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A Honey Season of Two Halves

New Zealand's beekeepers report on a summer where honey production waxed and waned.

TRAMID APPARIES

Photos: top - Jody Mitchell, Kaimai Range Honey; bottom - Pyramid Apiaries.

A Honey Season of Two Halves



Beekeepers from many regions of New Zealand are reporting a season of two distinct halves, with native "bush" honey varieties boosting quantities, while several major mānuka production areas have failed and clouds have also hung over key South Island white honey regions.

It's difficult to get a gauge on what the national honey crop might come to in season 2024/25, and many beekeepers are hopeful late-season flows can further boost their honey takes, but one thing is certain – a colder than usual January in many parts of the country has severely limited the honey crop that promised much more pre-Christmas.

2

"Over a recent 15-day period the regions that have been gloomier than usual for January have been the Far North, Northland, the entire eastern side of the North Island from East Cape down to Wellington, Nelson, Marlborough and the northern half of Canterbury," wrote Philip Duncan from weatherwatch.co.nz on January 24.

"If you draw a line from Bay of Plenty to Taupō to Whanganui, everywhere east and southeast of there has been more than 2°c below normal. In the South Island, Nelson, Marlborough and most of Canterbury also more than 2°c below what is normal for January." Easterly and southerly weather patters have brought those temperatures, meaning areas with mountains to their east (such as the South Island's West Coast) have seen greater heat in January.

While there is still much testing of honey to take place, few beekeepers spoken to for this report are optimistic about "quality" of mānuka honey with regard to MGO levels as they point to patchy flowering of the tree and the lack of the other key ingredient, stable hot temperatures.

NORTH ISLAND

Starting at the top of the country, Northland beekeepers appear to have benefitted from the warm temperatures that predominated much of New Zealand as the honey began to flow in late-spring/ early summer.

"We had a pretty good run on the early honey," says John Gavin, owner of Gavins Apiaries outside Whangarei.

"We don't normally get a lot of rewarewa up here, some but not a lot, but this season the hives put a lot of honey on in October.



Then our manuka flow was alright, without being good."

However, from mid-December "it stopped dead" due to a lack of temperature and too much wind. All up though, it shapes as a "reasonably average season" where the "mānuka crop was all right – a lot better than some other places in the country," Gavin says.

An hour's drive south, owner of Marshwood Apiaries, Richard Kidd says it was shaping as the best season in a long time, until the mid-December weather change. The quantity of the mānuka honey take is likely to be above average, but he suspects the activity level will be reduced.

On the other side of Auckland, Waikato beekeeper Jane Lorimer says her strongest Hillcrest Apiaries hives have put on a good box of honey, but the weaker colonies very little in what is, all up, a poor honey crop as pastures dried off fast.

"A continual wind since Christmas has meant bees have sat there and done very little," Lorimer reports.

Further east in the Bay of Plenty, Galatea Apiaries owner Cameron Martin says the rewarewa flowered well, boosting the early-season bush honey.

"Before Christmas we had a reasonable bush flow, but since Christmas, like a lot of places, we have had a lot of colder

> Pyramid Apiaries owner Laura Dawkins blows out honey supers at a kanuka block, taking what was available in a down season for the region and for the entire east coast of the South Island.





3

winds and the clover didn't produce like we would have liked," Martin says.

4

At Kaimai Range Honey, owner Jody Mitchell says the Bay of Plenty flows in spring were the strongest in several years, with the rewarewa again helping them and Tawari going "ok". The pre-Christmas flows have made for "a nice average season which is nice for a change because the last two seasons have been dire," she says.

For Bill Savage, owner of Wild Cape Honey on the North Island's East Cape, it was the same story as many of his beekeeping brethren around the country – a substantial early season crop, but little more post-Christmas.

"The early flow was good and the quality looks good, not that we have tested it yet. The later stuff has been poor though. From mid-December the weather turned and the manuka blew off. It just stopped," Savage says.

"There are good hives out there though. We have hives doing over 50kg on mānuka, but then the later crop is only about 15kg. Hives that came out of early sites with 30 to 40 kilos have gone to the later sites where they would usually do a similar amount again and have done nothing, or perhaps up to only 15kg."

Coming down the east coast, Hawke's Bay was shaping for drought following the heat in the first half of December and Melita Honey CEO Lars Janson says they were hopeful their approximately 800 hives on white honey sites were heading for a "cracker season". The weather change means they have produced only a box or two of honey, "nothing outrageous, but the flow is still going and there might be some more yet". Over the entire operation their crop has been badly limited by varroa in the hives though.

"It's one of our worst seasons. We will probably end up with less than 15kg a hive. A good spring, but our varroa levels have been very hard to get on top of ... A disappointing season for us," Janson says.

The all-important mānuka crop further inland has fizzled for Melita.

"The weather was good through spring and up until Christmas, but with most of our mānuka sites on the Central Plateau they flower later, and the flower was good. I don't believe the nectar released though. It has been cold and miserable there and it even snowed on the Desert Road in January. That tells the story," Janson says.

In Wairarapa, Steens Honey apiary manager Jonathan Tiangco says "I want to be optimistic, but the reality so far is not good," again pointing to the cooler temperatures in January as the limiting factor.

Paul Sergent, owner of River City Honey in Whanganui, says his bush crop has been good, boosted by kamahi, but their mānuka honey take "has not been great".

"The early sites have done well, but the flowering has been patchy in inland Wanganui and the cool nights have slowed down any good production," Sergent reports.

A company with as good a feel as any for the North Island honey season is Tweeddale's Honey and their almost 20,000 hives





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sales@stowers.co.nz 0800 082 000 www.stowers.co.nz across central New Zealand. Don Tweeddale says he expects a "very, very poor mānuka season".

"A few frames of manuka, instead of a box and a half. Quite dramatic and that is pretty much across all our areas," Tweeddale says.

"The mānuka flowering was not good. A rest year where it pushes its energy into growth and thus only about a third of the normal flowering."

The bush crop has been much better though – "average to good" – thanks in large part to the rewarewa, while clover returns are continuing and shaping as around average.

Tweeddale's Honey forecast to have a lot of multifloral mānuka honey, or under UMF10-type monofloral the owner believes. The honey crops in Wanganui and out to the coast in Taranaki have also been poor Tweeddale reports.

SOUTH ISLAND

While the national honey season can be described as one of two halves, the South Island's returns may also be viewed as two differing halves – geographically. On the West Coast the crop is being reported as better than most seasons, while from Marlborough south, through Canterbury and into Otago and Southland, the easterly weather pattern has had a significant limiting effect.

In Canterbury, Hantz Honey owner Barry Hantz is telling a similar story to many North Island apiarists.

"It started really good, and we thought we were back to the usual season where they get into their work from late November, into December. From there though, we got the rain at the right time, but just didn't get the heat afterwards, from Christmas time," Hantz says.

"It's on the poorer side of average, that's for sure. We might get just over half of last year."

Geoff Bongard tells a similar story from Ashburton Apiaries base. "We haven't got much around here. We haven't had a summer. We are still waiting and time is running out," he says.

Following the road south, the story is only marginally better, as Peter Ward of Alpine Honey Specialities checks in from Hawea.

"Central Otago has been really patchy, with quite a few disappointing areas. It just got too dry, then down closer to the coast it really got cool and there was a huge amount of the southerly and easterly weather which limited coastal Otago," Ward says.

"Our mānuka production is below average in Central Otago, but there have been a few spots in Southland that have produced a bit, but I would say for anyone looking to buy blending mānuka there might not be a lot around."



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6

"The honey crop will be average, perhaps a bit above average per hive, but we will be well down on total because we are well down on hive numbers," Hayes says.

That's due to a historically wet spring in Southland, which hampered queen matings and colony build up in general, meaning Hayes has only half his usual honey supers placed on hives.

"I have been explaining it like this to the farmers: we have an eight-week window to make honey, and the hives were five or six weeks late in building up this year," the Southland beekeeper says.

Young men were once told to 'go west', and they would have done well to heed the advice with their hives on New Zealand's mainland this summer. With rata showing strong bloom and an inverse weather pattern to much of the rest of New Zealand, there was honey to be had.

"All spring we had rain, rain and more rain and it was slow up until Christmas," Gary Glasson says from Blackball, home of Glasson Apiaries.

"I was looking at the crop then and thinking, this might be one of our worst, not good at all. Then afterwards the weather came right, the rata came out in flower and away it went."

Production on kamahi sites was poor he concludes, but they did get a mānuka crop, albeit one Glasson does not expect to be high in activity. "We are looking at an above average season. I am hesitant to go above that, but there is time for them to fill another box or two, so it could end up being a really good season," he says.

At the top of the South Island Jeff Lukey runs Sherry Valley Apiaries' hives between Marlborough and Nelson and the veteran beekeeper says his 50th year in the hives has been a productive one thanks to a hot start.

"It was a very interesting season, a wet and cold spring where an awful lot of sugar was needed to keep them going. Then, from the last week of November and first half of December it went the other way and got sweltering with 30-degree days here. The whole house open at night so you could sleep and the bees took off," Lukey says.

"I said to my staff 'we are going to need to have every box in the field' and, sure enough, by Christmas we had to have the shed up and running to get in the boxes because we had used everything we had plus some new gear we bought. Basically, we had the equivalent of last season's crop on the bulk of the hives by 20th of December. I had never seen anything like that before. That includes Marlborough, where there was a big kamahi flow."

Cool weather in January has once again slowed the roll of honey in the top of the South though and Lukey has a local summary which probably sums up where the national honey crop of 2024-25 will finish up – "It is not a dismal season, but it is not super fantastic". *****



Going to the Vote



Looming in February are votes crucial to the existence and roles of industry groups Unique Mānuka Factor Honey Association (UMFHA) and Apiculture New Zealand (ApiNZ) as a seismic shift in honey industry representation in New Zealand beckons. It will need members of both groups to advance the proposals of their leadership at Special General Meetings (SGM) though. We examine what will be put in front of them.

UMFHA and ApiNZ supplied their respective members with a copy of an updated draft constitution for the proposed 'New Zealand Honey Association' (NZHA) on January 28 and 29 respectively, calling for a final round of feedback to be lodged by February 4. After that, both hope to hold SGMs on the week of February 17, with the plan for ApiNZ to wind up and encourage members to join NZHA, should the UMF members decide to adopted their proposed new constitution.

7

The latest constitutional draft has inserted crucial new detail about how NZHA will be financed and led as they seek broader industry-good activity than UMFHA's current role. Following feedback from members after the first draft constitution was released in November, the board of directors has been expanded from six to nine, while membership fees and a levy of 30c a kg on members' monofloral mānuka honey exports has been defined.

The new association will be open to beekeeper and honey exporter full membership, with honey exporters who hold UMF™ licences paying 45c a kg on monofloral mānuka exports.

"The higher UMF™ levy rate reflects the additional value (and associated costs) delivered to those licensing the UMF™ trademarks," UMFHA CEO Tony Wright explained via email to their members when circulating the latest proposed constitution.

An annual membership fee of \$300 for beekeepers who are not exporting mānuka honey applies, while that fee is \$3500 for exporters.

Honey exporters would therefore provide the vast majority of funding to NZHA - through both export levies and their higher membership fee - but ApiNZ CEO Karin Kos is confident it will be a viable model to represent both beekeepers and honey exporters. Therefore, they are forging ahead with plans to disestablish ApiNZ as it struggles to pay its way under a voluntary membership model, and transfer any assets to NZHA should it get off the ground.

"We've made it clear that the proposal is the only viable option for the whole industry to continue to be represented effectively, and its interests advocated for," Kos says.

While the constitution does not define sectors which board members might represent - as ApiNZ's constitution does - it calls for six "member" representatives on the board, alongside three independent directors. Both Kos and Wright say it is intended three member directors will be from a commercial beekeeping background and three with honey export experience.

"Only full members are eligible to stand for any of the member director roles, but rather than define what a commercial beekeeper is (i.e. what's the threshold?) or what's an exporter, we have made that the role of the nominations panel to ensure balanced representation," Wright explains.

The nominations panel would be tasked with assessing those applicants for director roles and then making recommendations as to who should be elected as incoming board members at AGMs. Members would ultimately have the vote as to approving, or not, the panel's recommendation.

While the panel might be seen as another step in the way of

applicants being visible to the voting membership, Wright is confident it is an important step to have in place.

"The panel is there to make sure the appointments process is fair and transparent while ensuring the skills and experience needed are made clear. So, while the panel will definitely ask the Board for input on needs, they are there to deliver on the best interests of the members not the incumbent Board. That's why this model is used so widely elsewhere and we're catching up on best practice," the UMFHA CEO says.

Kos's communications with members states "as a result of feedback seeking reassurance that there will be transparent communication between members and



the organisation, we will work to establish formalised regional engagement". However, the constitution does not propose any regional structure as part of the blueprint of the NZHA. "Regional hubs" are detailed at length in ApiNZ's constitution though and, despite this, they have been limited in their implementation and support.

However, "regional forums that would enable members to discuss ideas, concerns and issues that can then be shared with other regions and the Board" are an initiative that Kos says they are "committed to developing".

Just weeks out from the proposed winding up of ApiNZ - a



group formed in 2016 as the successor to the National Beekeepers Association which had stood for 111 years – the CEO is confident members will see moving assets and attention to the planned NZHA as worthy of their approval.

UMFHA CEO Tony Wright also sits on the ApiNZ board and has thus been heavily involved in plans for the proposed New Zealand Honey Association. "As always with a democratic process, the final decision is in the hands of our members," she says.

The voting will be weighted as per the ApiNZ rules, with commercial beekeeper members carrying 56% of the weight, market sector 33% and non-commercial beekeepers 11%. More than 50% of the weighted vote is required to confirm the motion to disestablish.

Perhaps the more consequential and challenging vote to achieve will be convincing members of UMFHA to adopt the NZHA constitution which would see the mānuka honey marketing group take on a much wider role and membership. The vote will be carried out by UMF members, not licensees, and there will be no weight to the vote – meaning a company such as Comvita's vote will carry as much weight as those members who may not even be currently exporting honey. For the changes to be implemented, 50% of members must cast a vote and at least 75% of those must be in favour of the constitutional change.

February 2025 shapes as a crucial month in deciding the future of apiculture industry representation in New Zealand, from beekeepers to honey marketers and exporters. Wright, who also sits on ApiNZ's board and has thus been working on both groups' proposals, isn't tipping much as far as the crucial UMFHA vote goes.

"I'm not taking anything for granted. This is a very important vote for our members and the wider industry," he says.

"I would like to think we'll get this step over the line, and of course I strongly recommend they vote 'yes', but it's their call."

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Mānuka Honey Founders Reinforce the Need for Higher Standards



In December *Apiarist's Advocate* published an opinion piece by mānuka honey early-adopter Phil Caskey titled *Mānuka Honey: What Went Wrong? And a Road to Recovery* where the concept of a revitalised Unique Mānuka Factor (UMF) brand was floated, with a renewed focus on the science behind the brand, more prominent use of UMF on labels and a turn away from trademark attempts for the term "manuka honey". Two beekeepers who were among the group of six who first sat around a table and coined the association that is now UMF Honey Association read Caskey's words and offer their thoughts.

JMF Honey Association inaugural

chairperson John Bassett, seen

here passing on wisdom at his

now-local beekeeping club in

Thames, is strong in his belief that the Association – and wider

mānuka honey industry – needs

to get back to a focus on clearly

representing to consumers what

is genuinely honey with mānuka's attributes.

It was the late 1990s when the Active Manuka Honey Association first got off the ground, and John Bassett, then owner of Waitomo Honey Ltd in Te Kuiti, was appointed the inaugural chairman. Across the table John Gavin, of Gavins Apiaries in Northland, was a fellow founding member. Both men are still members of what is now the UMF Honey Association – Bassett a life member – and thus supportive of the group's work. However, there are improvements that could, and should, be made they say.

10

While Bassett says he might remember some events slightly differently from Caskey's account, "what is particularly important is that he highlights the scientific background to the success story of our brand".

"Further to what Caskey has said, I agree that it would be timely to re-enact the original standards of a minimum of UMF 10+ for a monofloral honey with the level of antibacterial activity that the customer can expect to receive from the product," Bassett says.

Now "retired" on the Thames Coast, he assists a business partner to manage around 300 hives and maintains an interest in mānuka honey production.

Gavin is still active in the Gavins Apiaries business and concurs with both Bassett and Caskey in the need to get back to a higheractivity honey under the UMF brand. Most of all he feels for the end user of mānuka honey.

"The customer is thinking 'MGO40, that is better than a UMF20." They don't know about the UMF difference. They have no idea," Gavin says.

He questions the validity of honey with as low a rating as MGO40 being deemed 'mānuka' honey, having not seen such honey produced in his own hives.

"Is it mānuka? That is the thing. It says on the label it is, and it probably meets the target which the Ministry for Primary Industries says it is, and it used up all the bush honey sitting around New Zealand. They are obviously selling huge volumes of it around the world."

Bassett is also aware of the need to market such lower-activity

honey effectively, but like Caskey and Gavin does not believe the UMF brand is the way to do it. He says a lot of customer confusion could be cleared up with more appropriate labelling of mānuka honey products.

> "Honey of lower than NPA 10 can be assimilated into 10+ mixes or marketed for what it actually is – a highly respected bush/mānuka blend. The misleading term of 'multifloral Manuka' should be replaced with the term "BLEND" with lettering of

equal size/prominence to the nectar source, or sources, on the label," Bassett says.

11

The UMF pioneer says it also rankles him that much of the research into mānuka honey's benefits – "anti-viral, anti-oxidant and even anti-cancer properties" – cannot legally be portrayed on labels in New Zealand because medicinal claims cannot be made. Plus, inconsistent labelling between New Zealand and overseas markets leaves tourists here confused when buying mānuka honey he says.

Both men are united in their, and Caskey's, view that a better way forward for presenting mānuka honey to market should be sought, so that a healthy long-term industry can be built for all, rather than one where certain players benefit at the expense of others.

"I can understand why they are doing it. They are getting honey offered to them pretty cheap," Gavin says of those selling low activity honey using the mānuka name, adding "but, we can't live on low value honey as an industry". *****

> Northland beekeeper and UMF Honey Association member since the get-go, John Gavin supports the need for a move to an approach to marketing mānuka honey which is sustainable and beneficial for the long term and all stakeholders in the industry, from beekeepers to consumers.



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A Guide to Realising Hidden Value in Selling a Honey Business



As gears are stepped down in honey production and extraction winds up in February-March, some honey-sector business owners will be steeling themselves to farewell a profession that may have returned the love, but not the livelihood. Others have already sought to sell their businesses in a market bereft of buyers. Bruce Roscoe believes that value lies hidden in what honey producers do and know. In this report he sets out ways that this value can be realised.

BY BRUCE ROSCOE

To read some business brokers' sales pitches, the honey industry outlook is as rosy as the colour of their eyeglasses. Comvita Ltd achieved its "highest ever export volume" last year; honey is New Zealand's "fastest-growing export commodity"; and the industry is "not able to keep up with global demand".

(Brokers print a disclaimer saying that listing information is provided by the vendor.)

Among their number some brokers possessed of honed people and negotiating skills will get a sale over the line. In the honey company cases seen by this writer, though, they appear as commission hunters working with blunt instruments. Volume rather than value driven, they are inclined to rush transactions rather than hold out for a price worthy of a seller's business.

They focus myopically on the real estate that your business owns, but cannot be blamed for this. The national qualification required of real estate agents and business brokers is the same – a licence issued by the Real Estate Authority and the prerequisite



It might be a challenging market in which to sell a honey business, but there could be hidden value to be extracted advises Bruce Roscoe.

New Zealand Certificate in Real Estate (Salesperson) (Level 4).

Brokers' "online confidentiality agreements", in this writer's experience, are largely ornamental. While some confidences are kept, others are betrayed. In one case, a seller's details were promptly posted to a website. In other cases, spouses and partners talk. "We tell each other everything", a friend from schooldays told me. Perhaps the breaches start from there. They start and spread from somewhere.

An alternative to engaging a business broker is to ask your accountant to discreetly advertise and manage the sale of your business. There are four advantages to doing this – your accountant understands your business better than anyone other than yourself; your relationship with your accountant is already one of trust; working as a team, your accountant and solicitor can conclude a transaction; an agreement on commission on a sale or other transaction reward can be reached on more favourable terms than those offered in a broker's contract.

THE DIFFERENCE BETWEEN A BUSINESS AND SHARES

You may think you are selling your company, but a prospective buyer's advisers will argue against buying it. They will want your company to sell the business that it owns. If you agree, you will remain the shareholder of an entity that conducts no business and owns no assets. Or still owns those assets that a buyer declined to accept as part of the purchase.

The buyer's advisers are saying that they do not trust you. They believe that you may have forgotten or even hidden liabilities such as a loan or some promise on which your company may be called upon to keep at cost in the future. The buyer of your company would inherit such liabilities, but the buyer of your company's business would not.

Also, in the likely case that the buyer merges your business with an existing business leaving you as the owner of what will become a shell company, the cost of winding down your company will fall on your shoulders. Liquidation accountants' charges can reach scores of thousands of dollars. You can insist from the beginning that it is your company that is for sale.

HOW TO IDENTITY A CANDIDATE BUYER

The company that is likely to take an acquisitive interest in your company is one that conducts similar businesses to a comparable scale. It may share chapters of your history and already be familiar with what you own and what you do. It is likely to understand the value of your knowledge. List such companies which your solicitor can approach in confidence. Among those, the ideal company is one that operates a stable primary or secondary business unconnected to agricultural production.

Offshore honey packers or food companies that operate honey brands have little incentive to purchase the production asset in New Zealand while they can buy bulk honey at low prices. The thread connecting foreign investment in this sector to date is less honey than value-added products that contain honey centred on dietary supplements, health foods, and personal care products. Much time can be squandered on voyeuristic inquiries from abroad. Australia, where mānuka is understood, perhaps is an exception.

THE VALUATION STARTING POINT

Let's value your business. Draw a line through a sheet of paper and on one side list the things that you can touch and the things you know.

Combined, those are assets – tangible and intangible. Land, buildings, machinery, vehicles – you can touch these, and none are likely to hide value. Value is unseen in the things that you know – your production processes; your name; your customers' names; the names of businesses you have found trustworthy. The value of such knowledge is often uncounted and all but given away in some cases where land value reflects the sale price of a business. For the moment, guess a value for what you know, and add that amount to an estimate of what you can touch. Add the two to arrive at a total asset value.

On the other side of the paper list what you owe — for example debt to a bank, outstanding payments on a lease, unpaid taxes. Add these and subtract the total from the asset value to produce a net asset value (also called "equity" or "shareholder's equity"). You have just constructed a balance sheet and calculated the theoretical value of your business. This is the starting point. Working with your accountant, you can fine-tune estimates for the various line items.

PROPRIETARY PROCESSES

Giving shape to what you know is the first step to realising its value. Whether extracting honey or finely granulating or crystallising it, you may have tinkered over the years to arrive at a novel process deserving of a trademark or even patent. We know in Japan from tasting New Zealand honey samples that processors are not all doing the same thing. Some honeys are of average taste, some good, and still others outstanding.

A registered process as "intellectual property" is a valuable asset. Citing perhaps the example of 100% Pure New Zealand Honey Ltd, which has trademarked "Pure FlowTM" as a process, it may be worthwhile describing your processes to a trademark or patent attorney with a view to naming and registering them.



More time for fishing? It might be the result of a successful business sale for beekeepers, and active relaxation during any drawn-out sale process can be beneficial advises Bruce Roscoe.

YOUR NAME AS A TRADEMARK

Molan Gold Standard,[™] is known as a trademark of the rating system developed by Professor Peter Molan for mānuka honey. The late professor's name itself was trademarked as "Peter Molan[™] by his employer, the University of Waikato, via its 100%-owned unit Waikatolink Ltd. If your name associates with your products and is known in the industry, you may be able to trademark it. It will hold value. That value should be realised in your favour rather than left to accrue to a new owner of your business.

Lists of customers over at least the three-year period to date and those product and service vendors that have earned your trust are valuable (and should not be released to a broker; perused in an accountant or solicitor's office under watch, maybe.) All product labels and graphic designs used in your business are valuable.

"GOODWILL" IS NOT AN EXPRESSION OF GOODWILL

Beware brokers' loose usage of the accounting term "goodwill", which can be deceptively pleasing to anyone's ear. It means only the difference between a balance sheet valuation of an asset and a higher market value for the same asset. Here's the catch. It is not possible to calculate a fair balance sheet amount for your knowledge. (Only the broadest guesstimates can be made.) Therefore, it is also impossible to calculate goodwill to any degree of accuracy. Goodwill valuations will always be subjective.

The two NZX publicly quoted honey companies – Comvita Ltd and Me Today Ltd – are immensely challenged by this grey area, as their reports to the exchange reveal. The people most likely to appreciate the value of your intangible assets (principally your knowledge and intellectual property), are your close peers and yourself. Only you can ascribe a value to them. Begin by asking the question, "What sales amount would I have achieved without using my name?" Then repeat the question for each of your other intangible assets.

A likely scenario is that prospective buyers will attempt to cherry-pick your assets, starting (and perhaps ending) with land. In one broker's honey company listing, the word "land" occurs three times more than the word "honey". Another listing is titled, "Manuka Honey Production Business - Assets Sale", which all but gives the show away.

You can defeat this view of the world seen by a frog inside a well by separating your tangible from intangible assets. Package the "what you know" component of your business for separate sale to a peer company which understands its value and wishes to become a flag bearer for your name and augment its own honey brands with yours. The "what you can touch" part of your business can be packaged for sale to those whose interest is only land and buildings and other fixed assets.

ALTERNATIVES TO SELLING

Leasing land, buildings, machinery, and other assets may be an alternative to selling that allows you to re-enter the industry at a later date in a stronger market. In a downturn some honey producers may be looking to expand in a way that does not require a large capital outlay and may show interest in leasing options.

Another is to combine with similar scale honey producers to form a cooperative. Drums of honey can be exchanged for equity in the venture, members' brands can be continued under one umbrella, and processing and packing can be rationalised at shared premises.



CURTAINS AND LIGHT

Emotionally, this is a difficult time. Once during a meeting that should have concluded with the sale of an agricultural property, the owner said, "If I sign this, it's over, isn't it?" Yet he had been offered all that he had asked. He could not let go. The silence was broken by someone saying, "I'll put the kettle on".

If you enjoy tramping, swimming, golf or other forms of relaxation or recreation, it can help to allocate more time to those activities during what may become a long and draining experience. Exercise and a focus on new beginnings can help draw the curtains on one window while letting light in through another.

Bruce Roscoe is a Japan-resident former foreign correspondent and securities analyst. He is now a researcher and occasional honey trader and consultant. *****







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14

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John Berry on Breeder Selection



Bees are livestock. Like all forms of livestock, they have been subject to selective pressure for a very long time. Over that time some of the things selected for have changed, but selection has had a profound effect on our bee stocks.

Some think this is a bad thing and that we should go back to more natural i.e. nasty, disease ridden, unproductive and swarmy hives. Me, I like to enjoy my beekeeping and occasionally make a small profit.

It has been argued that bees are not truly domesticated as they are still quite capable (apart from varroa) of surviving in the wild, but then so are most of our domesticated animals and they can go feral within a few generations. In general, feral populations are interesting, but not commercial. They exist for themselves. Done well domestication can benefit both parties.

In breeding bees we have a huge disadvantage because, apart from artificial insemination, it is impossible to totally control the dozen or more drones that our virgin queens mate with. This problem can only be overcome with either isolated mating yards or by totally swamping an area with your own preferred genetics. Both of these have been difficult given the huge increase in bee numbers. It helps when neighbouring beekeepers are all working towards the same goal.

In breeding bees we also have a huge advantage in that we can raise hundreds or even thousands of daughter queens from our best hives and, even when open mated, their drones will still carry the maternal line because they come from unfertilised eggs.

Given the difficulties you could wonder if any great improvements have been made over the years. This is something



The odd missed cell, but ultimately a good brood pattern to breed from.

"Productive bees can also be frugal bees that know when to shut down for the winter."

that is very hard to quantify, especially with the ongoing influence of feral hives.

However, this influence works both ways. Wild bees are not as wild as they used to be. I believe there is nothing that cannot be selected for given enough hives and enough generations. New Zealand bees have a huge amount of genetic variation and it is just a matter of selecting and stabilising desirable traits. It's not just a matter of finding a queen that lays continuously, I have had hives like that and while they can be very productive they are also very expensive to keep alive and usually end up getting a Darwin award over the winter. Productive bees can also be frugal bees that know when to shut down for the winter.

Initial gains from good breeder selection can be huge and gains over 100% in overall production are not unheard of when improving really bad strains. There is probably a ceiling above which you can't get, but even a 5% crop increase can have a profound effect on your bottom line.

REGIONALLY DESIRABLE TRAITS

Hawke's Bay is not Northland and the West Coast is not Canterbury. Having said that, really good bees generally perform well anywhere, but they will do better in their own environment. I once sent my uncle a beautiful breeder which he couldn't use because it showed bad chalkbrood in his environment. Years ago, when I was working for my father, we had some big winter losses after requeening with caged queens from up north. They were

"If you have a really intransigent genetic problem, then try and get a breeder from an area that has worse conditions for the problem than your own." beautiful queens, but had no resistance to our local wasps.

If you have a really intransigent genetic problem, then try and get a breeder from an area that has worse conditions for the problem than your own. I.e. if you have trouble with poor spring build up because of lousy spring weather, then try some bees from someone with even worse weather. There will be, somewhere.

SELECTING A BREEDER

I always had two main criteria and these were production and temperament. Health is important too, but the healthiest hives are usually the most productive. I'll go out on a limb here and say that colour is also important, for no other reason than experience has proven to me, time and time again, that a yellow queen with no black at all is far more likely to excel in those two criteria. If that yellow queen ages to a universal leather sort of a colour, so much the better. Remember, I have always selected for a consistent strain rather than hybrid vigour, which is not sustainable in the long term.

My requeening is done in the autumn and I expect my queens to be productive for two full seasons. Longevity is also something that can be selected for.

Each year I would have a thousand hives to select from. It can be difficult to select for production in a good year when almost everything is full and I'm sure we missed plenty of potential breeders because of this, but I have always been happy to choose breeders from hives that are full when a lot of their neighbours are not. "If you want hives that swarm continuously while producing very little honey and stinging the crap out of you and your neighbours, then simply stop selecting the best and you will very quickly get what you're looking for."

Any hive that showed a tendency to swarm, chalkbrood, sacbrood, lack of resistance to wasps, aggression or we just didn't like it for some reason, would get crossed off. We would normally end up with 20 or 30 one year old queens marked with 'possible breeder' on the box. The following year they had to be just as good and were generally whittled down to four or five hives which I would bring home and then these would be subjected to working on a bad day as a final temper check.

In practice I would normally do most of my grafting from only one or two hives and, in theory, this would lead to a lot of inbreeding, but in practice it never caused a problem. The reality

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Phone: 027 6677 588 or email: thehive@manukaorchard.com www.manukaorchard.com is, with the way queens mate, you are far more likely to have problems with undesirable outbreeding.

Breeder selection is even more important if you are trying to produce comb honey, as a lot of otherwise good hives show a marked resistance to drawing boxes of foundation.

After many years of this selection the vast majority of our hives were both very quiet and very productive and also even, i.e. all full at the same time, all of which makes beekeeping a lot more enjoyable and profitable. We also started leaving a lot of the best hives to raise their own cells after we killed the queen at the end of the second autumn. We would also find a lot of really nice autumn supersedure queens and these were left, provided their bees were quiet. Natural supersedure has been connected to swarming, but I have not seen this connection and supersedure is something I encourage as you get some magnificent queens.

Now I am semiretired with only 30 hives I can no longer dominate the local gene pool, but I can still breed from the very best hive I have and this is important. If you want hives that swarm continuously while producing very little honey and stinging the crap out of you and your neighbours, then simply stop selecting the best and you will very quickly get what you're looking for.

Varroa is a whole different ballgame and breeding for resistance is something we are all going to have to do. It will probably initially, at least, be largely dependent on those few of us (not me) who have the necessary AI skills, but the needed resistant genes are out there in the population and selecting them from already good bees makes sense. My bees are not due for requeening this year, but I do have a breeder picked out for next year. It has already produced two full depth boxes of honey plus one full depth box of comb honey, while the rest are at least one box behind that. It's a really good hive, but it's also showing the amount of variability in the local gene pool. Variability that really doesn't need to be there.

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. *****



John Berry knows he might be going out on a limb, but says experience has taught him that "yellow" queens, which age to a "universal leather" colouring such as this, excel in production and temperament.

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18

A Tower of Babble



There's a lot going on in a honey bee nest but, if we ignore the actual activity, even with a casual glance the nest construction itself looks fairly organised, predictable, 'sensible' perhaps. You'd be forgiven for thinking of it as, well, *planned*. Is it? What is it we should see if we observe properly? Science writer Dave Black has some informed observations.

BY DAVE BLACK

Beekeepers are looking at honey bee combs all the time, daily even, but what do they see? Not as much as Sherlock Holmes I imagine. The fictional character, who took up beekeeping in his 'retirement', was famous for pointing out to Watson the futility of just looking. "You see but you do not observe" he would say¹.

19

Whether we are simply seeing or observing our hives, we are used to picking out three distinct areas in a honey bee nest, common to both hive-bees and wild honey bees, and actually common in other species of social bees too². Around the periphery there is a storage area for honey, and a centrally placed area of brood. Between the two there is a band of cells that, if not empty, contain pollen. The precise area each of these regions occupies waxes and wanes with the season as the nest passes through its somewhat sporadic growth cycle, but that partitioning of honey, pollen, and brood is very consistent. So consistent that if it is disturbed experienced beekeepers point to queen failure, a swarm, or some aspect of the weather to account for any disorganisation. And too, 'mistakes happen'.

NESTLING IN

Even the simplest form of nest, a single, double-sided comb conjured from nothing but wax, shows the same partitioning. It develops a warm, humid brood region with food storage elsewhere. What's more, the face of the comb mirrors the reverse or 'back' side³. That front-to-back symmetry is specific to that colony, at that time, and maintained by the workers all the time. In experiments that were arranged so that two independent colonies (in an observation hive) each could only occupy one side of the single comb, they still maintained that front-to-back symmetry. Brood, pollen, honey, and empty space are 'mirrored' on the opposite side of the comb.

The evidence is that this is largely because of the need to maintain the brood temperature efficiently, the brood on one side



A place for everything, but is there a **right** place for all of the honeybee colony's needs? Perhaps not says science writer Dave Black who explains why, despite this, the hive always seems to look so organised. helping to keep brood on the other side warm. A two-sided comb is thermally more efficient that an equivalent area on a singlesided comb, and this thermally efficiency frees labour for more brood, more foraging and more comb construction. However, even when brood is absent that symmetry remains; other aspects of managing functions in the nest (like storing supplies) are more easily achieved with a two-sided comb. Symmetry means that nestmates don't have to have global experience of the whole nest but can infer the whole from their local knowledge, while a compact, double-sided comb means more possible unloading sites are within reach with less unused, empty space. Fundamentally, it's like the difference between the 'parallel processing' that random access allows and linear, sequential access. Picking out your favourite song was always quicker on an album (just access any place and drop the needle on the spot...) than it could be on a cassette tape (hold, hold, hold that forward or back button...) - if you can remember that far back.

SWEET CHAOS

In colonies of honey bees that have multiple combs, each comb also has front-to-back symmetry, but each comb is not exactly the same as its neighbours, and no comb shows much symmetry with another colony's. It's a little puzzling why things we think are being organised in the same way don't come up with a more symmetrical result. We are used to saying things like "pollen is put near the brood so that it's convenient for the nurses" and "honey is stored above the brood" and imply that the 'bees 'know' (or are being told) where everything should go in advance. We even make extra entrances so the "'bees can avoid going through the brood nest to put the nectar where it belongs" (in the supers). The thing is, we do know no-one is 'in charge'; there is no 'plan', no 'template', no blueprint', no map. The pattern emerges, as if from chaos.

Rather than divine intervention it turns out a few simple rules are all the 'bees (or a machine behaving like a 'bee) need to apply that will result in the pattern we see^{4,5,6}. These are: (1) the queen lays eggs (nearly, but not completely, at random) in warm empty cells in the *middle* of a comb; (2) workers periodically and randomly deposit pollen and nectar (at different rates), anywhere, or into a cell that already contains some; and (3) bees preferentially remove or consume pollen and nectar adjacent to brood cells at a greater rate than they do anywhere else.

A model applying only these rules is able to accurately 'create' a brood-nest pattern just like the ones we see 'bees make. Eggs are put in cells in the middle, and stay there for at least 21 days. A portion of the nectar collected is consumed but it can be deposited in any empty cell. It will be moved or consumed if it is close to brood cells, but a peripheral 'store' of nectar/honey will gradually accumulate. Pollen will be eaten, but it can't be moved, and ends up being cached in one of only two available places, the cells close to the brood being emptied, or the place where young bees emerge.



TAKING CARE OF BEEZ-NEST

The other thing that is different about nests that contain lots of combs is that the whole, somewhat spheroid, three-dimensional structure becomes significant, that is, more than just the sum of its parts. Bees know it. Last year the first really detailed study about how the whole nest develops, in its first 45 days, was published?. The team established 12 colonies as artificial swarms (approx. 11,000 bees each) in 10-frame Langstroth deep boxes. The wooden frames had a thin (<2mm) strip of wax to encourage the right orientation, but no foundation or wiring, and apart from an initial feed, were free to forage and construct the nest as they saw fit. Sensors collected weights every hour, and temperature every ten minutes, and once a week the bees were brushed off the frames which were then photographed on both sides under controlled conditions.

The photography was important because every pixel from the mirrorless digital camera was analysed by a computer running a trained neural network. This way they didn't just describe the process, but could simultaneously use the data to model and predict what should happen if the experimental conditions were changed. What they were really interested in testing was what happened if they disrupted the carefully constructed 3D structure, would it harm the colony? You would think it would.

In half of the colonies (six) each week they shuffled the order of the frames, both position and front-to-back orientation, to see what would happen. Beekeepers are always curious about the same thing – do I *have* to put the frame back in just as I found it? Exactly how much checkerboarding can I get away with? Well, what happened was... it made no difference. Nothing indicated there was any difference in worker population, comb area, hive weight or nest temperature between the unshuffled and shuffled nests, at least over the timescale measured (two brood cycles).

That's not the same as saying nothing happened. The reason there was no difference was that the 'bees rapidly repaired the 'damage'. They didn't just make up for the damage, they restored the congruency of the original architecture. They prioritised the 3D structure of the whole nest and the way its regions are 'connected', fixing the gaps rather than just expanding it to 'make up' for the



Apis florea nests with (left) and without (right) workers. On the right, one can see the differentially utilised parts of the comb. The crown with sealed honey above the twig, open brood or empty cells in the centre surrounded by sealed brood and newly constructed cells that are empty. Reference: Honeybee Nests: Composition, Structure, Function. (Hepburn et al, 2014.)



disorder. Using the same amount of wax as the unshuffled colonies, the shuffled colonies abandoned work on outlying combs, preferring to strategically infill gaps and maintain the nest's cohesion.

SWEET HARMONY

22

Why is this nest 'connectedness' so important? A 'selforganising' pattern has some important advantages – for the 'bees. Foragers don't have to worry about finding a 'right' place. If they put something in the 'wrong' place someone else moves it. It fits nicely with what we understand about the temporary space required for nectar concentrating (before there is honey to store), and the 'self-repairing' nature of the brood-nest.

This rapid removal of food from the brood area creates a very responsive zone between the brood and the honey, the transitory store for pollen. The size of the zone is determined by the amount of brood and the pollen being consumed to feed it. Rather than a 'reserve' of a specific size (which a 'plan' or 'map' might specify) this flexible space allocation reacts in real-time to the rate of egg-laying, pollen consumption and the current rate of pollen collection, directly 'feeding back' the needs of the colony to individual pollen foragers.

The nest is not just a structure, it is also information. If the nest becomes disorganised with, for example, pollen being stashed anywhere, it becomes, literally, incoherent, and the harmonious information flow between the inhabitants becomes meaningless babble. Dave Black is a commercial-beekeeper-turned-hobbyist, now retired. He is a regular science writer providing commentary on "what the books don't tell you", via his Substack Beyond Bee Books, to which you can subscribe here. *****

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Towards the tail end of summer, the honey flow is done and dusted. Hives are having honey boxes removed, or patiently waiting, silently sealing their lids with secretions. As well as extracting and disease inspecting in the field, I have been learning the finer ropes, some of the hundred little aspects that are all essential to our business model.

Diversity, in all forms, is an advantage in beekeeping. Knowing how to manage people, time, and equipment is a must.

23

My background as a mechanic saw me in good stead last week after our 16-frame extractor rapidly deteriorated with a series of knocks mid-extraction-day. We were able to replace the bearings and bushes and have her back up and running before the honey set in the pump. I'd say, a good deal – on a beekeeper's hourly rate.



Out of the extraction room and into the hives to check the Edgecomb Honey stock are doing what they should.



Time to take it off. Our main crop honey harvest is underway in the Bay of Plenty, from the Whirinaki to Waihau Bay.

Out of the extraction room I have been involved in running off and packing honey and I am also becoming familiar with our 300-litre stainless steel, water jacketed wax melter – a hungry beast that devours every last capping, cut-out, or cone of wax from the centrifuge.

Glorious golden blocks give way to childhood memories. The smell and the slum-gum. Dipping fingers and hands into molten wax, creating massive casts, that were only to be peeled off and put back in the melter. Earlier still, the solar wax melter my dad made, following instruction from the bible (Practical Beekeeping in New Zealand). An angled box with a glass lid, that you could melt a couple of frames in on a hot day and run off into the attached 2 litre ice-cream container. Suitable for the old man, a big-time hobbyist with his twelve beehives.

The solar melter was succeeded by an old washing copper with a lid, and then an ex-butcher's fat-rendering vat that was heated by oil. This was probably as much a liability as it was an asset, and I recall there was an element of fear associated with it. In any case, caution was warranted as the setup was complete with steam plant and hot knife.

Gone now are the knives and steam plants, given way to the automated pricker and centrifugal filter systems. But not the melter, inconspicuously in the corner, indispensable.



Wax is a valuable substance. Young bees are fed honey which they convert through glands on their abdomens to wax scales. At a ratio of around eight parts honey to make one of wax, there is definite value to the bees. Not just scaffolding. Hexagonal marvels moonlight as brood chambers and larders, as well as insulation and inductors of air-flows. Mixed with other secretions it becomes the anti-bacterial, anti-microbial and anti-biotic glue – propolis.

To the beekeeper, bees wax is also prized. Not only monetarily, but also as a base product. Made into sheets of foundation or used to coat plastic ones. The fun really starts when you get home, and I imagine most beekeepers have had a go tinkering with salves, balms, candles, crayons and polishes (while holding their eyes open with matchsticks).

Maybe that last comment is just me.

24

One thing I love about beekeeping is the diversity of it all. Gone are the 50 hour working weeks of pollination (until we meet again), but the surefire thing is, there's always something to do.

Cleanliness is next to godliness in the honey shed, but millions of bees make a lot of wax scales. Between wax and honey, our days consist of keeping everything running smoothly and cleanly. 60 drums of our early crop honey have been snabbled up and we are eagerly awaiting their departure from the shed before the real extraction season begins and the shed is packed with boxes again.

Most of you will be in the thick of it as well, but do take a second to taste the honey and savour the moment, as I leave you with these two quotes from British author Angela Abraham; "The story of the bees was told in honeycomb, in both the dance that built its walls and the flowing fragrant ink."

"The honeycomb was pockets of sweet bee-dreams, each one a story of wildflowers and summer days."

Enjoy, Aimz 🚿

The one that got away'...If bees require an 8:1 ratio of honey to create wax, then think how hard this colony has worked to create their new home (away from home!).

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Chalkbrood – a Growing Problem

25



Great Barrier Island beekeeper Colin McLean details his growing concerns at chalkbrood in his beehives, and what he is doing to combat the fungal disease.

I have heard a number of beekeepers commenting on a more infectious strain of Chalkbrood over the past six years, or perhaps even more. I started seeing it through summer in the odd hive, something I had never seen before. I made the comment to an AFB inspector who said he would see chalkbrood in every hive!

Chalkbrood used to be a minor problem, appearing in a cold, wet spring and clearing up as the bees got stronger and the weather

warmer. This strain is different and can be damaging. It can weaken a hive to the point of producing no honey. So, what do you do?

Adding brood from a strong hive can help them get on top of it, otherwise requeening with a resistant queen is your only option.

Disease resistance is usually focused on hygienic behaviour. There are two recessive genes, which means it needs to be with the queen and the drones she mated with to be effective. One gene stimulates the bees to uncap a diseased larvae and the other to remove it. With chalkbrood most die at a larval stage, before it is capped, and you usually see chalkbrood mummies in the brood nest. Chalkbrood spores seem to be abundant in beehives, just waiting for the right conditions to infect brood.

Beekeepers use different methods to select for hygienic behaviour and it relates to how well the bees uncap and remove dead larvae. Some use the pin method or liquid nitrogen and see how well the bees respond, some rely on observation. I knew a queen breeder who used to see how clean the bottom board was, which goes to show it doesn't matter what method you use as long as it works! I sometimes see subclinical infections where the bees will remove larvae at a very early stage before symptoms develop, which leaves a slightly patchy pattern in the broodnest.

The other area of disease resistance which never seems to be discussed is genetic resistance. Some bees are more resistant to an infection and beekeepers probably select for genetic resistance as part of selecting a breeder queen, without doing it specifically. I



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APIARIST'S OPINION | COLIN MCLEAN

don't know how you select for genetic resistance except for a lot of observation and, ultimately, how the daughters perform.

Perhaps we have queen breeding all wrong and should only breed from hives with solid brood patterns – it sounds simple enough!

So, getting back to this infectious strain we are having to deal with, two years ago I had a five frame nuc showing a lot of chalkbrood in spring. I killed the queen and put in a cell. Within three weeks, much to my surprise, there were only three chalkbrood mummies left in the nuc. Everything else had been cleaned out. This nuc has a 16mm entrance hole 50mm up from the bottom, but it didn't stop the bees removing all the chalkbrood. I didn't see any more chalkbrood infection, so in this case the bees showed good hygienic behaviour, but the queen was susceptible to chalkbrood. The other 20 nucs in the yard were normal.

Last spring I had two yards with ongoing chalkbrood issues, and also high varroa. I'd seen several hives break down with chalkbrood in autumn, relating to high varroa numbers. I'd never seen this before. The hives wintered okay, but with ongoing chalkbrood in half the hives. Did I use a susceptible breeder, or did she mate with some suspect drones? Interestingly enough there were a few hives with no chalkbrood at all.

I decided to requeen the hives with caged queens from overwintered nucs. I also had the odd hive in several yards showing chalkbrood right through the broodnest. This is really unusual. These hives were moderately strong and conditions in mid-spring



were good. I rechecked the hives every two weeks to see what was happening and there was variability between hives, but, for most, the levels of chalkbrood infection dropped dramatically, and this was before any new bees from the new queen started hatching. A few hives are still showing chalkbrood and I have added brood to some. It seems to take time to get on top of it.

Not only is selecting good breeder queens important, but also having good drones for her to mate with. These days I spend a lot of time just trying to control varroa and these challenges certainly test your ability and commitment as a beekeeper.

Colin McLean is a beekeeper of 40 years' experience across Hawke's Bay and now Great Barrier Island where he owns and manages 450 hives.

*Additional reporting on chalkbrood from 2024 includes 'Chalkbrood Explained' by Dr Mark Goodwin and also this contribution from Frank Lindsay. *****



26

Breeding Varroa-Resistant Buckfast Bees in Russia



Landing in the editor's inbox this month was mail from an international subscriber – Konstantin Tregubenko, who keeps 40 beehives in the Krasnodar region in the South of Russia. Despite a mild winter, snow is currently dusting Tregubenko's hives and so he takes the opportunity to introduce himself, explains some of the peculiarities to keeping bees in Russia, and how he has been undertaking promising efforts to breed a line of varroa-resistant Buckfast honey bees.

BY KONSTANTIN TREGUBENKO

Kia ora dear colleagues and like-minded friends!

27

Greetings from distant Russia where one day it is 15°c and the next a snow flurry at -2°c comes through. Today, I'd like to share my beekeeping journey – from my first childhood experiences to today, where caring for bees has become not only a way of life, but also my contribution to preserving nature.

I first became acquainted with bees when I was a small child. My relatives had five colonies and when we came to visit I really enjoyed watching them, how they brought pollen, how they worked on flowers... even then I knew that one day I would become a beekeeper. But the path to this dream took more than 20 years.

In 2014, at the age of 26, I finally got my first bees. There was very little information at that time, and I had to look for it bit by bit. Every day I devoted a couple of hours to self-education. At that time there was a local population of bees in my region, very swarming and vicious. Sometimes I even had to run away from the



Despite an unusually mild winter in Krasnodar region in the south of Russia, Konstantin Tregubenko's beehives were dusted with snow mid-January.

hive! It wasn't without its benefits though – it made more than 150 queen cells at a time.

By 2017, I managed to buy an artificially inseminated, Buckfast queen bee. This event radically changed my understanding of beekeeping. I never thought that bees could be like this – with excellent development, honey production, good honeycomb construction and a reduced swarming instinct. And also with a very, very gentle character. It was love at first sight.

This colony remained in my memory as a standard bee. For me, it seemed ideal, except for one thing – it attracted varroa like a magnet. Then there was a stage when I bought genetics from different breeders and compared them in my apiary. And then I decided for myself that I needed to master artificial insemination in order to maintain good combinations.

So, in 2021 I did my first artificial insemination and a new world with new opportunities opened up for me. Due to the peculiarities of honey bee mating, controlling which drones mate with your queens is extremely difficult. We need to know which colony is maternal and which colonies are paternal. Without controlled mating, this cannot be achieved and breeding work cannot be built. Knowing who the paternal colonies and maternal ones are through artificial insemination, we can now evaluate them.

Colonies of potential Buckfast breeder queens are assessed by 14 main characteristics: vitality of bees and brood, winter hardiness, character, swarming, fertility, behavior of bees on the frame, honey yield, amount of propolis and construction of bridges between frames, hygienic behavior and resistance to varroatosis.

Each characteristic is assessed in points from 1-6, where 1 is the lowest point, and 6 is an exceptional characteristic.

The goal of breeding is to create the most balanced bee. If the bees are swarming we will not get a good honey harvest; if they are angry it will be uncomfortable to work with them and they will take too much time to maintain. Each characteristic is important for obtaining the maximum amount of harvest.

To me, colony testing is somewhat reminiscent of the excitement of sporting competitions – which colony will be the winner? There's no gold medal, but they get to advance to breeding. In 2022, I started working with like-minded people on breeding varroa-resistant bees. Surprisingly, no one could have imagined earlier that bees would be able to resist varroa. Now it is becoming a reality. There are not many such colonies yet, but the fact that they exist, and you can see for yourself, is very motivating for further work.

 $\mathbf{28}$

The first year of work was probably the most difficult. Due to lack of experience and knowledge, almost fifty percent of my apiaries died before the New Year... I started treating the colonies for mites too late. It was a harsh lesson.

In the second year, work was done on the mistakes, the apiary was restored and I tried to consolidate the varroa sensitive hygiene trait in my colonies as much as possible. A couple of colonies died during the winter. Now I have 30 colonies that have been living without treatment for over a year. To be honest, this is very exciting. There are still two months until the beginning of the calendar spring.

I believe that one day we will be able to forget what varroa is and focus on other aspects of beekeeping. In the meantime, we continue to learn, share experiences and inspire each other.

Wish me luck, because I hope everything will be just fine when I lift the lids again. In turn, I wish you, dear colleagues, a good season and success in your business!

If you have any questions regarding this contribution, Konstantin Tregubenko can be reached via email: p4elowood@gmail.com 🕷



Russian beekeeper Konstantin Tregubenko removes honey from a beehive in a warmer time of the year than the current mid-winter conditions.

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Public Service



One of the things I say regularly is that the government system in New Zealand is too centralised, and that its default under pressure is to opt for even more centralisation. This month I thought I should unpack that a bit.

The challenges we face as a country include both a dysfunctional public service and serious dysfunction in what's sometimes grandly called the 'public realm' – politics plus media plus academic debate. It's the space where we collectively think about what's going on and what we might do to chart out future. It's a process now overwhelmingly dominated by social media, which is foreign-controlled, centralised, and driven by algorithms that prioritise both reinforcing prejudice, and serving up scandal and controversy. That's for another day.

The public service first. The public service does three different things. One is to deliver routine services to the public, like birth certificates, driver's licences, routine benefits, land transfers and so on. We can see from other countries that this can be largely digitised, and designed around the user. We're not bad at that; we can surely do better. But it's a process we can tackle incrementally.

The second is dealing with people who face situations that require individual attention. They might be involved in the justice system, or perhaps require social housing. But the big one is health. Everyone entering the health system wants to be special and to receive individual care (although no one wants to be a medical mystery). The same is true of the justice system, Oranga Tamariki's systems, social housing and so on.

These are all case-based systems, requiring potentially lifechanging judgements that combine real, professional expertise with attention to the individual, all done against the clock. These are necessarily complex systems, all depending on making rare expert skills available at the point of delivery. As we can see from health, they don't respond to command very easily, and they have



Sir Brian Roche was appointed public services commissioner in October 2024, and he's got his work cut out for him, especially in the policy departments, says former top bureaucrat Ian Fletcher.

complex internal cultures that sometimes defy comprehension. Politicians are bad at manging them, because politicians don't like thinking about systems where simple answers don't work.

Education is a special case here, because schools impart values and culture as well as skills. Culture shapes future politics. So, the politics of education are very intense. Another topic for another day.

The third thing the public service does is grandly called 'policy'. That's thinking about what might be done, in the future, to achieve whatever changes in law or society the government wants.





Here we are especially bad. The senior public service culture is inward looking, complacent and resists new ideas. As I have said, senior officials are often not pushing up to the CEO level, and some of the CEO group have been around, perhaps, too long. The new public service Commissioner (Sir Brian Roche) has, it seems, turned to this older group for ideas, which are unlikely to be new, and which won't challenge what I'm told is a culture of excessive intimacy, and reluctance to disagree. The top echelon has generally lived in Wellington for much of their careers, and so has limited real insight to life in a country that is actually big and diverse, although with a small population. The result is a lack of both imagination and empathy.

That's at the top. Further down the system is just fundamentally wrong. The issue that no-one has tackled is the basis of employment. Ideally you want a service that is able to be re-shaped and redeployed as priorities change. It also should be one where investment in training and development is recouped through successive successful deployments as staff mature through a career. Finally, it should involve a balance -Wellington policy work matched with a stint running WINZ in Gore, for example.

However, the current system just doesn't allow any of this. It attaches people rigidly to current jobs, and so to the current structure. This forces traumatic restructuring processes when all you want is a bit of downsizing and redeployment. The result is Ministers get time-servers, good people get badly handled, no-one gets the development they need, and the whole system is frustrating for everyone. Watching – as we all have – Ministry for Primary Industries staff resist feedback on their mistakes is frustrating, and damaging.

That means the results - both policy and delivery - are not very good. It's hard to build and deploy the deep expertise we need if these rigidities mean skills get cut up into small packets, and people actively resist learning from mistakes. We need to be able to move people across departmental boundaries and between jobs if we want to keep them. And we need a fair but firm performance management system to shed the people who just don't fit.

In short, we need a policy service, run as a service, giving great service to Ministers and thus consistently good service to the public. Sadly, I see no sign that this issue is part of any agenda. Once again we (and public servants themselves) wait for a crisis before things change. So, we have fatalism, complacency and a naïve hope that something will turn up. You couldn't make this stuff up.

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



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31

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