount committed to loan repayment. The result of the capital raise will be announced 12 May.

The holdings of Comvita shareholders who do not participate in the raise dilute by 39.53%, though there is a market for the rights, which closed at a thin NZc1.1 on 1 May.

Comvita chair Bridget Coates, in her undated Dear Shareholder letter bundled with the 15 April offer document, wrote: "The capital raise and refinancing package mark a significant milestone for Comvita…"

Shareholders may ask, "What became of the capital raises that took in NZD25.1m, NZD22.9m, and NZD47.6m in the March 2015, June 2017, and June 2020 financial years?" Shareholders likely will see the latest appeal for funds as more millstone than milestone.

EMBRACING DEBT

In its 15 April announcement to NZX, Comvita reveals that a new debt "facility" totalling NZD50m has been arranged – NZD20.0m in "working capital" and NZD30m in "core debt".

In October 2025 Comvita advised that repayment of NZD59m in bank debt was due in Jan.-Mar. 2026. Extensions were granted to 30 April 2026 and again to 30 May 2026. The apparent reluctance to foreclose on Comvita may reflect the company's two main banks' view that repayment is more achievable by allowing the company to continue to trade and solicit funds from shareholders than to force asset sales.

Too, banks will value Comvita as a client. By virtue of the bounty bestowed by bees, Comvita has paid NZD90.3m – equivalent to 60.7% of NZD148.7m in operating profits – in interest expense and related finance charges to banks between December 2002-June 2025. (Comvita public disclosure begins with the prospectus issued 6 August 2002.)

THE GUARD CHANGES

While Comvita has welcomed new shareholders, once loyal shareholders have left the building. Chief among them is Li Wang, who with husband and former Comvita director Zhu Guangping, spearheaded Comvita's advance into China, which became Comvita's largest market. Ms Wang's 12.1% holding in Comvita as at 1 August 2025 made her the largest shareholder. Also, China Resources Enterprise Ltd, the second-largest shareholder as of that date, has sold its 6.1% holding.

On the home front, Kauri NZ Investments Ltd, which wholly owns Oravida Ltd, a supplier of New Zealand foods to China, has increased its Comvita holding to 11.3% from 5.0%. (All above shareholding changes followed the April announcement of the rights offer.)

MĀNUKA MILKSHAKES?

F&N breaks down its September 2025 year revenues of SD2,323m into the segments of dairies (SD1,276m; 55%); beverages (SD772m; 33%); publishing and printing (SD197m; 9%); and other (SD78m; 3%). After tax profit was SD210m and net asset value was SD2,772m. (1 Singapore dollar equals about 1.3 NZ dollars.) The company employs 7,200 staff in 12 countries, according to its website.

Excepting Singapore, New Zealand honey has made only marginal headway in Southeast Asia. In CY2025 for all honey types, Singapore ranked 8th-largest market (342.0 tonnes); Malaysia, 13th (84.7t); Indonesia, 16th (58.4t); and Thailand, 25th (9.3t). Vietnam does not admit imports of New Zealand honey. The region may represent a promising greenfield for F&N and Comvita if they are able to collaborate.

At 19.99%, F&N's investment in Comvita is a toe dip, and the company has stated it does not expect the transaction to impact earnings or asset values in the September 2026 year. Comvita underperformance could prompt a full takeover offer, which would represent a footbath for a company of F&N's scale.

Bruce Roscoe is a Japan-resident researcher and former foreign correspondent and securities analyst.

Retail Pack Monofloral Mānuka Exports(a)

United States	Volume(b)	Value(c)	Price(d)
CY2025 1Q	404,301	20,256,268	50.10
CY2026 1Q	597,901	22,584,731	37.77
% chg y.o.y.	47.9	11.5	(24.6)
China(e)			
CY2025 1Q	173,323	11,798,103	68.07
CY2026 1Q	143,886	8,720,987	60.61
% chg y.o.y.	(17.0)	(26.1)	(11.0)

Notes:
(a)Jan.-Mar. 2026 year data are provisional.
(b)Kilograms (c)NZ dollars FOB (d)NZD per kilogram
(e)Includes Hong Kong

Source: Statistics New Zealand

Provisional FOB export statistics for retail pack monofloral manuka honey show continued volume weakness for China and volume strength for the US on price declines for both markets.

Beekeeping 'Event' Uncertain, Science Symposium Off, but Mānuka Orchard Open Again

As the calendar turns to May, and the hopes at a new and improved industry body for commercial beekeepers wind on, the time for a winter beekeeping 'conference' draws close. However, at this stage no national-level event is set on the beekeeping calendar.

For the past decade Apiculture New Zealand (ApiNZ), formed in 2016, has hosted a major winter conference in the majority of winters, and before them it was the realm of their predecessor the National Beekeepers' Association, with locations varied around New Zealand. With the future of ApiNZ in flux, it is hoped that "mid-July" could serve as an approximate time for an "event" for beekeepers, which could potentially tie into plans to formulate a new industry body.

There is water to go under that bridge though, with a new constitution yet to be publicly circulated, meaning at this stage no date has been set, and limited plans are in place from ApiNZ's side, chief executive Karin Kos told an online meeting of members on April 30.

A casualty of that uncertainty is the Honey Bee Research Symposium which, for the last 6 years, has been held in June, July or August.

"We were exploring the possibility of hosting a seventh iteration of the Symposium in Hamilton or Wellington, but with rising fuel costs, no set date of a wider beekeeping conference to coincide it with, and our organisers also away at different times, it all got a bit too hard," Symposium organiser John Mackay says.

Feedback from regular attendees is supportive though Mackay says, so organisers fully anticipate holding an event in 2027.

Conversely, Mānuka Orchard owner Logan Bowyer says in the absence, or at least uncertainty, of a larger national-level event for beekeepers they welcome people to their July 24 Open Day in Paengaroa, Bay of Plenty.

Initially believing there would be a larger industry-wide get-together, he says they had planned to scale back the event this year and focus on their honey processing, storage and sales business's core supporters. Now though, stressing the importance of beekeepers having the opportunity to stay informed of industry matters, in person, plus socially, he is encouraging anyone wishing to join their open day to reach out for details.

Email justine@manukaorchard.com for Mānuka Orchard Open Day details.

"Cautiously Optimistic" at Hornet Eradication, but Only Time Will Tell

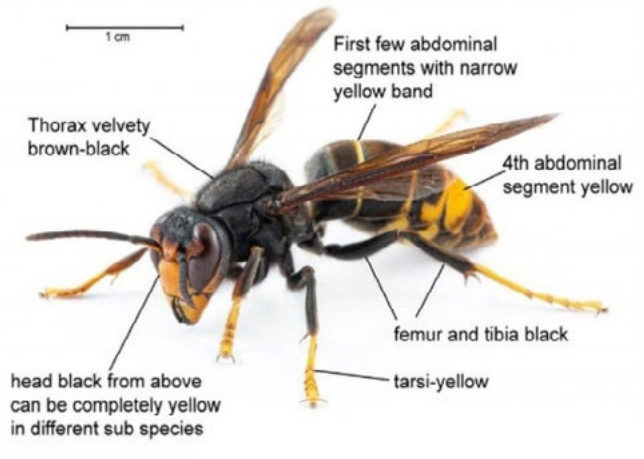
While the leadership at the Ministry for Primary Industries' (MPI) Biosecurity New Zealand are encouraged by a recent lack of yellow-legged hornet sightings, there is agreement that the incursion response must continue apace for at least another month before taking a new tact over winter.

Zero hornets in all of April. Following 132 nest finds in Auckland between October last year and March 25 2026, it's an impressive and encouraging result, leaving both Biosecurity NZ commissioner north Mike Inglis and technical lead of the *vespa velutina* response Scott Sinclair "cautiously optimistic".

Eradication of the invasive pest, first detected in the form of two male hornets in June and July 2025 in Auckland, has always been MPI's goal. Any chance of proving that will be several years down the track, requiring two seasons of no sightings.

To this point hornet activity has been largely inline with expectations: nests building up through spring and then moving to "secondary" nests, often high in trees, as temperatures rise. That has seen MPI's response employ a range of tactics to identify hornets and their nests, and destroy both. Ground searches, feeding stations, traps, radio-tracking technology, field observations – including around beehives – and poison bait have all be utilised in the six-month long response.

As temperatures cool and autumn moves to winter yellow-legged hornet nests typically die-off, each leaving behind potentially hundreds of mated queen hornets, known as gyne, to attempt to survive winter and start nest-building again in spring. That natural reproductive cycle begs the question, *is the reason no hornets or nests have been located since late-March simply because only hard-to-find, gyne queens now remain?*



There were no yellow-legged hornet sightings in New Zealand in April, but it will take years of that to confirm eradication and thus the incursion response continues at strength.

"Mapping the phenology from the northern hemisphere onto New Zealand's seasons, we would expect a lot of hornet activity at this time of year, as it would be too early for nests to die off," Inglis says, explaining their optimism.

"We have not seen a hornet for about a month now, when we would expect at this time to have peak activity."

They will continue to look closely over at least the next month though says response technical lead, Sinclair.

"We are looking to destroy all the nests we can before they enter the reproductive phase. While we have detected some male hornets in the environment, we have had no detections of any gynes, the next generation future queens, yet," he says.

VESPEX'S VALUE

Autumn sees the hornets seek protein to meet dietary needs, and so protein-based, fipronil poisoned bait *Vespex* has been used and it is believed to have been attractive to the wasps, providing an encouraging tool.

"We have done a small trial that demonstrated the presence of fipronil in nests around which we had deployed Vespex. This indicates that hornets do take Vespex back to their nests, in a similar manner to Vespula wasps," Inglis says.

Sinclair says Vespex has been used around the three Zones of the response in Auckland "to cover off areas which are difficult for the field team to reach and to provide a level of confidence that any hornets not coming to our feeding stations, traps or observed by members of the public are eradicated".

WHAT NOW FOR WINTER?

Hibernating queens become a "very difficult part of the hornet lifecycle to impact," Sinclair says.

"They could be anywhere and we have no real tools to impact the hornet at this time, other than strong awareness and messaging around the types of places they might hide, such as firewood stacks or goods which may be attractive for a hornet to hide in."

Therefore the response will soon move to just such education, while also taking the opportunity over winter months to better research how the hornet may have arrived into New Zealand, and how it has responded here.

"We are unsure how long the hornet season will last in New Zealand, but it is important for us to analyse the data we have gathered over the season and start planning for next season," Sinclair says.

As for how the pest – native to several parts of Asia but which has migrated to Europe – may have entered New Zealand, that's "difficult to know exactly".

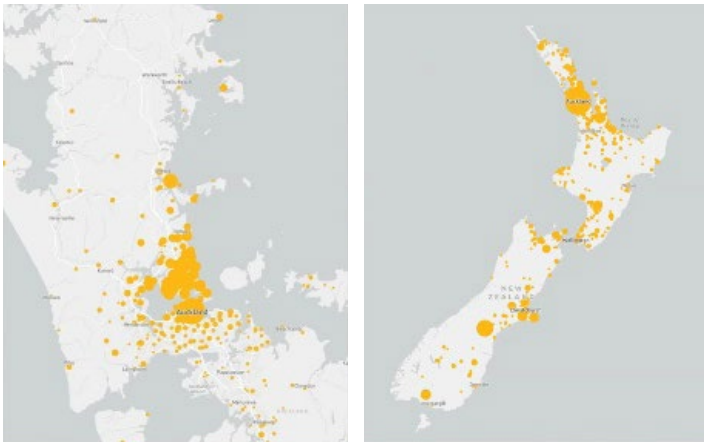
"It may be through the shipping of personal effects, golf clubs or jackets coming back from overseas, it may be through shipping containers. What we do know, based off genetic analysis, is we are fairly confident this hornet has originated from the invaded population in Europe, rather than its native range in Asia," Sinclair says.

CONTINUED PUBLIC AND BEEKEEPER HELP NEEDED

MPI has received in excess of 17,000 notifications suggesting potential hornet sightings "from Invercargill to Cape Reinga" and, while relatively few have been "positive", Sinclair says it is important public vigilance continues and beekeepers can play an important role in that.

"There may be hornet activity around your hives, but it is unlikely this time of year. So, we are asking the highly engaged apiarists to really be advocates and keep awareness up out there. One of the best tools we have is public awareness and people calling in sightings," Sinclair says.

To assist that area of the response, MPI is being encouraged by New Zealand Beekeeping Inc advisor Ian Fletcher – who along with Apiculture New Zealand, has been meeting with MPI to represent beekeepers – to establish a smartphone app to simplify identification and reporting of hornets.



A map highlighting where notifications regarding yellow-legged hornet have come from. Few are "positive" MPI say, but regardless public vigilance is still highly important.

Questioned on whether such a piece of technology was in the pipeline MPI was noncommittal, Inglis saying only they are "exploring more novel tools".

There's a chance what tools they have used this season have worked, but it is all still an unknown and thus Sinclair reinforces their position.

"It is positive, but no one is getting ahead of themselves just yet. There could still be small, difficult to detect nests out there. We certainly are not diminishing our operations. We are looking to maintain a high level of activity for another month or so before we start to think there is not much out there for us to find this season."

MPI's yellow-legged hornet response page has a range of resources and regular updates.

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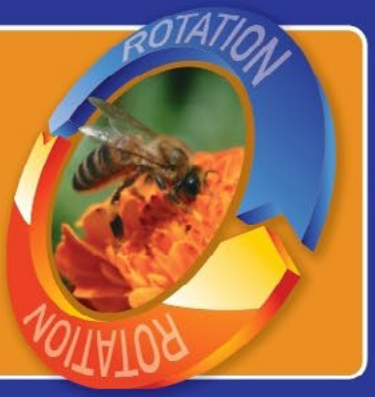

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Talking Points from Kiwifruit Country

Gaining best value for pollination hives; thermal auditing of beehives; effective industry advocacy; and even that damn hornet – the Bay of Plenty Commercial Beekeepers group met on April 17 at the Mount Manganui offices of Zespri where, stimulated by attendance from various interested parties, a wide range of topics relevant to beekeeping and kiwifruit pollination were explored.

BY DAVE BLACK

A group of about 40 beekeepers was welcomed by Shane Max, head of Zespri's Global Extension Team, who is responsible for improving the productivity of the fruit cultivation, for which pollination plays an essential part.

This year Zespri is on track to ship 220,000,000 trays (TE's, tray equivalents, more than 7 billion fruit). The plan is to release licence for approximately 400ha of Gold3 variety annually through to 2029/30. One hundred hectares of a new red variety, Red80, is being released this season and a decision on the release of new green variety, or even varieties, is expected in the next couple of years. All up, Max estimates the continuing growth will mean there will be demand for approximately 3-4000 more hives annually through until 2030. That's an opportunity: 14,000 more hives by 2030.

INDUSTRY ADVOCACY IN PRACTICE

Colin Bond, the CEO of New Zealand Kiwifruit Growers Incorporated (NZKGI), described the history of the organisation and the partnership role it plays in the regulatory framework governing the kiwifruit industry. The grower representative body, funded by growers, is committed to advocating for the business interests of its members, negotiating, advising, and managing conflicts with things as diverse as the Resource Management Act, the Recognised Seasonal Employer (RSE) Scheme, Māori Land Court administration, post-harvest operations, agrichemicals and biosecurity. The relationship 'management' is complicated by the reality that roughly 70% of orchards are owned by relatively "passive" growers who sub-contract to management companies, but who still need their interests protected. Fruit quality, or a potential shortfall in pollination units, are definitely things NZKGI is interested in.

Matt Dyck has worked with Kiwifruit Vine Health (KVH) since 2013 and is their biosecurity manager. KVH is also grower funded, using a levy required by an Order made under the 1993 Biosecurity Act, the *Biosecurity (Readiness and Response—Kiwifruit Levy) Order 2015*. KVH operates the 'Government Industry Agreement' (GIA) deed for the kiwifruit industry with the government and has several 'Orders' in place to be ready for and respond to particular biosecurity threats. Besides some, more obscure, fungal and bacterial pathogens the more familiar ones will be well known by beekeepers here; fruit flies, the Brown Marmorated Stink Bug and of course kiwifruit's *Pseudomonas syringae* pv. Actinidiae (PSA).

Zespri offices in Mount Maunganui played host to a meeting of the Bay of Plenty Commercial Beekeepers group on April 17, where the head of Zespri's Global Extension Team, Shane Max, detailed the kiwifruit industry's plans for expansion of growing area.

HORNET HIGHWAYS

While not the subject of an Order, KVH has taken an active interest in Auckland's yellow-legged hornet response too. The hornet will affect all pollinators, not just honey bees, yet there is no Order because there is no relevant GIA and no levy.

During questions it emerged Arataki Honey owner Russell Berry was working with the logistics company Mainfreight to establish hornet monitoring at their depots. UK experience suggests that long-distance dispersal of the hornet can often be along highways in vehicles, like trucks.

In a related train of thought, some beekeepers wondered whether the KVH PSA 'rules' and risk regarding the transit and 10-day stand-down for

beehives moving between orchards in the North and South islands was properly considered.

HEAT CHECK

Pollination hive auditing has generated a bit of interest again in recent years, for a variety of reasons. Discussed at a previous meeting, in 2025, Zespri, along with research partner StartAFresh and assisted by beekeepers Richard and Michael Klaus, plus Neale Cameron, presented a report of an investigation and recommendations for the use of thermal imaging cameras for determining hive strength. Further work is required before these devices can be deployed for this purpose, although this initial exploration suggested they would detect poor quality hives if they were properly calibrated and used appropriately. The prospect of using cameras for rapid, non-invasive auditing remains, just not yet.

It's also not clear how they would 'fit in' to the pollination unit delivery process. The question of who would use them, when, and how will the data be treated, remains.

The meeting heard, from several participants, how growers are understandably keen to see hive auditing, of any kind, applied widely and reliably, but good auditing actually protects both parties to the service. If the quality of hives being supplied remains unknown the supplier can be accused of not providing value for money, even of fraud, they could lose the chance of repeat business, and are easily 'undercut' by a competitor. Beekeepers and growers, when they stop to think about it, realise a 'race to the bottom' isn't a sustainable advantage to either of them.

AsureQuality's Tony Roper explained that he has trained beekeepers in hive auditing for many years (even me, 16 years ago), and last year he held a training session locally assisted by Byron Taylor and Richard Klaus, but at quite short notice it didn't really attract the right audience. The industry's ability to train properly independent and skilled auditors in either island is nowhere near adequate. It sounds like beekeepers are concerned enough to try and do something about it.

CALL THE DOCTOR

Dr Melissa Brousard, a well-known crop pollination scientist with Plant and Food Research, (now a division of the Bioeconomy Science Institute) was on-hand over a video link to present and discuss some yet-to-be-published research. This had been jointly commissioned and funded by Zespri and her employer's plant variety rights earnings, to examine the nutritive value of pollen from the current varieties of kiwifruit.

It's been some time since the dietary adequacy of kiwifruit pollen was looked at; a 1992 paper explored male and female-produced pollen from green Matua and Hayward varieties of *Actinidia deliciosa*[1], but this has little relevance for bees in today's gold, red or kiwiberry orchards.

It's not just about nutrition. The different value of the pollens, or the different properties, may determine how individual bees choose to forage and how the colony 'chooses' to allocate its foraging workforce.[2] We have also learnt that the ratio of proteins to lipids in the diet matters; that larva appear to stop feeding if the ratio is 'wrong' (if they have enough of one they don't continue feeding to get enough of the other!), and that certain plant-derived sterols (a class of lipid) are essential to honey bees. Pollination and nutrition are inseparable and discussion turned to how we should give more thought to mowing swards, planting complimentary plant forage, and supplements.

FINAL THOUGHTS

If all that wasn't enough, Beequip wrapped-up with their current advice on the various presentations of oxalic acid for treating varroa. While data from the annual Colony Loss Survey shows beekeepers use a variety of treatments throughout the year, oxalic acid now seems to form the backbone of the successful control methods used in operations here.

I'm sure the BOP Commercial Beekeepers would want me to acknowledge and thank Zespri and the other contributors to the meeting for organising and participating in a lively and informative afternoon. It was only unfortunate that a dozen or so of our beekeepers were missing as several roading issues intervened.

The next few months look to be quite busy after all.

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Better Honey, Better Businesses and a Better Industry – Mānuka Orchard Can, Will, and Is Helping

Mānuka Orchard owner Logan Bowyer might have grown up on an orchard of a different kind – kiwifruit – but his dedication to the cause of bettering New Zealand's honey industry is now well proven through his Paengaroa business. Eight years in, Mānuka Orchard is calling on any beekeepers wanting to improve their honey quality, business profitability and industry representation to utilise their wide range of services.

"We want to partner with more beekeepers who are committed to the industry and committed to shaping their business into the best it can be," says Bowyer, who owns and directs Mānuka Orchard.

"To do that, there are skills and expertise beyond the beehive that we can offer which, currently, beekeepers may be operating less than optimally at."

Growing up on an orchard in the Bay of Plenty beehives were often about and then, after working as a fabricating engineer in some of the country's largest honey processing facilities, Bowyer learned more about the honey industry and saw an opportunity.

"Our honey in New Zealand is the most valuable honey in the world and, while it is a product that requires little processing compared to other foods, it is essential we handle it optimally. There is a lot of value to be gained in maximising its value, but I learned quickly that the resources to do that can be expensive, and the expertise required difficult to obtain. One or both of them are often beyond beekeeping businesses' capabilities."

Therefore, Mānuka Orchard was brought to existence by he and wife Tania Bowyer in 2018 and it soon became the country's most trusted honey storage facility. Now, approaching a decade in business, their services continue to expand: extraction; blending; moisture reduction; creaming; and packing. It doesn't stop there though, with Mānuka Orchard now matching honey stored on site with buyers, providing beekeepers with access to honey buyers they likely never would have connected with.

"If you've got goals, then we have too," says Mānuka Orchard's Logan Bowyer to beekeepers.

WHO SHOULD PARTNER WITH MĀNUKA ORCHARD?

"If beekeepers are looking for better returns, a positive direction for their beekeeping business and sustainable prices for their honey from buyers who are taking a positive approach to the industry, then they should make a call to Mānuka Orchard," Bowyer explains.

For many beekeepers that connection can start with extraction, and the Paengaroa facility is growing its capabilities there, while already spinning out the boxes of 30 beekeepers this past season.

"There are many beekeepers with their own extraction facilities who we deal with once the honey is in a drum though," Bowyer explains.

"If they are having fermentation issues then don't open the drum, send it to us, and we can help solve that problem without the risk of product loss. Or if they need honey packed, then we provide that service too. Appropriate storage of mānuka honey for growth is also essential and we have the heated or cool rooms to suit the honey's needs. But, the real value is added through optimal blending programmes."

And that's a bit of a pet-peeve of Bowyer – beekeepers who are not maximising their honey returns by either not blending, or doing it poorly, when Mānuka Orchard can be called on to assist.

"It is a complicated equation to understand what the buyers are seeking, what they are paying and how a beekeeper can maximise their returns by getting the most out of their own portfolio of honey, but also other honey that is out there in the market place which could compliment it from a blending perspective," he says.

"On the shelves there might be UMF 5+, 10+, 15+ and 20+, but there is honey in every grade between those. Are you maximising the value of your honey when it lies between those grades? Are you getting it to where it needs to be and do you know if there is more or less value in each range?"

FINDING THE BUYERS

While the facility might have launched to provide physical solutions to honey processing, it fast morphed into a venue which honey buyers could approach to find what they need. Thus, Mānuka Orchard has invested in an interactive website to assist the connection. It's now a

big part of the services offered and another opportunity for beekeepers to maximise returns.

"We have a platform to list your honey on to and that is getting easier and easier to use, and easier for the buyers to get exactly what they need. So, if you produce and sell honey, but would prefer someone else to sell it on your behalf, then that's our role," Bowyer says.

"I have spoken to a lot of beekeepers recently who have said they have ignored every honey buyer coming to them in the last few months because they have just been too focused on their bees. If they just give us some parameters then I can review the offers and only bring them to the beekeeper once those parameters are reached – selling made easy, and in many cases, more profitable."

Nowhere in New Zealand will honey buyers and sellers find a more comprehensive and user-friendly trading platform than at www.manukaorchard.com

THE BIGGER PICTURE

Never ones to rest on their laurels, the Bowyers have come to understand that to fully realise the value in New Zealand's honey industry, beekeepers will need better representation. Therefore bridging relationships with landowners will become more of a focus moving forward too.

"We have dropped off as an industry in many respects, but we are about to grow up again. Unfortunately we have let some landowners down in the last 10 years through a lack of honey production and payment to them. We will likely have an under supply of honey over the next five years ... what we need is realistic and honest pricing to landowners, it means true and accurate pricing which is visible through our online platform."

Mānuka Orchard has long held an annual open day to help bring beekeepers, suppliers and scientists together and will do so again on July 24. Before then though, their industry representation will go to the next level with a stand at Fieldays 2026 at Mystery Creek, June 10-13. Bowyer will also be speaking on the "The Future of Mānuka: Why the Best Years Are Ahead" as a part of the Fieldays 'Tent Talk' series.

"That will provide a presence at a business-to-business level. We want to talk to landowners, growers requiring pollination and experts from other industries about the synergy between apiculture and their fields," Bowyer explains.

It signifies the growing dedication of Mānuka Orchard to not just creating the best possible honey and returns to the producers of that honey, but a sense of sustainability and stability in the honey industry going forward.

Bowyer sums it up – "If you've got goals, then we have too".

John Berry on 'SAD', Sudden Autumn Decline

Beekeeping is getting more and more challenging and a 'sudden autumn decline' of hives has veteran Hawke's Bay beekeeper John Berry worried about the sustainability of beekeeping.

BY JOHN BERRY

I was planning to write something a bit upbeat as it's been pretty tough for beekeepers lately, but what I saw the other day made me change my mind.

Around seven weeks ago I helped take the honey off my mate's hives and they were in really good nick, fast forward to mid-March and we went out to requeen some of these hives. Patchy brood, parasitic mite syndrome, deformed wing virus and bee numbers down by about two thirds.

All this was bloody depressing and left my mate wondering whether he should even bother trying to keep bees. I am going to check my bees this week and if they are the same I will be asking the same questions... Okay I have checked my hives and they actually look pretty good, but for whatever reason whatever happens to my friend's hives generally hits me the following year. The only thing we did different this year from each other was that I used oxalic acid Swedish cloths over the summer and he fogged more.

"These hives were good two weeks ago. I hope they still are now," says John Berry amidst his concern at hive health decline in autumn.

Before you ask, yes he knows what he's doing, he was taught by one of the best – me! Yes, the hives had all had a full varroa treatment with amitraz (had been in seven weeks) as well as several oxalic fogs over the summer.

It's not the first time something like this has happened to him. There was the time that synthetic pyrethroids stopped working. Pretty obviously that was because of resistant varroa. I contacted the Ministry for Primary Industries and submitted mites and they were shown not to be genetically resistant to the treatment. My testing showed otherwise, but I could not get anyone to do any practical follow-ups.

Another time was when he got a bad batch of strips along with many other beekeepers in the country. Once again, no follow-up from anybody. Then there was the time when the hives just up and died in the autumn. This happened to other beekeepers for at least one year before and after, but no follow-up, nothing from the authorities, very little from any governing bodies and no science at all as far as I know. We're talking about tens of thousands of hives.

So what happens now? Unless we get some major changes, nothing at all. The government and its departments seem to be totally unaware that there is a health crisis in New Zealand beekeeping. One assumes they are aware that there is a financial crisis, what they don't seem to realise is that the combination of both health and financial worries is getting very close to destroying beekeeping as we know it.

We don't know how bad or how widespread the problem is. There will be plenty of beekeepers out there that have been unaffected and on reading this will think I was just another case of PPB (piss poor beekeeping). I thought that for a while, till I got knocked off my perch by reality back in 2022. We face perhaps the greatest crisis New Zealand beekeeping has ever seen, but we didn't even have a national conference last year where we could at least discuss face-to-face what was going on and talk to each other about what was working and what wasn't.

I think I could keep some hives healthy around here or at least reasonably healthy, but I strongly suspect that will involve a lot more costs and about twice as many apiary visits as I have done in the past. I cannot see how I or anyone else could justify that

with the current low honey prices. When orchardists and farmers have to start paying over a thousand a hive for pollination then beekeeping will once again be profitable, but I strongly suspect in a few years there will be nowhere near enough hives to meet pollination demand at any price.

WHAT WE NEED

We need a governing body for beekeepers (including hobbyists and retired beekeepers) and those beekeepers need a chance to talk and more importantly talk to each other. This is not easy because the mānuka gold rush has left a legacy of distrust.

We need a government that helps us and reduces bureaucracy and expense. The price of honey in the shops hasn't gone down that much since the boom years, but the price to the beekeeper is not sustainable. You used to be able to extract honey, put it in a pot and eat it. Now sometimes it feels like you do more paperwork and testing than you do beekeeping and the honey is not any better for it, just way more expensive to the consumer.

We need science. We have some of the best scientists in the world, but they are either not doing beekeeping stuff or they are doing beekeeping stuff that is fascinating and amazing, but with little or no practical value. Think back to when varroa first arrived in the country and the amazing work that was done then to prepare us for the inevitable. They had funding in those days, a beekeeping team who worked on practical beekeeping. That funding seems to be completely gone.

Wax moth takes over a hive inflicted with an undiagnosed decline in hive health which John Berry is calling 'Sudden Autumn Decline'.

TOP RESEARCH PRIORITIES

We need urgent work done on:

Are varroa resistant to our current treatments? Science is saying 'no', but practical experience and quite a bit of individual testing by beekeepers is giving a resounding 'yes'. It's years since I have been able to use synthetic pyrethroids. Amitraz appears to be failing as well.

Why are so many hives collapsing in autumn (my guess is a combination of varroa, viruses and nosema ceranae)? The New

Zealand Colony Loss Survey is great and has my full support, but it doesn't seem to be picking up the massive losses that have been occurring for years in autumn. There is no doubt that there have been massive drops in hive numbers, but no one can tell me how many of those were because of deliberate reduction in numbers or hives that just died and weren't replaced because it was not economic to do so. I know one local beekeeper who lost around 90% last year, hives he was not looking to lose and was looking after.

What are the most effective ways to use alternative treatments, such as the various forms of oxalic acid? There is lots of anecdotal stuff out there, but very little concrete science-based facts especially for dosing and timing. I have done a bit on this myself and thought I could answer my own questions, but there are too many variables. We need some really good science on this one.

Lastly, we need to get serious about breeding resistant bees. There are people working on it and have been for years, but it will never be successful until every beekeeper in New Zealand commits to this. I could do all the breeding in the world but whatever I do will be continuously swamped out by neighbouring genetics. We were told when varroa got here that treatments would eventually fail, that it would take less varroa every year to kill a hive, and that our only long-term answer was resistant bees. Despite this, we have spent the last 20 years relying on relatively cheap, easy to use and, initially, reliable treatments. Complacency must end.

Honey while magnificent is an insignificant byproduct, important only to people with specific taste buds and beekeepers who depend on it for their living. Pollination is the important one and I can only urge the government to urgently (and by that I mean tomorrow) fund some real research into some real problems before it is too late. And beekeepers, we need to work with those scientists and each other.

Just as well I am an optimist.

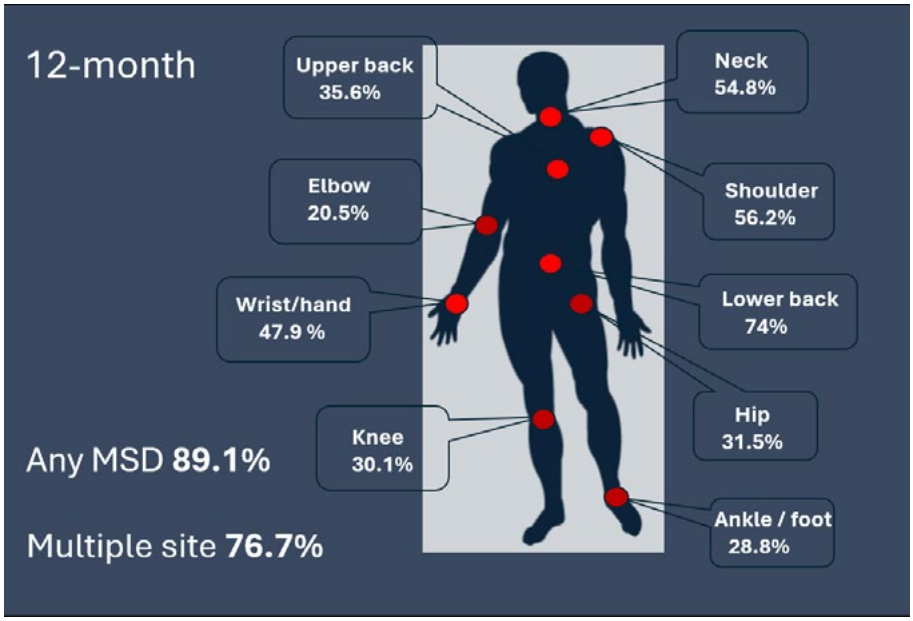
John Berry is a retired commercial beekeeper from the Hawke's Bay, having obtained his first hive in 1966, before working for family business Arataki Honey and then as owner of Berry Bees. He now keeps "20-something" hives.

Lower Your Risk of Injury – a Beekeeping-Specific Resource

Previously PhD student Jane Pierce's research has identified the most likely areas of musculoskeletal disorders among beekeepers, now she reports on a recently-developed, free resource which provides an assessment of common beekeeping tasks with the goal of lowering injury risk.

BY JANE PIERCE

As some of you might know I have been doing a PhD study with Victoria University Wellington, to examine risk factors associated with work-related musculoskeletal disorders (WRMSDs) among apiarists in New Zealand. Musculoskeletal disorders may be felt as aches, pain, discomfort, weakness, or numbness which may interfere with your ability to do your work. Apiculture requires manual work, with physical risk factors such as lifting, carrying and poor postures being part of everyday apicultural work. Calculation of risk is based on the likelihood or probability of the harm being realised and the severity of the consequences.



Jane Pierce's research into musculoskeletal disorders among Kiwi beekeepers identified the pain points, now she has contributed towards a freely-available risk assessment of common beekeeping tasks to help beekeepers become more aware of, and mitigate against, injury-causing activities.

My study showed that apiarists have a high prevalence of WRMSDs, and physical factors were identified by participants as the most likely contributor. One of the important outcomes of my study was the identification of which body parts are affected by musculoskeletal discomfort for apiarists and to what extent. Different agricultural sectors have different results because their work is not the same, so having a general risk management approach was not sufficient to assist in the reduction of musculoskeletal harm.

While discomfort, pain and injury may be seen by many of you as an inevitable part of your job, if not managed well there are consequences which include developing chronic pain, damage which requires medical intervention such as surgery, and increased risk of getting another injury. This will all impact your business, let alone your private life.

A legislative requirement under the Health and Safety at Work Act (2015) is that workplace risks need to be identified, assessed and managed as far as is reasonably practicable. That could be onerous for a small company (as many of you are), as you do not have the time or means to undertake assessments, nor do you have spare funds to contract out your risk management processes. In addition, there are not many resources available for workplaces, especially smaller sectors, to manage their musculoskeletal risks.

Before they were disbanded, the Human Factors Ergonomics team at WorkSafe identified and updated several manual handling risk assessment tools covering a variety of manual handling tasks which are available on their website and are free to use. The NZMAC (New Zealand Manual Handling Assessment Charts) has three sections and covers lifting and lowering, carrying and team handling. The NZART (New Zealand Assessment of Repetitive Tasks) is for tasks which involve repeated movement of the shoulder and arms for loads under 8kg. There is a separate assessment, NZRAPP (New Zealand Risk Assessment of Pushing and Pulling), for tasks which involve pushing and pulling. The Human Factors Ergonomics team also developed some additional resources to assist with assessments such as guidance documents and screening tools to identify which assessment is applicable. You access the resources via this link and, whether it is you or your staff, or both, undertaking such tasks I highly recommend utilising this information.

However, there still appeared to be a gap between the assessment tools and the practical application in a work situation. I collaborated with Leanne Hunter at ProErgo+ who had helped develop the tools at WorkSafe, and we have produced an example of the use of two of the assessment tools (NZMAC for lifting and lowering and NZART) for the task of hive inspection. This is also freely available at this link.

We acknowledge that the example we chose may not be exactly applicable to each apiarist, but the assessments provide examples of practical applications with explanations and are able to be used as templates for your own use. This resource is intended to contribute to the reduction of harm and assist individuals to take care of their own musculoskeletal health management.

If you have any further questions, please feel free to contact myself, mbkstudynz@gmail.com, or Leanne leanne.hunter@proergo.co.nz.

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Breeding for Varroa Resistance – Beginning the Long Journey

The journey of 1000 miles starts with a single step; How do you eat an elephant? One bite at a time; How do you build varroa resistance into your honey bees? You have to start looking. That is the philosophy and practice of bee breeder Rae Butler who says the results of several seasons in her breeding programme demonstrates to others how progress can be made.

Real progress will take industry-wide buy-in though and that is why Butler is hosting a series of workshops on selecting for varroa resistant bees this winter, designed for both queen breeders and those who buy in queens. Participants will gain practical insight on how to implement selection for varroa-resistant traits in their stock. That will include details of how Butler has been able to make gains in her Ashburton-based Bee Smart Breeding business using both open and instrumentally inseminated matings of bees to promote the varroa sensitive hygiene (VSH) trait.

"The key message we need beekeepers to understand is VSH can be identified in breeders and sustained in production colonies under open mating," Butler says.

She undertook a research project over three seasons, starting in 2022-23, first identifying a queen with the VSH allele and then proving that, through open-mating, it could be passed through to the next generation of queens.

"From my observations over seasons one and three, instrumental insemination can accelerate gains in VSH levels, while open mating systems still produce viable progeny that maintain resistance traits," Butler says.

Selecting for varroa resistance need not come at the expense of other desirable traits. They can all be chosen for alongside one another, but, before all else, beekeepers must start looking for resistance traits so they are not inadvertently eliminated Butler says.

"Beekeepers may unintentionally discard valuable varroa-resistant bee populations if they don't actively identify and assess for resistant traits."

The workshop will cover resistant traits, how they are measured and why the Harbo VSH test is the most reliable to assess varroa resistance potential.

Butler has already taken the first steps on the road to building varroa resistance but it will take a whole hikoi of beekeepers to reach the long journey's end. Now she is spreading her knowledge to speed up the journey for others.

Locations and dates of the workshops will be confirmed once a general level of interest is known. To register your interest, follow this link. For further questions email Rae Butler at runny.honey@extra.co.nz or call 027 430 1106.

Autumn's Last Round Around

As the days shorten and nights cool, the bees' flight time shortens, diets reduce and cluster tightens. It's got Bay of Plenty beekeeper Aimz thinking while she works the last round of the season.

A pretty cool, casual start to winter. What an amazing time of year to beekeep.

Death and decay in the veggie patch foretells the coming cold. The act of living, through depth and purpose, reveals to us the art of dying, the naturalness in it, and the wholeness of surrender and acceptance.

Heading into winter, the colonies will lose their share of bees. What lives, must also die. Short lived summer bees will be dying off en masse, and drones will be dragged to the entrances and discarded as waste.

Below 14 °c, the bees will begin to cluster.

The single cold-blooded bee becomes part of a super-organism, generating heat by shivering its flight muscles. Through a period of near dormancy, a tight ball of bees forms within the hive. The nucleus. There are two distinct layers to this ball. The core is the middle where you will find the queen, and maybe some brood, kept warm (between 18-35 °c), and protected by the encircling vibrating bodies.

The mantle is the outer insulating shell, consisting of inwards facing bees, packed tightly so that air is trapped between their hairy bodies. These bees help maintain the temperature, buffering from the cold but also expanding on warmer days to permit air flow and thermo-regulation.

Our bees are not quite hunkered down yet.

The last week has been a flurry of beekeeping, a pretty thorough round around everything. I have been heading up the team as driver of the littlest bee truck, the mighty Mitsubishi Canter. Boxes of bee-stuff carted around sites, feed and feeders and spare hive ware. Like the steering wheel, my hands are inlaid with wear marks and propolis.

All hives are inspected, making sure each one has reserve honey. Empty boxes are taken away from colonies that have already moved up, and old mite control is binned. Needy hives, super

The Mitsubishi Canter, my steed of choice for the last round of the season.

The winter shed work – there's stacks of it…

strong ones, or those lacking stores are given a boost with s ugar-syrup.

Across the board, our bees are doing fine. I have checked, and found success in all our recently united hives – united because they were queenless or had failing queens or drone layers. Those ones then had a weak queenright hive placed on top of them, separated by a sheet of newspaper and a spray of air freshener, to confuse pheromones and bide a bit of time before the two become bonded in union.

One strong hive will fare better than two weak ones. Tidying up any bits and pieces now will allow us that coveted breathing room, maybe even time for recreation – if I can find my way out of the shed.

Inside jobs have finally stopped accumulating, but they are waiting, nonetheless. Cleaning and repairs. My current tasks are making up brood boxes, sorting a mountain of pollen frames, and setting fire to burn piles of windblown trees and old bee boxes, while the boys inch their way through a colossal stack of cut-outs.

The change of season is upon us, a slower pace, time for remembrance and reflection. As too, the winter of life deserves the same reverence. Respect. Peace. Enjoy the journey.

Maybe I'll skive off from sorting frames for a day. If my boss asks, tell him I'm hibernating.

Aimz

Aimz is a second-generation commercial beekeeper in the Bay of Plenty who took up the hive-tool fulltime at the end of the 2024 honey season. Formerly a stay-at-home mum to four kids, she has now found her footing in the family business.

A common wasp is a common pest but at least can be taken care of by fipronil-laced Vespex baits this time of year.

Fuel Shortage: Underprepared?

BY IAN FLETCHER

The Iran war (like all wars) has been unpredictable. The actual bombing stopped just after Easter (in fact more or less as predicted). This reflected US ammunition shortages, again as we expected. I have always thought, too, that any ceasefire would be ragged and that there would be months of disruption. Finally, I still think that any peace deal that includes sanctions relief for Iran is a big win for New Zealand. Iran would be a big untapped market for exactly the stuff we grow best.

But there's the stuff that hasn't been foreseen: firstly, the very poor management of the conflict by the US. The Iranians were able to shut the Gulf first, and on their terms, and so show the world what a wonderful weapon of mass disruption they had exposed. The later American ('Me too') blockade was too late to establish psychological dominance – US commentators had been calling for such a move for a month prior to US action, and so there was no surprise. And not having any idea of what sort of a peace deal they really wanted has meant confusion on both sides.

But the Iranians have learned that the Hormuz card is a real joker in the pack. They don't have to re-open the waterway if they don't get what they want. The psychological advantage now lies with Iran.

Like every country east of Hormuz, New Zealand is in the economic crossfire. Three really important conclusions about the situation, and then some lessons:

First, it's going to get worse. For us, it's all about diesel, and (to some extent) jet fuel and fuel oil for ships. Prices have been held down (yes, down) by slow release of stocks around the world. Traders are now warning those stocks will be gone by the end of May, and prices will then rise sharply. We pay for the fuel we need at rates much higher than the crude oil price – the refiner's margin, shipping costs, and exchange rate depreciation (likely) all jack up pump prices here. I'm told we might well see $5/litre diesel. You should plan accordingly.

Secondly, sustained high fuel prices will tank much of the economy. Tourism (anything involving travel, actually), and fuel-intensive industry (forestry, food supplies) will be really hard hit. It won't take long for the higher prices to start to distort some sectors permanently – many companies will not survive, and the economy will be more fragile in future. Many of our Asian trading partners will be hit hard too, so a regional recession is likely. Some particular sectors will do well – I wish I owned an electric car franchise right now.

While actually running out of diesel completely in New Zealand is unlikely, Ian Fletcher says prices of around $5 a litre in the near future are not far-fetched.

Finally, there are some second-order effects we haven't really understood yet. Nitrogen fertilisers will be more expensive, and may be just unavailable. For beekeepers, that will lift the relative value of clover pollination. Like all pollination, beekeepers receive a poor return for the value created. I've urged before that beekeepers form pollination collectives and negotiate higher prices. This might be an opportunity.

Separately, it's clear that a lack of helium (a by-product of oil and gas production I hadn't appreciated) will seriously crimp production of computer chips. We don't yet know how much, but stored reserves will run out soon, and it's an

essential input. That will directly slow the global engine of the US economy's investment boom.

Are there other risks? The big one is that Asian countries decide to ban exports of refined fuel, and we are unable to replace the supply. So, we actually run out of fuel at any price. As I wrote last month, this would be a threat to our way of life at a fundamental level. The agreement with Singapore being signed this weekend is intended to provide some guarantee against this. But if our trading partners are themselves pushed over the limit, there are no guarantees. I think this is low risk, but it would be catastrophic.

What is to be done? Firstly, I fear the government has a response based on hope. They hope they won't need to make difficult rationing decisions. That may be true, but they have yet to be really clear with the country that prices will go higher for longer. Many groups and regions will be hard hit, and everyone needs time to prepare. Secondly, although we might all agree that physical shortage (no fuel at any price) is very unlikely, we all deserve reassurance that there is a plan, and to know how it would work. At present I'm reliably told there is no meaningful plan. This is culpable negligence.

For each of us individually? Rising prices, and static or falling real incomes face most of us who live rurally or provincially, and many others too. This is a moment to seriously reduce exposure to oil and gas, and manage our other costs carefully. We are all about to discover we are not as affluent as we thought. For many of us, this is also the moment to consider a move across the Tasman. The economic gap between New Zealand and Australia is about to widen sharply.

The election later this year will be fought against this background. The temptation to offer simple, magical solutions to the electorate will be seductive for many parties. Far be it for me to tell anyone who to vote for (I haven't decided myself, and I rarely vote for the same lot twice). But honesty about the challenges and humility as to the solutions will be the measures I expect to apply.

For those of us running small businesses using diesel-powered vehicles, this is a moment to vote carefully, and to ask searching questions as we do. Plato is said to have observed that "failure to go into politics is to condemn oneself to be governed by one's inferiors". It will be a pity to see him proved right once again.

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 CE 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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