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Apiarist's Advocate

News, Views & Promotions – for Beekeepers – by Beekeepers

Sweet Deals?

We explore honey supply contracts and the ambitious 100,000 Hive Project. Plus, we get expert anlaysis on the NZ-EU free trade deal, takeaways from the ApiNZ national conference and much more...

Egmont Honey Think Big, Offer Up Honey Contracts

"The 100,000 Hive Project" is what they are calling it. It's ambitious, a little bit tongue-in-cheek, but a sign of Egmont Honey's desire to grow their supply base and market share. The New Plymouth-based business is calling on beekeepers who wish to partner with them and contract their hives' future honey crops to the Egmont label. We explore the reasoning behind the move and what's in it for beekeepers.

Egmont Honey founder and chief executive James Annabell, says their 100,000 Hive Project has an eye to present and future, for both their company and the beekeepers they are seeking to partner with.

"You have to think big, don't you?" says Egmont Honey's chief executive James Annabell, when asked about the scope of their push to secure honey supply.

The company's founder admits the "100,000 Hive" title – which would represent almost an eighth of all registered hives in New Zealand – has been landed on as more of a marketing gimmick and to pique interest, than a target.

Annabell, speaking from the UK amid a sales mission to solidify and extend the Egmont Honey reach, says the goal is to work more closely, and with a larger group of beekeepers, to develop "sustainable" relationships.

While the finer details of exactly how the contracts will work will not be finalised until Egmont Honey has held discussions directly with potential suppliers, the basis of the relationship would be that the New Plymouth-based packer would buy all honey contracted to them, giving beekeepers certainty their honey will be bought, while providing Egmont Honey guaranteed supply.

"We have been throwing this idea around for a while because, while we have our database of suppliers and we go to them and then some others come to us, this will put a bit more structure around supply and supply relationships so that everyone has a bit more certainty really. An effort to professionalise the industry a bit," Annabell says.

The guaranteed supply would help Egmont Honey not only solidify and expand their current global markets, but also potentially grow into new markets. Currently they export to "more than 20 countries" and are looking to grow the chief executive says.

"As a company we shift well over 1000 tonnes of honey a year and I wouldn't be in the game if I didn't feel we had plenty of growth potential as a company. With the 100,000 Hive Project we are looking after current demand, while also looking to the future."

Egmont Honey's demand is for "bush" or "pasture" honey Annabell says, as well as multifloral manuka. He encourages beekeepers to reach out to them and discuss their likely production, both in terms of variety and quantity, plus pricing and the finer details of the contract arrangements.

"We will talk to everyone individually to understand what their supply capability is, what sort of honey they produce. Then we will set some pricing around that based on the market price, but probably with the option to tap-out should the price go beyond what the retail market can accept."

Egmont Honey Sold!

In just seven years Egmont Honey has gone from Taranaki father-and-son duo Toby and James Annabells' one-hive beekeeping business to soon be the property of the World's largest food company.

Last week Swiss multinational food and drink conglomerate Nestlé announced it is buying The Better Health Company, which took control of Egmont Honey in 2020. The sale will require approval from the Overseas Investment Office, a process which is likely to take several months.

Terms of the deal, including price, have not been disclosed.

Bush and pasture honey supply are the order of the day for Egmont Honey as they look to fill honey pots and supermarket shelves in more than 20 countries.

Following the introduction of Ministry for Primary Industries' (MPI) manuka honey export standard in 2018, non-manuka honey prices fell from regularly above $10/kg to the beekeeper to around $3. However, in the past year that price is said to be in the $5 to $6 range with MPI reporting a 20% increase in the export price in their recent Situation and Outlook report (detailed in *Export Honey Volumes Declining*, page 12).

Setting a "sustainable" price is about getting the balance right between maximising returns for stakeholders in the supply chain and ensuring history does not repeat and markets are lost, Annabell explains.

"There's demand for the honey we are trying to contract, but there is also a tipping point. Back in the days prior to MPI's manuka honey definition, when clover was blended into manuka, then prices went up and our space on the shelf disappeared quite quickly. So, this initiative is about sustainable supply, at the right price, to ensure we maintain shelf space."

Current pricing is "putting pressure" on those markets again, he says, while acknowledging that beekeepers are facing fast rising costs to doing business.

A five-year contract term has been floated, "to prove we are not just going out to fill a one-off contract or spike in demand", Annabelle says.

"We are not reliant on any one market. We are broad in our distribution, so, if one market falls over, we are still pretty well buffered by others. It is no secret, Egmont Honey has grown

quickly and that is off the back of a young, motivated and aggressive sales team."

Over the coming months they will hold discussions with beekeepers on a one-to-one basis.

"I think there will be a huge amount of interest, but then it comes down to whether people are willing to come along on the ride and trust us. Some people might say 'we will just let the market decide and go where we will with our honey'. That is obviously fine, but it comes with its own risks. We are not long off thousands of tonnes of honey being moved at $3.50."

Egmont Honey are unlikely to be the only major honey buyer offering forward contracts this coming season, with Midlands Apiaries general manager Douglas McIntyre signalling they will likely repeat something similar to the clover honey contracts offered to beekeepers in season 2021-22. Those deals were more suited to the clover honey producers of the South Island, giving beekeepers a sliding price scale for their honey based off colour grades, with the lighter the honey the higher value. July sees McIntyre travelling to their Asian markets to shore up arrangements, after which time they will be able to set the details of their new season contracts.

Comvita, who targets manuka honey, will continue to work with their "supply partner group" whose honey is exclusively contracted to their label. While they are always happy to discuss potential partnerships with new suppliers, the current supply partner group – along with Comvita's own hives – generally fills around 90 percent of their honey requirement, chief executive officer David Banfield says.

Midlands Apiaries general manager Douglas McIntyre is off to Asia this month to confirm markets before, once again, offering up clover contracts for the coming season.

Airborne Honey sales and marketing manager John Smart says, although they will not be putting out supply contracts to beekeepers, they continue to be willing buyers and he can't see that changing through the coming season.

"We have our regular honey suppliers who Airborne has built up relationships with over the years, some for decades. On top of that, we are always willing to discuss new supply relationships with beekeepers and expect the prices we offer to be every bit as competitive as the other big buyers in the domestic market," Smart says.

Whatever the details of supply arrangements, the surety of a buyer is likely to appeal to many beekeepers and contracts get taken up. Whether that will total 100,000 hives might be another story, but Egmont Honey are thinking big.

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The EU/NZ Free Trade Agreement – Good, or Bad?

News last week of the signing in Brussels of the EU/New Zealand Free Trade Agreement (FTA). Four years in the making, and already some controversy among agricultural groups, who think a little longer at the negotiating table might have secured a better deal for beef producers, in particular. How should we assess the result – good, or bad? **IAN FLETCHER** – who has extensive experience around the tables in which this deal was negotiated, has spent years consulting to apicultural groups, and recently was elected chair of the Mānuka Honey Appellation Society – seeks to answer that question here.

Firstly, let me declare my interest: I used to work for the European Commission (a very long time ago – 1996-1998). I was a UK civil servant on loan. My area was indeed Free Trade Agreements (and their close cousins, customs unions). My job was to write EU internal rules on FTAs in general, and then to defend the EU's agreements in the WTO. I am a fan of the EU; I enjoyed working with one of the most creative and committed groups of people I've ever met, and I see the EU as a force for good in the world. Judge my comments against that background.

We only have this week's announcements to look at – the legal text is a couple of weeks away.

At first sight, the EU/New Zealand agreement does what the EU always said it would: their top priority was protection for Europe's geographical indications (GIs – some 2000 food and drink products, like champagne and feta). Until we see the legal text it won't be clear how all these GIs will be treated. But New Zealand has agreed to change its law to protect many – or most of them. At present only wines and spirit GIs are protected. It's not all one-way: the Government has secured grandfathering for existing producers of cheese called 'parmesan' (meaning they can continue with the label, but no new New Zealand producers can use the term), presumably at some cost for beef exporters. Cheese called 'feta' will have to go – it can be made only in the relevant locations of the EU. But there's a long transition. Brie and Camembert are fine: they're not GIs in the EU either, so NZ producers can carry on.

Ian Fletcher offers expert commentary on the just announced NZ-EU FTA and it's good news for honey, with the agreement helping to "demonstrate to the world that mānuka honey is not just a flavour substitute for other honeys."

The agreement also provides for full opening of the New Zealand market for other goods, some improvements (for the EU) in our already open services and investment regimes, some lengthening of copyright protection (which I think is bad, but not disastrously so). Re-sold art works will attract a royalty for the original artist or their heirs. The bottom line: the EU had a list of objectives at the outset, and they've achieved most of them (the notable exception may be EU pressure for extended patent length for pharmaceuticals which we have been able to resist, which is a very good result).

For New Zealand, a more mixed bag, but not a bad one. There is really good news on kiwifruit, wine and almost all seafood where early tariff elimination will put tens of millions of dollars straight into industry. Cheese producers will have opportunities, but Europe produces some great cheese, and we will struggle to find a niche in many places. Beef producers get extra quota, but they're concerned it's not enough. Sheepmeat access is already called 'good' by our own Government, and it is extended. Access for milk powder is established. Overall, not bad.

There's a chapter on Māori economic development which seems (based on what I read on the EU website) to be good intentions, but nothing concrete (I hope I'm wrong on this, but the EU summary is written in the warm, fuzzy language that usually means nothing meaningful). Relevantly, MFAT's press release says the chapter "defines 'Mānuka' as the Māori word used exclusively for the Leptospermum scoparium tree grown in Aotearoa New Zealand and derivative products such as honey and oil. It describes 'Mānuka' as culturally important to Māori as a tāonga and traditional medicine." Helpful, but unlikely to be binding on the EU. It will be interesting to see what the eventual EU/Australia agreement says on this too.

There is a commitment on Paris accord climate change goals where both sides are equally invested (it'll be much harder to get the same thing in an EU/Australia agreement, where there are

real differences). International Labour organisation standards are entrenched (both sides have a good record here). A standard clause on the Treaty of Waitangi (allowing the Crown to introduce otherwise discriminatory rules to give effect to treaty obligations) is included. Other rules in areas like competition policy will change little at either end, too.

Honey gets a good result. The current tariff (17.3 per cent) will go, apparently only on mānuka honey, from day one. Other honey will become tariff-free three years later. Splitting mānuka and non-mānuka honey is good: it will concentrate the value of early tariff cuts on the highest value product and help demonstrate to the world that mānuka honey is not just a flavour substitute for other honeys. A real win. The result will mean that the question 'what is mānuka honey?' is suddenly very relevant – and we may find it's the EU that sets the standard. I think the 'multifloral' idea will be hard to defend.

The New Zealand Government's decision to recognise non-wine and spirit GIs ought to galvanise the honey industry. It's an opportunity to make use of GI rules in the EU and China, and get good, strong protection for mānuka (and other) honey in these big markets. The industry must press the government to legislate ahead of the FTA coming into force.

What next? There's lots more to do, so don't pop the champagne just yet: signature, ratification and entry into force will take a couple of years. What could go wrong? Lots: the EU/Canada FTA signed in 2016 has not yet fully entered into force.

New Zealand Prime Minister Jacinda Ardern and European Council President Donald Tusk in Brussels, Belgium, where an agreement in principal has been reach on a free trade agreement.

Overall? A good result. Especially when Europe is so distracted. Could be better? Yes, but the glass is more than half full. We should say thank you, pocket this deal, wait a year or two and go back for more. A very good colleague said in Brussels many years ago, "…if you want someone to accept the thin end of the wedge, don't show them the thick end". Wise words.

Dr Samuel Ramsey of the Ramsey Research Foundation was again a lively and entertaining speaker on his second trip to an ApiNZ conference, providing an update on his research into parasitic mites of honey bees. **Photo:** *ApiNZ*

Conference Takeaways

With an impressive venue playing host, a smaller cluster of beekeepers and a day shorter duration than recent events, the Apiculture New Zealand (ApiNZ) conference was recently back in the South Island for the first time since 2018.

Chief executive Karin Kos says feedback at the June 30-July 1 conference was very positive, while announcing a registration total of just over 750 people. That number is down considerably on recent events in Rotorua that saw more than 1200 gather. While many beekeepers feel the pinch of depressed honey prices, the South Island's lower count of beekeepers is likely to be the main contributing factor to the reduced turnout.

A bevy of expert speakers and industry personal addressed those gathered at the state-of-the-art Te Pae Convention Centre, while the usual wide range of exhibitors in the trade hall provided a regular gathering point.

Here's our takeaways from the two-day event…

- **Shots fired:** Conference premium sponsor Manuka Health chief executive Alex Turnbull, who has been in that role since September last year, had some choice words in his opening address for those who "actively oppose" industry collaboration, saying "we need to unify and Apiculture New Zealand plays a big part in this".
- **Easy solve:** Keynote speaker Dr Jamie Ellis of the University of Florida dispelled some of the myths around "colony collapse disorder" in America, pointing out they have more hives now than at any time in the last 30 years. He addressed major causes of hive losses in both the USA and New Zealand – varroa, queen issues and starvation. One of those is much more manageable than the others though … "The fact that our bees die of starvation annoys the willies out of me. It is so manageable. Easily addressable".
- **Under doh'sed:** Pike Stahlmann-Brown of Manaaki Whenua-Landcare Research presented results from the latest Colony Loss Survey, including highlighting the finding that 40% of beekeepers using Bayvarol to treat varroa underdosed.
- **Following on that topic…:** Phil Lester of Victoria University presented a study recently completed on the university's hives that showed "good evidence there is some mite resistance to flumethrin" (the active ingredient in Bayvarol). However, he advised "it doesn't mean you shouldn't use it" with Stahlmann-Brown pointing out that 85% of respondents to Col Loss were "satisfied" with Bayvarol.
- **Before we leave it…:** Ellis was keen to impress the message "there is no registered varroa treatments that you can put in your hive that is as bad for it as varroa". Despite research and discussion around various methods for managing varroa, he believed, for at least the next 10 years, chemical treatments will continue to be the primary answer to varroa.
- **Double the OA:** An interesting insight when panel discussion on bee health turned to oxalic acid – Dr Ellis recommended using 4g of acid per hive when vaporising, twice the usual approved rate in the USA. Also saying "oxalic acid has promise, but is very sensitive. The amount you use and the amount of brood present is critical," in reference to vapour treatments.
- **Copy cats:** Dr Sammy Ramsey's presentations – as with his appearance at the 2019 conference – were lively, entertaining and deeply fascinating as to the habits of varroa and tropilaelaps mites. His use of electron microscope photographs gives new understanding of the mites. He explained how varroa go to great lengths to mimic honey bees and avoid detection, from copying the bees' smell to the type of hairs that both display.
- **"Not your best and brightest":** Ramsey warned beekeepers not to get overly encouraged by high natural mite drop on sticky boards beneath hives, pointing out they were likely the "old, diseased and infirmed" mites of the population which would soon die anyway.

- **Not looking good Oz:** Calling on the example of Réunion Island, where varroa mites spread across the previously varroa-free Indian Ocean island rapidly, Ramsey said he was not optimistic at Australia's chances of eradicating the recently arrived parasite. With a single mite capable of founding an entire population, preventing spread is near impossible the American entomologist believes.
- **"It's all about timing":** Varroa scientist Michelle Taylor of Plant and Food Research made an excellent presentation on management considerations for the control of varroa. Her line graph detailing an example growth/decline of the honey bee colony, overlapped with mite populations and alongside critical honey flows, provided a great illustration of the need for correct timing of treatments. With talk of varroa damage of colonies prevalent in beekeeping circles, Taylor's graph highlighted the impact of a declining honey bee population (such as in autumn) against any sort of varroa population, but particularly high mite loadings.
- **Show of strength:** Those groups tasked with trying to protect the term "Manuka Honey" are displaying confidence, despite setbacks in the UK Courts. "We have a stable infrastructure and funding to continue going forward. We've got this covered," claimed Te Pitau director Tony Wright, while detailing their primary funding sources – the UMF Honey Association, along with a $2million government loan and $700K from major manuka honey exporters.
- **Bloody battle:** Asked what the failings of their current strategy in the UK courts might be, Wright was not willing to give any details, just saying, "we may lose the odd skirmish on the way to winning the war". Seems so.
- **Sustainable first steps:** Comvita sustainability program lead Erin Swanson addressed the main auditorium saying "the sustainability journey is an opportunity for our industry". She detailed how their company has begun addressing key issues as they target becoming carbon neutral by 2025 while imploring beekeepers to take the first step in their operations. She pointed out Comvita are seeking greater sustainability in the businesses of their suppliers, including honey producers. "Measure emissions, identify hot spots within your business and set targets to reduce them", she encouraged, pointing beekeepers towards the Sustainable Business Network website for tools to help with the first steps.
- **Might Monitor?:** A running theme when the talk turned to varroa was Ashburton queen breeder Rae Butler's desire to establish a more comprehensive mite monitoring programme and ideally a mobile app. Her passion for the idea is certainly being noticed, but will it be acted upon?
- **ApiNZ AGM:** The good news of soon-to-be free trade to the EU greeted the industry on day two of the conference, which began with the industry body's AGM. These days the annual meeting is a rather rushed affair, seemingly angled

toward back slapping more so than any critical analysis of the industry body's operations. There was time for three Life Memberships to be awarded, the first since ApiNZ was formed in 2016. Barry Foster, John Hartnell and Ricki Leahy the worthy recipients.

- **In the waka without a paddle:** There was time enough for a few questions from the floor during general business at the AGM, with Mid Canterbury beekeeper Roger Bray questioning the relevance of ApiNZ's involvement in the He Waka Eke Noa (HWEN) emission reduction discussions. ApiNZ Chair Bruce Wills responded by saying "it doesn't really affect us" and "we were largely an observer" but that "it is much better to be involved in all aspects. We support our primary sector partners".
- **Levy update:** When questioned on the progress of an industry levy proposal, Wills called it "a work in progress" and to expect an update in the next six months.
- **Tropi mite:** With the news that varroa has arrived in Australia, biosecurity was not far from conference attendee's minds and day two saw Ramsey take to the stage with some warnings about tropilaelaps mites, currently confined largely to Asia but making a similar progression across the globe as that of varroa. He pointed out that there is not a single registered treatment against "tropi" mite (although his trials with formic acid are showing potential) … "We really need to wake up and study this parasite before it becomes the next pollinator pandemic."
- **Go fund me:** Ramsey is to be admired for his approach to research. The American scientist has relocated to Thailand to study Tropi mites, established the non-profit Ramsey Research Foundation, yet did not bring up that all important issue of funding until prompted by an encouraged audience member. *www.ramseyresearchfoundation.org*.
- **Time to re-queen?:** Ellis dialled in from Florida again on day two of the conference and shared some knowledge on requeening, saying we have an "ethical responsibility" to ensure our colonies do not have a poor quality queen which leads to reduced welfare of the colony. "We need to stop letting inferior queens remain in the colony, we do more harm than good if we do so."
- **Mike's Message:** Discussions on mental illness are not your usual setting for rapturous laughter, but former stand-up comedian Mike King seemingly took the 'former' out of that title with his thoroughly entertaining 45 minutes spent addressing the main auditorium. While his work with charity I Am Hope often presents to children directly, his conference audience was largely parents, who he left with some great advice around improving the mental wellbeing of both themselves and the next generation. "The key to good mental health is looking outwards, asking, 'how can I help?'. Lift others up," King said, among many other hard-hitting messages.
- **Bureaucratic bungling:** King, after years of dealing with the health system's inadequate mental health support, does not

Te Pitau's Kristen Kohere-Soutar, at the lectern, and Tony Wright, far right, updated the conference on their work to protect the term "Mānuka Honey".
Photo: *Laura Dawkins.*

sugar coat his thoughts on our failing bureaucracies, much to the audience's delight. "They build something which doesn't work, then – instead of admitting their failure – they keep bolting other pieces on to it to try and justify the broken model, until ultimately it sinks." I wonder if MPI's reps at the conference heard that one…

- **Good sport:** Bruce Wills, sitting front row, provided King with a subject for some good ol' fashioned comedic roasting, the outgoing ApiNZ chair taking it all in good humour and helping King provide a lighter side to his serious subject.
- **Deer Levy:** Rhys Griffiths of Deer Industry NZ got an invite to speak at the event and, following in the footsteps of Jen Schuler of the avocado industry at last year's conference, he was singing the praises of a levy in advancing a successful industry. It wasn't an easy road though Griffiths said, "initially it was highly fragmented. We pulled all the deer velvet exporters together in a room and I thought there was going to be a punch up." At least apiculture has avoided that so far too!
- **Genetic solutions:** A more informal discussion on day two between the two keynote speakers, Ramsey on stage and Ellis dialling in through the huge projector screen from late at night in Florida, saw talk turn to genetic improvement. "I believe with my heart that most of the solutions we need to honey bee health problems are there in their gene pool," Ellis said, with Ramsey agreeing. Unlocking those genetic improvements through editing and modification is a touchy subject though, but one "we need to get comfortable with and make happen," Ellis said.
- **Manuka Collective collecting awards:** The Manuka Collective (formerly 100% Pure NZ Honey) once again scooped a haul of golds at the national honey awards, with Jarved Allan backing up his supreme award win from 2021 by once again claiming the top gong at the gala dinner on the final night.
- **$:** From research funding, to improved biosecurity, or a more unified marketing approach, the lack of funding within the apiculture industry was a consistent message across the science symposium and then two days of national conference. Unfortunately, so too were the financial struggles of large parts of the industry. A chicken and egg situation of sorts … and we don't have the funds to research which one came first.

Export Honey Volumes Declining

New Zealand is tracking towards a decline in honey exports for the year ended June 2022, but honey value is up, according to the Ministry for Primary Industries (MPI) latest Situation and Outlook report. How does that align with what exporters 'on the ground' are seeing? We check in with John Hartnell, managing director of Hartnell and Associates, and Sean Goodwin, chief executive of Manuka Collective, to get their takes.

While the New Zealand honey industry continues to work through the sale of several years of honey stores, MPI reports a reduction in the main method of moving product, export volume. Believed to be hindering that export channel, particularly in manuka honey, are congested supply chains. They were filled during the early stages of the global pandemic, resulting in a record export period, with 12,788 tonnes of honey recorded as sent offshore in the 12 months to June 2021. However, New Zealand is tracking towards a decline to approximately 11,000 tonnes in the 12 months to June 30 2022.

From 2018-2021 the average annual honey exports have been just short of 10,000 tonnes.

"The bulk market is slow and retail prices are soft," Sean Goodwin says.

"As an industry we're still sitting on a hell of a lot of stock from the 2020 bumper crop and two subsequent seasons. So it's tough times, but we've got to believe that the medium and certainly long-term prospects remain positive."

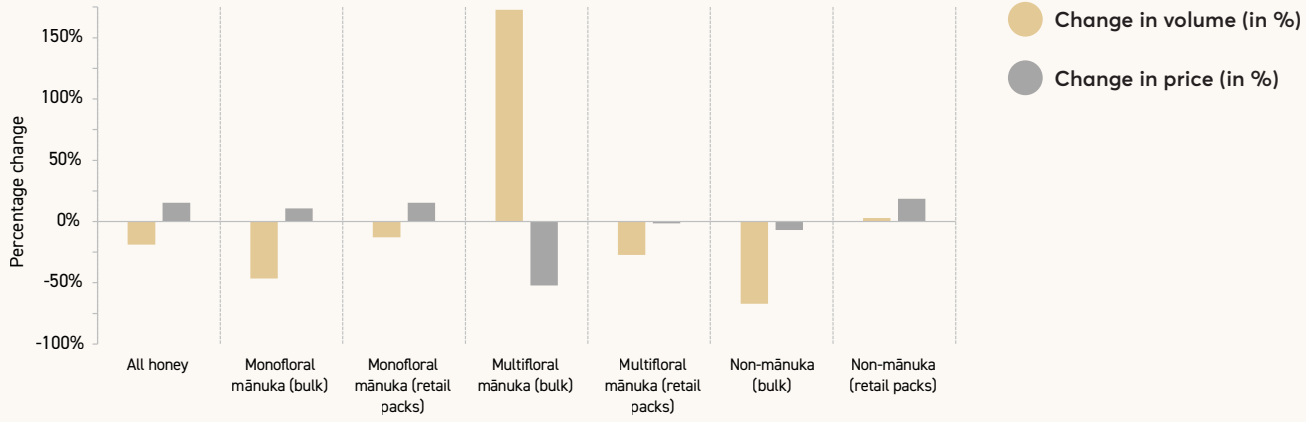
MPI's report states "honey exporters will be looking for both domestic and overseas stocks to clear to support higher prices in the coming seasons".

With only the "blunt object" of total exports providing detail on how much honey is in the global supply chain, knowing when that will clear is difficult, Goodwin says. However, he concurs with MPI's prediction that it could be at least 12 months more, while also expecting manuka honey prices to "stay where they are for the foreseeable future".

With the world opening up again, post-Covid, there is optimism the honey channels will eventually clear and more demand will result.

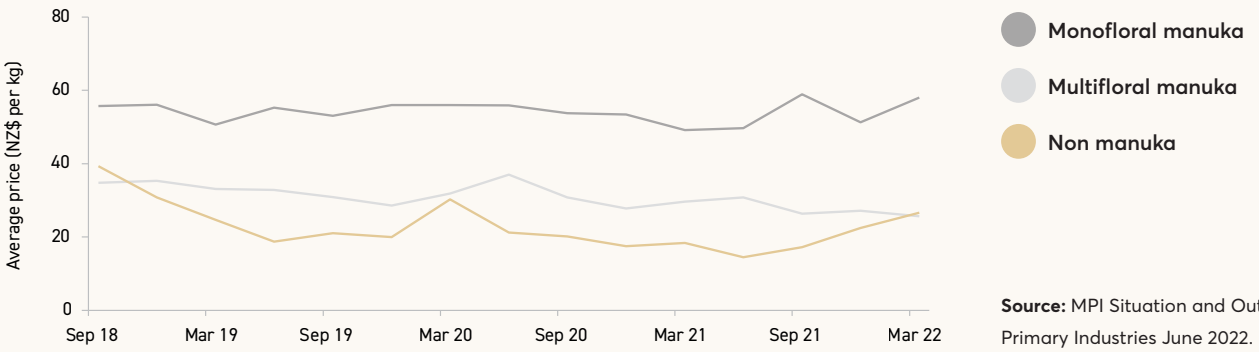
Average prices up but volume down year on year

Percentage change from March quarter 2021 to March quarter 2022



Monofloral manuka prices hold while other honeys converge

Year to 30 June 2022, NZ$ per KG



Source: MPI Situation and Outlook for Primary Industries June 2022.

"We need markets to open up. Shanghai, Japan and Singapore are now only just starting to get going. These are our traditional markets. It's interesting to look at markets like the UK, where we're seeing consumers now returning to stores and balance shift back, from online ordering, to offline again. So, we will see it come back," Goodwin says.

Even before talk of the congested honey chain offshore, the "stockpile" of honey within New Zealand existed, with it looming over the market and depressing honey prices for the best part of four years.

"There are beekeepers throughout the country that are carrying stock that's perhaps three, and now even up to four, years old," long-time exporter John Hartnell says.

"They haven't been able to find a home for it. So, I understand that buying by the larger players, this year, is down on last year."

He believes a continuing reduction in the national hive numbers is the likely outcome as the industry moves to balance production and demand through "market forces".

Registered hive numbers nationally have decreased from a high of 918,000 in 2019 to 806,000 in 2021, with the 2022 count yet to be released.

Non-manuka honey prices have increased according to MPI's report, up 20% on 2021 as a greater proportion was shipped in "retail packs" rather than bulk. That price rise is something Hartnell – who exports a lot of beech honey dew – has witnessed, with that honey lifting around $1/kg in value in the past year.

"There is demand for bush honey at the moment, although I'm not sure what they're doing with it. There's been good demand for pastoral clover honey too and we only had an average season. So that's probably assisted the beekeeper and the price returned," Hartnell says.

The MPI report points to the opening of borders and thus the opportunity for exporters to get out and travel more freely to market their honey as a potential aid to greater export, while also forecasting a "rebound" in the domestic market as our own borders open.

"Prior to our borders closing there was a large, unknown grey market," Hartnell explains.

"Product bought by international tourists to be taken back to their country, and it was quite large. We are talking cartons of product, not jars. How do you quantify that? I have no idea."

With export honey volume down, MPI also predicts total export revenue for the year to be down $42million on the record-setting 2021 year, to $440million. Manuka honey has seen an 8.3% price increase to an average kg price of $55.83. However, multifloral manuka honey has fallen 10% in value as a much greater percentage of it was sent offshore in bulk (rather than retail packs) in 2022.

New Zealand's top honey export markets are the USA (with a 22% share), China (19%), the European Union (excluding UK) (13%), the UK (10%) and Japan (9%).

Talking Points from a Science Symposium Growing in Popularity

A mix of detailed in-depth scientific presentation and more generalised discussion over beekeeping and industry matters hallmarked the 3rd Annual New Zealand Honey Bee Research Symposium in Christchurch recently.

Beekeepers, research professionals and students came together on June 29, the day prior to Apiculture New Zealand's national conference in Christchurch, at the Te Pae Convention Centre. Around 100 gathered to hear 25 15-minute presentations on research that is being undertaken or called for. The day was capped by an opportunity for "industry discussion" where beekeepers voiced their opinion on where industry research would be best focused.

Varroa was, unsurprisingly, a hot topic, both in terms of research already conducted and where beekeepers believe the science community can bring them gains. Overall the day's topics were wide ranging though, from that pesky parasitic mite, to wasp biocontrols, diastase, pollen analysis, pesticides, AFB, training in apiculture and much more.

Top student presenters at the Honey Bee Research Symposium were, from left, Rose McGruddy on the use of RNAi to control varroa, Amber Bell on low diastase levels in NZ honey and Damien Feure on the influence of nutrition and genetics on queen egg laying.

The varroa mite research of Victoria University of Wellington students, under the guidance of Prof. Phil Lester, was a highlight of the event and stimulated discussion amongst the beekeepers gathered. None more so than that of Rose McGruddy, who took out the award for best student talk for presentation of her research into the use of RNAi to control varroa – a very promising line of work.

The symposium was initially held online in 2020, then in Rotorua last winter where around 60 delegates attended. Event organiser Ashley Mortensen says she is pleased with the growth in popularity and expects the event to continue next year.

Some key takeaways…

- **GoFundMe:** Research scientists are always quick to mention struggles to fund their work. That was once again a theme of the event, with their concerns echoed by veteran beekeepers Alan McCaw and Barry Foster, both who have extensive governance experience. They remonstrated the need for the beekeeping industry to fund research. "The industry needs a cohesive policy on research. What is the plan?" McCaw asked.
- **Samples for goodness sake:** The industry discussion to close the symposium saw the concern of varroa resistance to common miticide treatments raised, with dnature diagnostics and research lab technical director John Mackay imploring concerned beekeepers to take samples of bees and mites. "For goodness sake take samples and put them in your freezer, then make the call as to what you want to do. Without samples you have no options. Just dead hives."
- **Our day has come:** Also during that discussion, veteran Hawke's Bay beekeeper John Berry raised concern at the virus loadings now present in hives, with his colonies particularly hard hit this autumn. "When it hits you, you will be wiped out. We always knew this day was coming. Well, it has come. We need to research it and find out what is happening."
- **I got it from my mumma:** Prof Peter Dearden of Otago Uni stepped in to present student Astra Heywood's work into 'parental meiotic contribution in honey bees', which he called "a remarkable piece of work". Heywood's early-stage research looks to have confirmed that certain genetic characteristics in queen bees are consistently inherited maternally. It could lead to the conclusion that genetic improvements may be easier to achieve than beekeepers previously believed, as the largely uncontrolled open and polygamous mating habits of honey bees and

thus varied paternal genetics have lower representation among offspring. "I'm very excited by this, I'm glad you are," Dearden responded to an encouraged beekeeper.

- **Doing it themselves:** Updates on research into varroa resistant bees were well received. Vic Uni's Tessa Pilkington presented her investigation into a beekeeping operation where hives were left to fend for themselves against varroa. The results so far show a shorter incubation period in the colonies is resulting in lower mite populations – just one hour less time as capped brood has resulted in an 8.3% reduction in mite tallies as varroa have less time to reproduce in the brood. The supposed resistant hives were measured as having young bees emerge 10.5 hours sooner than the usual 21 days, perhaps explaining their ability to survive treatment-free. Meanwhile the symposium was also updated on the work of Rae Butler's Bee Smart Breeding programme, with the Mid Canterbury beekeeper demonstrating progress in developing varroa sensitive hygiene (VSH) traits, such as bees removing varroa from brood, in her line of bees.
- **Varroa Taking the Pill?:** "We might have a varroa contraceptive on our hands. The pill for mites," claimed Rose McGruddy after explaining that RNAi (a natural form of supressing gene expression) was shown to hinder varroa reproduction. Colonies subject to the RNAi (fed through sugar syrup), saw little difference in adult mite survival, but a big reduction in young mites. Field trials await this summer.
- **Cocktail time:** The ABAtE research into active bacteriophages to target AFB infections is always of interest to beekeepers, and Danielle Kok of Massey Uni gave an update – they have been able to locate phages which they believe can achieve 93% coverage of AFB strains in New Zealand. Those phages are to be combined to form a "cocktail" which will be lab tested in the near future. Little umbrellas not included.
- **A virus to beat a virus?:** Another from the Vic Uni stable, Antoine Felden may be on the path to locating a virus to supress one of beekeepers' worst nightmares – deformed wing virus. Where VDV-2 (varroa destructor virus 2) is present in mites in high amounts, then DWV is shown to be low. Felden's call for funding to extend the project was heard, with McCaw, a trustee of the Honey Industry Trust which funds industry research, expressing interest.
- **Coming soon…:** Felden also said beekeepers should look out for a research paper into ants' ability to spread DWV, which would be published "in the next few weeks". It seems the team at Vic Uni have been busy little bees…
- **Help Wanted:** AFB Management Agency AP1 Marco Gonzalez appealed to the research community to consider ways in which they can assist the national goal of AFB elimination, outlining a wide range of areas for potential research. Exploring the true cost of AFB, creating devices which mimic the hive disease for training purposes, development of detection tools using AI or sound recognition, creating more environmentally-friendly hive

materials when destroyed and many more concepts were floated, as well as "if you find a better way for beekeepers to managed varroa it will help AFB incidence". There goes that mite again…

- **Filling the training gaps:** Veteran beekeeping mentor David Woodward, currently overseeing Otago Polytechnic's Level 3 & 4 training programmes, highlighted the potential for greater beekeeping training, including in diploma and degree level.
- **Wasps be gone:** Landcare Research scientist Bob Brown has been busy importing hoverflys (*volucella inanis*), as well as the "wasp nest beetle" (*metoecus paradoxus*) as a biocontrol for common and German wasps. In the UK, where the bio-agents are from, it can take five weeks to find 20 wasp nests, whereas in New Zealand it takes just a matter of hours he says. So, Brown is working on importing more of the hoverflys, and some have been released in NZ already. Progress would have been faster had the first shipment not been left to sit on the airport tarmac for two days and 90% of the insects been "lost". Freight issues these days huh…
- **Pollen ID & more trees:** Linda Newstrom-Lloyd and Angus McPherson of Trees for Bees Research Trust both had speaking slots, taking the opportunity to introduce their new book based on simplifying pollen identification for beekeepers and explain its value, as well as the role the Trust is playing – improving hive health and vigour as well as reducing both apiary visits and the need for supplementary feeding of hives.
- **Late risers:** That some bee colonies have a tendency to begin foraging noticeably later in the day than others, was a key finding of Madeline Post's research across 70 hives and seven sites in Cromwell fruit pollination for AbacusBio. Bases equipped with iApis monitoring measured weight, in and out activity and entrance temperature. A major takeaway – perhaps we should be targeting certain hives, such as late risers, to certain crop varieties for greater pollination success.
- **Diastase doubts:** Diastase is currently used, by markets all around the world, as a measure that honey has been stored and at high temperature. However, Waikato Uni's Amber Bell believes that the diastase test "has had its day as a tool for determining honey quality", following her work on stored honey which showed that compounds in the honey, such as MGO, impacted diastase levels too. Further findings of conflicting results between low diastase and low HMF also puts the role of diastase testing into question.
- **Staying at Waikato Uni:** Anya Nobel's research into the bacteria on the leaf surface of manuka honey and its impact on qualities of manuka honey is continuing. Manuka and kanuka trees have been found to have distinct leaf surface bacteria, while regional differentiation is also observed. "There are a huge number of bacteria only found on manuka. This is an incredibly exciting starting point for future questions," Nobel said, while hinting the work could be useful in proving New Zealand manuka's unique qualities and authentication.

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The Dangerous Questions

We often turn to science and new research to solve problems of bee health, but some academics are questioning whether purely scientific solutions are possible. Instead, they highlight the wider economic and sociological environment surrounding bees and beekeepers as the real barrier to improved honey bee health. Our resident science writer Dave Black looks at the problem from a New Zealand perspective and highlights some important but "dangerous" questions for the conduct of our research industry...

BY DAVE BLACK

For years, beekeepers have become accustomed to every news item or research article about 'bees' (unspecified) beginning with some encomium that at once describes their value, justifies the article, and mourns their current status. While beekeeping gets more difficult, and economic and regulatory pressures on apiarists grow, it must be said, the sector mostly expands and even makes money. 'Bee-mageddon' hasn't happened. We point to a need for 'clicks' or a research grant to justify the pessimism and skip quickly to the next paragraph. While dreary, and firmly focused on the global north, these introductions are not all wrong though. Bees do seem beset on all sides by pests, pesticides, and diseases: malnutrition, and so on, problems that despite decades of scientific study collectively seem worse rather than better.

This continual crisis in bee health has led some academics to apply a new perspective for trying to understand the complex web of problems at play, and to express doubt about whether there are purely scientific or technical solutions at all. The argument being made, most recently by American entomologist Maggie Shanahan in February's Journal of Insect Science[1], is that we have failed to acknowledge that, in the real world, biology, entomology, or ecology are inextricably bound to economics, politics, and ideological assessments. We haven't been asking the big questions.

To illustrate what she means, Shanahan expands on the cliché we've all heard comparing the honey bee to the coalminer's canary. She writes;

"…if the honey bee is the canary, a narrow framing leads us to focus on the health of the bird instead of its surroundings. We see the canary, we know it is unwell, but instead of evacuating the coalmine and bringing the bird up to the surface for the fresh air that it needs, we scientists are setting up a more permanent camp inside the mine, hooking the canary up to oxygen, running diagnostic tests, supplementing the canary's diet to elevate its hemoglobin (sic) levels, and initiating a program to develop a canary that can survive on CO_2. Our efforts may allow the canary to live a little longer, but focusing solely on individual aspects of canary health actually keeps us from asking more fundamental questions: Why are we keeping canaries in coalmines in the first place? Why are we still building coal mines at all?"

STATUS-QUO AND BEEKEEPERS' POWERLESS EXISTENCE

This reluctance to address the root cause(s) of the conditions that put honey bees at risk is a consequence of our collective commercial dependence on continuing to operate as things are, and the enormous fragmentation that makes complex modern activities work. Yes, I am thinking about my kiwifruit pollination.

Keeping bees has always been an unstable, seasonal occupation. Beekeepers do not control access to the raw materials required for their hive products and over the years have lost access to bee forage for economic and political reasons, because of habitat change and various forms of agricultural pollution, or simply because of the scale they operate on. Faced with having to deal with consolidating global markets and supply chains, beekeepers had little choice other than to adapt as best they

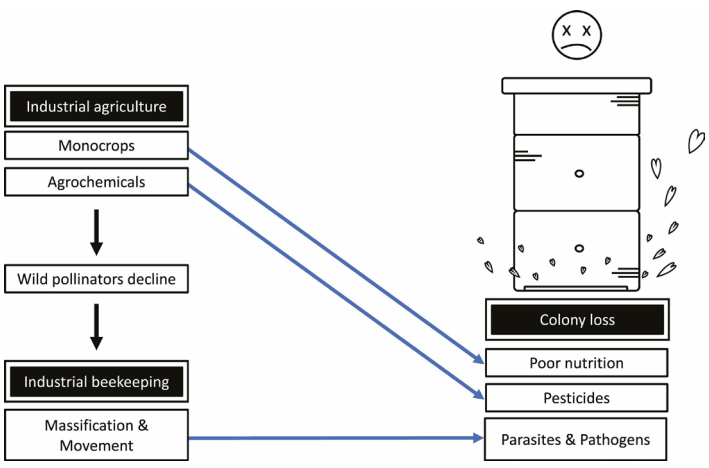
	Provide context	State the problem	Explain how your research addresses the problem
Current framing	*Honey bees are essential pollinators in agricultural systems; their contribution to crop production is valued at $$$.*	*Colony loss is occurring at unsustainable rates. These losses result from multiple interacting stressors.*	*To address these stressors...*
Reframe	*The proliferation of industrial agriculture results in decreased abundance of wild pollinators. So, growers across the country rent honey bee colonies to meet pollination needs in large monocultures.*	*Although this arrangement may improve yields in the short-term, it ultimately exacerbates a series of multiple interacting stressors which negatively impact honey bee health.*	*To address these stressors...*

In her published article in the Journal of Insect Science, American entomologist Maggie Shanahan outlines how she sees bee scientists currently posing research questions and how they could be reframed to help get to the root of the problem.

could. Commercial beekeepers either shifted their business model to specialise or upscale particular aspects of husbandry or honey production (bee breeding for instance) or reduced their risk away from honey crops to the theoretically less precarious income from pollination fees. In comparison to owners of land and capital, beekeepers lead a powerless existence.

For the ecologists and sociologists looking on, this helplessness explains beekeepers oddly ambivalent approach to science. On the one hand we say we need more answers, more 'scientific beekeeping', but engage only sporadically with registers, surveys, and trials, and on the other hand the expressions 'all beekeeping is local…' and 'if it works for you…' are trump cards in discussions about good practice.

In 2021, 4232 beekeepers (from 9891 registered 'enterprises', 43%) responded to the NZ Manaaki Whenua annual colony loss survey, and in past years it's generally run at about 30-35%. Only about 50% of the largest commercial outfits took part last year. The same survey in 2020 recorded that only 13% of beekeepers listed scientific resources in their top three sources of information. Only in the very largest operations was it more than half. We demand science, then either don't believe it or don't use it. The argument is that the focus on scientific solutions merely allows a feeling of optimism and control, of agency in pursuit of a 'solution', when the real solution is far beyond our grasp. Our collective inability to deal with AFB does not arise because we don't understand the biology, it's because we don't understand the sociology.



Maggie Shanahan's depiction of the negative influencers of hive health. How many apply in New Zealand and is our research adequate to overcome them?, asks Dave Black.

A FAILURE OF THE FUNDING MODEL?

A focus on bee biology and beekeeping practice avoids difficult questions about our role as both enabler and victim of the agricultural model we benefit from. Oddly, waiting for the science to save us is a form of denialism.[2]

Scientists usually focus on the minutiae, and not just to cope with the complexity of the questions they try to answer. A researcher can spend their entire career studying a single organism or process. It's also because that's how their work is paid for, rather than an altruistic act of discovery, the pursuit is now directed problem solving. For example, Sustainable Food and Fibre (SFF) Futures funding looks to co-fund economic innovation for New Zealand. The Agricultural and Marketing Research and Development Trust (AGMARDT), who currently contribute to AFB phage research, similarly look for opportunities to cooperate with, and contribute to, the growth and performance of agricultural, horticultural, and forestry industries.

As a provider of the science we ask for, looking at the big picture Shanahan suggests some "dangerous" questions to deal with.

"… if 'saving the honey bee' is less about drilling down on honey bee biology and behavior,(sic) and more about food system transformation, then what is the role of honey bee research? Does it have a significant role? What if the answer is no, not really… if honey bee researchers present a critique of the pre¬dominant agricultural system in the United States – the system that currently supports so much of our research – then what happens to our funding..? If we speak openly about the negative im¬pacts of industrial agriculture, will we alienate the people that work within that system..?"[3]

Dave Black is a Bay of Plenty based hobbyist beekeeper who now works in the kiwifruit industry. He has a degree in Environmental Science and for the past 25 years he has been reading and writing about bees and beekeeping. His essays are available at www.beyondbeebooks.substack.com

References

1. Maggie Shanahan, Honey Bees and Industrial Agriculture: What Researchers are Missing, and Why it's a Problem. Journal of Insect Science, (2022) 22(1): 14; 1–8 https://doi.org/10.1093/jisesa/ieab090
2. Laurent Cilia, We don't know much about Bees!' Techno-Optimism, Techno-Scepticism, and Denial in the American large-scale Beekeeping Industry. Sociologia Ruralis, Vol 60, Number 1, November 2019 DOI: 10.1111/soru.12280
3. Shanahan, ibid.

Hot off the Press for Winter ... Get Your Copy!

It was with great anticipation that I awaited our first ever print magazine and now it is pleasing to have *Print Reads Winter '22* out and a wide range of our stories compiled into one publication.

It wasn't a large print run first up, with 60-odd copies sent out to those who pre-ordered, but luckily for you (our loyal reader!), we have run some extra copies off. A few of these were sold over our stand at the ApiNZ conference last week, and now only about a dozen remain – so get in quick if you want a copy to land in your mailbox soon (ordering details at the end of this story).

What's in it for the reader? Well, while our eMagazine and website will continue to be the main and regular mediums in which *Apiarist's Advocate*'s "news, views and promotions" can be consumed, the concept of a bi-annual print magazine will bring together a selection of what I consider our best and most relevant stories from the last six months. That's what the Winter '22 edition does – 48 pages of stories to educate and entertain any beekeeper, whether you have your own hives, or work in the industry.

In this day and age there is a plethora of information available to us and we can easily get caught up in the irrelevant. *Apiarist's Advocate* puts a beekeeper's lens on and filters through that information for you so, as a busy beekeeper yourself, you have a selection of content tailored "for beekeepers, by beekeepers". Print Reads takes that to the next level, by distilling down our content from the last six months into an even more relevant collection for any beekeeper.

While we pride ourselves on offering our content to beekeepers free of charge via website and eMag, obviously printing adds some cost and so *Print Reads Winter '22* is priced at $29 (gst inc) per issue or $25 per for an order of four or more. It is undoubtably an investment in your beekeeping education and an easy way to get to know the happenings of the wider apiculture industry and people in it. It's a great addition to your smoko room, coffee table, bedside reading and then on the bookshelf for posterity – that's the beauty of *Apiarist's Advocate*, consume it however and wherever you wish.

I invite you to order one (or more if you are an employer) before they are all gone:

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Happy reading! Patrick Dawkins, editor.

The Rewarding Road to Kirwee Bees

BY MAGGIE JAMES

Everyone's road to beekeeping is different and for Kirwee Bees owner Glynn Cleaver, despite close family connections to the industry, it took a violent shake and some mental anguish for him to land with 600 hives. He's embedded in the industry now though, with the Cleaver's family business in Canterbury producing honey under their own label, mated queens for sale, plus nucs and hives for smaller scale beekeepers ... all while providing employment spanning four generations of the family!

Glynn Cleaver had a close connection to beekeeping from the start. He didn't spend much time at school. Instead, as a kid, his uncle's extraction plant held more interest. His first job at 5 years-old was sticking Honey Marketing Authority levy stamps on honey lids!

The now-46-year-old's grandfather and uncles were farmers and beekeepers, with hives around the Molesworth and Kaikoura areas, and his maternal grandparents always had a couple of hives in their Christchurch backyard.

Despite the early connection with the honey industry, it wasn't Cleaver's first career and for a number of years he was a roading contractor operating in the Porters and Arthur's Pass areas as a "2IC" for Fulton Hogan. Like many who lived in the Christchurch area though, February 22, 2011 proved a fateful day.

SHAKEN, BUT STIRRED TO BEEKEEP

When the 6.3 magnitude earthquake hit, Fulton Hogan immediately deployed staff and machinery to Christchurch. Within two hours of the first afternoon shake, Cleaver found himself in the city as a first responder for body recovery, as everything continued to shake.

After those operations ceased, he did go back working at Arthur's Pass, but with great difficulty due to lingering post-traumatic stress disorder. Work and dealing with family life, which included three children, was difficult and eventually wife Alissa delivered a blunt ultimatum: "Find a new job or piss off!"

He decided on the former! Thus, two bee hives were acquired and Cleaver, reverting to a previous path in life, learned how to "breathe" again.

Glynn Cleaver has built a beekeeping business that spans four generations at Kirwee Bees, while offering a diverse range of services to fellow beekeepers. **Photo:** *Maggie James.*

A FAMILY AFFAIR

The hive numbers rapidly increased and now Kirwee Bees is a family business, operating 600 hives, over-wintering a substantial number of full-depth six frame nucs, selling mated queens, and undertaking pollination contracts. The Cleavers also extract and pack under NP1, marketing their own Kirwee Bees honey, while Glynn carries out contract AP2 work for the American Foulbrood Management Agency and Honey Bee Exotic Surveillance.

The enthusiastic Kirwee Bees team spans four generations – Glynn and Alissa, their children Jack (13 years-old), Max (11) and Rex (10), along with super "Nan" (Alissa's 86-year-old grandmother who works a 40+ hour week) and Alissa's brother Paul.

Often buses bring older generations out for the day to visit Kirwee Bees' honey shop and picnic under the trees.

"86-year-old Nan likes looking after these old people – many of whom might be 20 years younger than herself!" Cleaver muses

Alissa is a dab hand at woodwork, with hexagonal display shelving, and benches in their shop beautifully finished as evidence of this.

ADDING VALUE

"Currently, to survive in this business you must do everything yourself and add value," Cleaver says.

"Pollination contracts are radish and Asian greens. Our honey is labelled as to the area it was produced, giving individuality for our customers with extraction and packing in site batches by ourselves under NP1."

When honey supers are removed for extraction, each box has a duct tape patch with the hive number, and this box goes back to that hive as a wet to control potential spread of disease.

"We sell honey on site, at farmers' markets and via retail outlets. The onsite shop doubles very nicely as a tutorial room for hobbyists. Alissa produces wax candles, stick deodorants and lip balms."

The sale of mated queens and nuc colonies gives added diversity to Kirwee Bees' business, along with sales to hobbyist beekeepers of full-depth and ¾ supers and nuc boxes, plus feeders. Wood is cut and planed themselves for this equipment.

Kirwee Bees' incubator, adapted from a wine cooler and with three levels of storage to house queen cells, escort bees and virgin queens, and equipped with a water system to control humidity and coloured lights to act as a temperature alarm. The wooden queen cell holders in front have heavy plastic net bases to contain virgins and easily observe if a cell has hatched.

"We produce and sell mated laying queens. Our queen orders to the North Island are delivered personally by myself, and in August I will fly up with our first order – 100 autumn-mated laying queens. We rely on word of mouth for the success of the queen business."

As for the nuc sales to beginners, well they only go to suitable suitors.

"I hate setting people up to fail," Cleaver explains.

"The thought of AFB nucs keeps me awake at night. So, our nucs only go to people that have come and worked a day with me, or until they are proficient. Sometimes a potential buyer doesn't get a nuc, some decide it's just not for them. The new beekeeper brings their ready-to-go-starter hive purchased from a beekeeper supplier. They have already seen their nuc colony and queen, and worked it. When they leave with their starter hive there are three to four frames of brood, four drawn out frames including stores, plus a new queen, and miticide strips. I point out, that if you can't afford strips, you can't afford bees."

Cleaver has followed Randy Oliver's opinions on oxalic acid treatments and makes and uses his own strips. In addition to that, when he sees mites a 240volt ProVap oxalic acid vaporiser is used. While he admits he's "had a few disasters", they now have a system working well. However, he recommends beginners stick to registered treatments.

STOCK SELECTION AND MATING

When Kirwee Bees started up they bought in mated queens which Cleaver decreed as "absolute rubbish" in terms of production and temperament.

"I had the privilege to work with bees pre-varroa in shorts and t-shirts, and pre-Carnie mating with Italian bees. We needed to get better stock and take the issue into our own hands, if we were to make money," Cleaver says.

"We use the more manageable Italian stock. All our queen bees and our hives are numbered in manual records. Therefore, the genealogy of all queens produced is traceable back three to four generations. When I inspect a hive I do a running commentary on its attributes and Nan is there with her book and pen noting the queen and hive traits. Each yard has its own separate handwritten folder.

"I recognise that a colony is managed via pheromones. We select superior stock of Italian strain because it lacks the aggressive defensive behaviour and is much better suited to Canterbury. They are good at pollen and nectar hoarding and disease resistance, all leading to big strong hives."

Cleaver puts major emphasis on drone production and recording to maintain good stock lines. Kirwee Bees works with a few beekeepers with whom they swap stock. Also, 13-year-old Jack has become a swarm chaser, currently running 30 hives himself. These colonies are closely monitored and recorded for disease and potential drone selection.

"It's hard to guarantee matings, so I flood areas with my top drones. I really focus on drone production at mating sites. It is harder and harder to get quality open-matings in Canterbury, particularly in the last five years with Carnie crosses about."

THE GRAFTING YARD

Cleaver uses the Cloake board method in his grafting yard. Hives are full depth boxes, comprising two bottom brood boxes, with a top box of capped brood. There is mainly capped brood and not much larvae in the top box, then the next week these frames are cycled down. In each hive on a graft there are 40 cells, comprising two bars. Cleaver believes that the frames of open nectar and pollen are best next to the grafted cells.

"There is no such thing as too much royal jelly in grafted cells. If there is no royal jelly, the queen will be malnourished."

On Day five the capped cells are removed and it's off to the wine chiller! Fear not, it's been revamped into an incubator with an airtight seal, wooden vented shelves and a sophisticated temperature controller bought off AliExpress. The bottom shelf holds a humidity producer with water at 60-68% humidity. An alarm beeps if humidity is 58% or lower.

The top shelf holds queen cells, with homemade wooden cell bars to capture emerging virgin queens. In the middle shelf are Nicot cages with newly-emerged escort nurse bees, which are

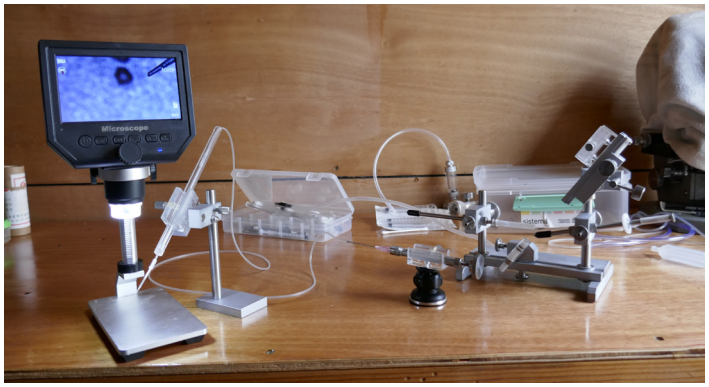
caged one day prior to queen cell emergence. A virgin less than 24 hours old is added to each Nicot cage and attendants, then placed into three frame nucs to be eventually on-sold. By adding these virgins to a nuc, instead of a queen cell, Cleaver estimates he is saving a trip to the nuc yard every third week, because he doesn't have to check that the queen cell has emerged, nor the quality of the virgin. All mated queens are traceable and each queen has a hive number which can be traced back to written records.

The incubator temperature is set to stay stable to within 0.5°C, and is equipped with a nifty alarm system. If things aren't working properly and the temperature drops below 32°C the usually stable blue light is replaced with a red flashing light.

INSTRUMENTAL INSEMINATION

In 2018 Cleaver was fortunate to attend a New Zealand workshop for a few days led by Sue Cobey, acknowledged international authority in the field of instrumental insemination (II) and honey bee breeding, and stock improvement. The technique captured his interest and the Kirwee beekeeper still keeps in contact with the American expert.

He doesn't think that II is the answer for mass production. However, Cleaver is instrumentally inseminating some queens for Kirwee Bees use only. That is, until he has proven his method of selection, written records, his ideologies on the use of CO_2 and attendant workers, are correct.



Glynn Cleaver has been experimenting with instrumental insemination on his own queens, while maintaining open mating in his saleable mated queens. On the left is Kirwee Bees' portable drone semen collector used in the field to reduce risk of contamination. Right is the more expensive Habro insemination syringes and equipment. **Photo** *Maggie James.*

BRING ON SPRING

So, there is usually plenty going on at Kirwee Bees. However, the day I visit in mid-June it's particularly cold – just 2°C at 3pm – and Cleaver is in the mode of contemplating winter work for the next day: splitting a massive wood pile for the local food bank. Not far away though, farm gorse hedges are flowering profusely with pollen, and he is eagerly contemplating next week and the start of hive stimulation feeds for drone production …

It's a long way from working the roads of Arthur's Pass and the rubble of a devastating earthquake, and it seems like he can breathe again just fine.

To discuss any aspect of this story with Kirwee Bees email kirweebees@yahoo.co.nz.

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Honey Compliance an Achievable Challenge

BY PHIL EVANS

When it comes to food safety, there is a road to a fully-compliant honey industry, believes Waikato beekeeper Phil Evans. He has 12 hives, runs a small extraction facility from his Hamilton flat, has made it NP1 compliant, made it available to other beekeepers and made it pay – by selling his Dinsdale Honey in two local retail outlets. Now he challenges beekeepers – those with many hives or few – to work together to protect the honey industry.

I got my first hives in the spring of 2017 and, at that time I had no idea about American foulbrood (AFB), varroa, or requirements for selling honey. I thought it would be great to have a couple of hives and get some honey for myself. I feel like over the last five years I have seen everything beekeeping can throw at the beekeeper. I have twice lost all my hives to AFB, and suffered my share of losses to varroa and wasps.

I have extracted my own honey with hired club equipment, extracted and bottled at a small independent extractor, and now set up my own registered kitchen to do it all myself. Over the last two seasons I have also extracted and bottled nearly four tonnes of honey for around 60 customers.

I won't hesitate to say all bee clubs around the country should be promoting compliance to all their members, but I do realise that putting that in place is no easy task. In last month's Apiarist's Opinion article *Why We All Should Comply*, Scott Williamson discussed some of the reasons for compliance, with tutin, contamination and mis-labelling being the most significant. Before that, the story *Non-Compliance Conundrum* introduced the issue to Advocate readers in May.

Phil Evans

Honey is food and, although it is considered low risk, it is still food. I give my customers the analogy of baking a cake. Would you bake a cake on your garage work bench? Would you use flour that has weevil or moth larvae in it? Would you put the cake in a box that has had mouse droppings or cockroaches in it? Would you transport your cake on the deck of a ute, or the dirty boot of your car? Would you do any of those things, and then expect someone else to eat the cake? Please don't be the person who thinks any of that is OK. A cake is food, and so is honey, so they should both be prepared in suitable conditions, with all necessary steps taken to ensure it is safe to eat.

A DOG'S BREAKFAST

I have watched video and photos posted online of some appalling extraction setups. The most abhorrent was a photo of a bucket of honey sitting on the ground where the dusty concrete garage floor met a gravel driveway. The bucket lid was on the ground beside the bucket, with a dog standing on the lid with its nose sniffing the honey. The caption was "extracting honey for tomorrow's market".

Anyone who thinks that is OK really is a disgrace to this industry, and it is images like this that do the whole industry irreparable damage.

I have also seen homemade extraction equipment that appears to have never been cleaned, and possibly stored outside. Another recent video showed a group of people extracting honey in an aircraft hangar, with the extracted and filtered honey left open while the lids were stacked on the floor nearby.

You don't need a whole lot of space to operate a certified honey extraction facility. Hamilton beekeeper Phil Evans has done so in the kitchen of his two-bedroom unit and made it pay.

When people buy any food, there is an expectation that it has been produced or prepared in a facility where hygiene is paramount, from start to finish. That is not happening in this industry, and it is past time this industry stepped up and insisted that ALL honey complies with food safety laws.

Compliant extraction and bottling of honey, tutin testing and labelling should be included in everyone's beekeeping budget, without exception. Everyone eating any honey should know that the preparation is of the highest standard, and has not been extracted in a garage with the help of the family dog.

THE RULES

The rules about selling honey are clear. To sell, even to family, your honey MUST be extracted and bottled in a registered NP1 or RMP facility. Your honey MUST be tutin tested if taken off the hives after December 31, you MUST have a compliant label, and you MUST keep records of sales, among other things. This is the law. If you are selling any honey to friends and family, and not complying with the above rules, you are breaking the law.

Ambiguity surrounds giving honey away, which you are allowed to do as long as no money or trade occurs. The problem with this is that tutin testing is only recommended, and you can extract in your garage and bottle into partially cleaned curry jars.

I believe that all honey sold, donated, or given away, should be fully compliant.

THE ROAD TO COMPLIANCE

Getting to a fully compliant position across the country will not be easy, as most contract extractors have minimum number of honey box requirements that keep hobby beekeepers out. When I made the decision to set up my own facility, I decided to also make my kitchen available to others to help cover my costs. However, it may surprise many that – even though I had less than 150kg of honey in my first season in my facility – sales in two retail outlets more than covered all the registration and equipment costs, with a little left over. I didn't really need to extract others' honey, but I had the time, and the desire to play a part in getting compliant honey out into the market.

Being able to do this is not for everyone, but there are beekeepers out there that could. Bee clubs could at least start discussing setting up a facility, assisting members to do the same, or contacting commercial operators to work out ways of making compliance more widely available. There are clubs that have their own registered setups, and commercial operators that will take smaller box numbers.

MY SET-UP

My facility is in the small kitchen of a two-bedroom flat that I rent. The extraction occurs in the kitchen, with filtering and bottling in a corner of the lounge where the carpet has been covered by 2 large (and cheap) pieces of vinyl flooring offcuts. There have been some 'accidents' where not paying attention has resulted in minor spills, but with the cleaning and hygiene processes in place, these are easily resolved. The main requirement to pass the inspection is that every surface must be washable. Cleaning processes are required so you don't wipe down the electric uncapping knife with a cloth that has just cleaned honey drips off the floor.

Keeping records is also necessary. If you are only extracting your own honey, this is as simple as recording how many boxes, how many kgs extracted, how many of each size bottled, and where you are selling it. You can design your own compliant labels, which can be printed on your home printer or sent to a local copy shop. Getting tutin tests done is very simple. All testing labs will send you the sample pot and a return courier bag for free.

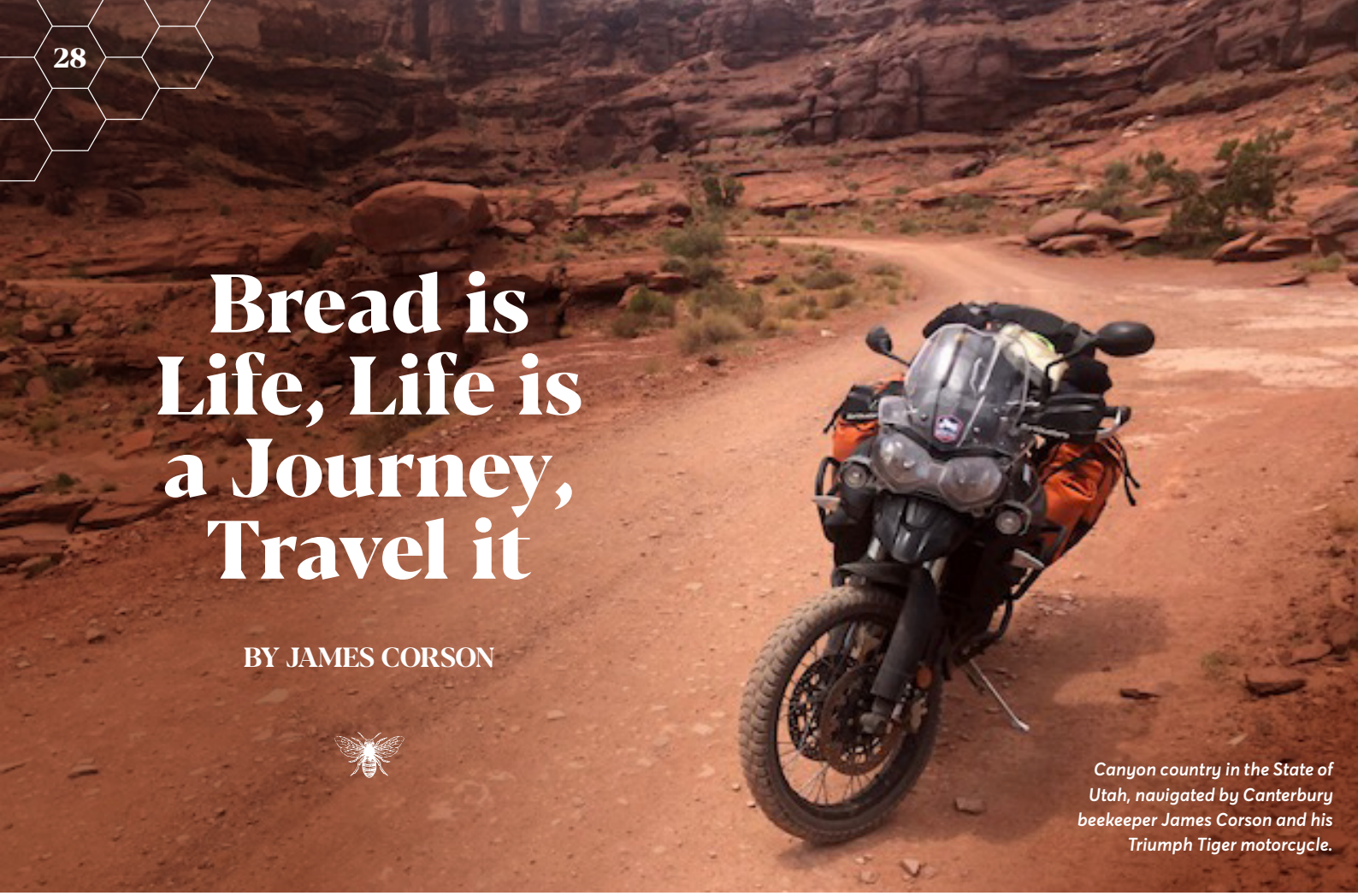
If you have the time to extract others' honey, you just need to keep records of their extractions, plus ensure they get a tutin test done, and have compliant labels. If you are already doing this for yourself, you can easily ensure your customers are also meeting the same requirements.

This conversation needs to be had by all beekeepers and bee clubs to work towards compliance as the norm, which all beekeepers follow, just as we already do with varroa and AFB.

My challenge to all beekeepers is on. It can be done.

Bread is Life, Life is a Journey, Travel it

BY JAMES CORSON



Canyon country in the State of Utah, navigated by Canterbury beekeeper James Corson and his Triumph Tiger motorcycle.

On the trip of a lifetime, Canterbury beekeeper "Jessie" James Corson checks in from his journey across the states of America aboard an 800cc Triumph Tiger motorcycle. How he ended up with this Tiger by the tail was told *last month*. Now he reflects on the road travelled thus far, the characters that inhabit it and finding "zen" in an amazing continent.

Tonight I come to you from my camp on the banks of the Arkansas river … and she is no mean river. Draining out of Kansas and the mountains of Colorado, feeding into the Mississippi. As I paddled in her warm waters in the late evening of a hot and humid day on 'The Tiger', I absorbed the energy of the continent and, oh my goodness, what energy.

Small town America, as seen from the vantage point of a Triumph Tiger. What characters lie around the corner?

Today is Sunday in The Bible Belt. The land is in prayer … sort of … and, as the Tiger ate up the miles through the rolling forests in the early morning cool, I reflected…

In the San Juan mountains I got a flatty. The back end went soggy on a corner and we came to a slow halt. Darn it. We limped in to town and pulled up at the convenient air hose. I always thought 02 was free, but not in this neck of the Land of the Free.

As I fed eight quarters into the air-meter a Harley rider pulled in. A drop-dead gorgeous riding an orange-tanked pan-head beauty. It was fate that we didn't ride the pass together, but she gave me a hug in commiseration at my predicament. Adventure bikes eh!

I filled the tyre with air and 'slime' and rode on out of town. Two kms up the hill and the back end went soggy again.

The art of the journey is a philosophical state of mind … the zen of the ride. There is no timeline, no daily goal. The day is not set with a destination. The destination becomes that arbitrary point along a casual route of connection.

"HONEY I'M LIVING LIFE"

The tyre slime didn't work. Funny that.

I limped back into town and came to a halt beside a liquor store. Behind the liquor outlet was an open-doored 'shop' with a stack of old truck tyres out front. Even in the darkest moments there is always potential … one just has to look!

The liquor store owner found the tyre stack owner, and a new connection was made.

Dylan had a long wispy beard and smoked an evil smelling cheroot. He had the air of a man in control … there was no rush, nothing was a problem. He also had a tyre bead breaker and a compressor in his shop, which are also good at resolving problems!

"I reckon we can do something with that", he drawled as he drew on his smoke. "I just gotta go and sort the ole lady out first".

He reappeared an hour or so later and over the course of the early afternoon we pulled the ripped tube, replaced it with a spare and put the whole rig back together. His phone pinged and pinged as we worked. "Messages from the ole lady," he sighed. "Where are yah", she kept asking.

As I tightened up the back axle nut Dylan's phone pinged again … "Where are yah. Whatcha doin'". Dylan spat the cheroot out onto the dirt and sent a message back … "Honey, I'm living life!" And then he switched the phone off.

ON THE ROAD AGAIN

I crossed over Lizard Head pass to Telluride and beyond in the late evening light. It was stunning. The spring green of the Aspen shimmered against the red and browns of the mountains. I plugged in the tunes on the blue tooth Sena Skid Lid and cruised, easing the Tiger into the lazy curves and pouring the power on with the twist grip as we came out the other side. Rock n' roll n' country at its best!

It was almost dark when I pulled into a small settlement. A neon sign beckoned with the blue and red thirst-quenching words anyone, after a day in the saddle, wants to see … *Budweiser.*

The day hadn't panned out according to my plans … It did better than that. Rehydrating in a small town bar with Mike, who was in love with a Mexican gal, and Nicole, who owned the joint, and who ended up shouting us the bill on the beers and Taco'.

One must watch where they step on life's journey, if it takes you through the backwaters of the USA!

I camped that evening in a small rest area beside the Uncompahgre River that had its source in the San Juan Mountains. As the chattering waters soothed me to sleep, I reflected on a quote I had seen years ago on a truck in India…

Bread is life. Life is a journey. Travel it.

AFB Detective's Mystery Honey

Francis Proffit strode across stage at the recent national honey awards to claim top prize in the club category for his "mystery" honey, but the Taranaki Beekeepers Club member is better known for his dedication to tackling American foulbrood (AFB) through both his work with the club and as a travelling AP2 hive inspector for the national agency. We catch up with him soon after scooping his honey award to see how he achieved success in two crucial areas of beekeeping.

He's calling it "dark bush" and that's what it was entered as at the National Honey Awards, June 30, but Proffit admits it's a bit of a "mystery one".

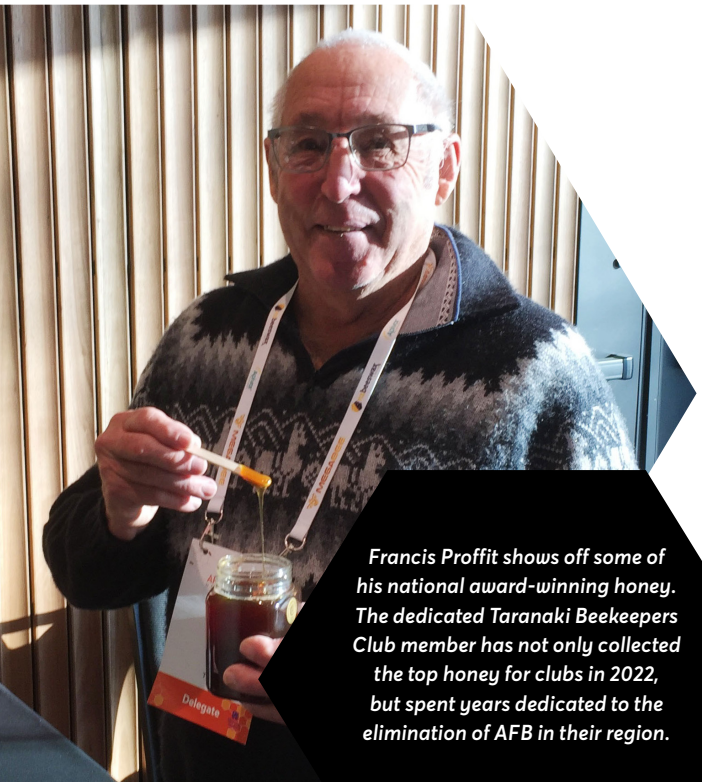
Collected from hives in a Taranaki valley featuring a range of native bush, including rewarewa and manuka, as well as some willow trees and farmland with clover pastures, the honey is very dark and judges were impressed, even suggesting it could have been entered in the open honey classes.

Proffit keeps approximately 20 hives, has been a member of the Taranaki club for a dozen years and an AP2 hive inspector for the past 10.

"Producing liquid honey is difficult for hobbyists, who don't have access to sophisticated heat exchange systems. However, this sample had no granulation," honey judge Claudine McCormick praised.

"It has a taste of raisin on the pallet. Dark honey like this is usually rich and bold, but this is different, there is no lingering aftertaste."

While Proffit is understandably happy with the award, having beaten out "about 30" samples locally to earn his club's nomination, it is work with local beekeepers to vastly reduce AFB



Francis Proffit shows off some of his national award-winning honey. The dedicated Taranaki Beekeepers Club member has not only collected the top honey for clubs in 2022, but spent years dedicated to the elimination of AFB in their region.

infection in their region which he is most drawn to discuss.

"They get sick of me talking about AFB and varroa, but we have cleaned up New Plymouth and even Taranaki to have very, very low AFB. I put that down to talking to the beekeepers, both commercial and hobbyists."

He is passionate about his work as an AP2 and says he freely gives much of his time to the work, getting calls from beekeepers most nights to discuss the matters of AFB. Annually he completes about 80 certificate of inspections (COIs) for non DECA registered beekeepers, adding a level of education into the work.

"I might spend an hour doing one COI hive inspection, all the while training the beekeeper and teaching them what to look for. It's extremely rewarding. The Management Agency don't know how much I do, especially with commercial beekeepers. If I am traveling around the mountain, to do a COI, I will stop to have a cup of tea and talk about their AFB problems."

That travel is not limited to the wide-ranging Taranaki region either, with Proffit sometimes taking his caravan on the road – along with wife Christine running logistics and administration – to incorporate AP2 work with their holidays. He doesn't charge mileage to the Agency until he gets on site, and the caravan covers his accommodation, giving the Agency a cost-effective "roving" inspector.

The former dairy farmer makes for a convivial and very approachable face for the Agency, something this author has experienced when the Proffitts – caravan and all – incorporated some hive inspections in Marlborough into their South Island getaway a few summers ago.

His desire to help advance the beekeeping industry through AFB education and identification is obvious. It extends to taking a detective like approach to snuffing out sources of infection, which has undoubtably helped reduce its prevalence in his area.

An example of this was a recent project where the club worked with Gisborne lab dnature to test honey and hive samples for spores, pointing them to two suspect hives.

"I immediately inspected those hives and the surrounding areas and cannot find any AFB," Proffitt says.

"I have managed to trace them back to an old beekeeper that extracted honey. I think the positive honey samples came through his plant, but I'm still looking."

Still looking for AFB and moving closer to elimination, while also adding "award winning honey" to his resume. While there might be an element of "mystery" to the Taranaki beekeeper's honey, the reason for success in reducing AFB is more obvious: passion and work ethic.

"I love it. It is extremely rewarding."

Thoughts, feelings or other input you'd like to share?

We'd love to hear it.

Email your 'letter to the editor' to editor@apiadvocate.co.nz

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