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Apiarist's Advocate

News, Views & Promotions – for Beekeepers – by Beekeepers

Conference Season

We preview the ApiNZ National Conference & the 2nd N.Z. Honey Bee Research Symposium

Countdown to Conference

Following a year of Covid-caused cancellation, the Apiculture New Zealand (ApiNZ) National Conference and Trade Exhibition is set to return this June 24-26 in Rotorua, with around 1000 delegates expected to attend. The Rotorua Energy Events Centre will hum with beekeepers, drawn by a range of speakers, workshops, awards, trade exhibits and social events.

ApiNZ chief executive Karin Kos is looking forward to hosting the apiculture industry's showpiece event for the year, summarising the situation simply, "the industry needs to get together every year and when they don't, we miss it."

Not only was the 2020 ApiNZ conference missed due to cancellation, Covid concerns and lockdowns also saw fellow industry body New Zealand Beekeeping Inc forced to can a conference scheduled for last August in Taupo, while numerous other would-be gatherings have been disrupted or moved online in the past year.

ApiNZ was able to transfer their 2020 booking at the Events Centre in Rotorua over to 2021. Consequently, plans for a Christchurch conference this year were pushed back until 2022.

While there is always potential for national Covid alert levels to change – and at Alert Level 2 or above the conference would proceed "virtually" online, but not in person – for now it's full steam ahead for June 24-26 in Rotorua.

The headline speakers at this year's event have a North American flavour, with two from Canada and two from the USA presenting on a range of subjects – but all via video-link. In a sign of the times, the international speakers will pre-record a presentation to be played, and then answer audience questions via live video.

So, with its reduced travel burden, in time, health and financially, is this method of presenting to the conference the way of the future?

"No" Kos is quick to say.

"You can't beat face-to-face and ideally we would have international speakers on the ground.

"There's nothing wrong with what we are doing this year. It's absolutely the right thing to do, but normally people get up and speak to them in the breaks, they socialise at the dinners with beekeepers. It's a good opportunity to chat with these really incredible, knowledgeable people."

That knowledge will be transferred via the big screen in the main conference hall, with the speakers each having their own areas of expertise, but falling under the conference's theme of "Healthy Bees, Healthy Industry, Healthy Future".

From Alberta, Canada, Dr Shelley Hoover will present on the impact of climate change on plant-pollinator relationships, plus Patricia Wolf Veiga will discuss her work assessing imported and domestic queen bees in Canada, and how New Zealand's queens stack up.

The Trade Exhibition at ApiNZ's national beekeeping conference is always a focal point for attendees.

From the USA, high-profile Californian beekeeper and applied honey bee researcher Randy Oliver will present his latest findings, while University of Maryland's Dr Dennis vanEngelsdorp has speaking slots on day one and three of the conference, where he will dive into the habits of varroa mite and its management.

Those international speakers will be joined by a range of local experts from the apiculture industry who will present through a range of speaking slots, panel discussions and workshops. Also included will be someone from outside the apiculture industry, mental health advocate and motivational speaker Dr Tom Mulholland who will offer advice to beekeepers to "get the buzz back into their life".

Some attendees will also gain a buzz when a range of competitions, including the national honey awards, are decided and awards presented.

A highlight for many beekeepers attending will be the trade show in the main hall, which will include more than 50 exhibitors of beekeeping equipment and services.

The gathering of around 1000 beekeepers and those associated with the industry is the logical time for updates to be given by the American Foulbrood Pest Management Agency, as well as for ApiNZ to host their AGM.

For the hosts, ApiNZ, the national conference also acts as an opportunity to showcase their work and to interact with beekeepers, members or not.

"It's a really good opportunity for ApiNZ to say 'hey, this is what we do for the industry' and I think conference is a genuine industry-good activity. We obviously have an AGM, we've got board members that speak, and we say 'these are the issues that are important to our industry and ApiNZ is prepared to front them'," Kos says.

The projector screens at Rotorua Energy Events Centre will play a crucial role in ApiNZ's national conference this year, with international speakers presenting to the audience via video link.

While the conference is unlikely to draw in attendees like it did when New Zealand honey prices and the industry was booming four or five years ago, registrations, a month out, are on a par with the last conference, Kos says. That was also in Rotorua, in 2019.

While ApiNZ is looking forward to finally hosting beekeepers, there's a lot of work that goes into putting on a three-day event that will be of value, with many of those involved doing so on a voluntary basis, Kos says.

"I don't think you could overestimate the work that goes into planning an event like this – its huge, the voluntary work that we do, from the organising committee and board members, is massive."

More information on the Apiculture New Zealand Conference and Trade Exhibition, including a full programme and registration forms, are available ***here****.*

From California to Conference

Among the most keenly anticipated speakers at this year's Apiculture New Zealand National Conference will be renowned American beekeeper Randy Oliver, who freely publishes a range of his own applied honey bee research via www.ScientificBeekeeping.com. With 1000 hives made available to him for field trials, the Californian will have plenty of research updates to share with Kiwi beekeepers. A month out from the June 24-26 conference, he Zoomed in to discuss his latest work, New Zealand's management of varroa mite and what motivates him to continue his "scientific beekeeping".

While many beekeepers endeavour to carry out scientific trials and research work within their own hives, few – if any – have been able to match the success of Oliver in, firstly, gaining results of value to the everyday beekeeper and, secondly, disseminating them globally.

For that reason, he is a sought-after speaker at beekeeping events all around the world and has visited New Zealand several times previously for such purposes. This time around, global pandemic or not, due to a recent series of chemotherapy and radiation therapy treatments, the Californian beekeeper would not have been in a position to travel across the Pacific.

The video-link setup will therefore suit Oliver just fine, and prior to his cancer treatments he had been presenting "three or four times a week" in this manner and has become well practised at getting his messages out.

"My enjoyment in life is learning about things and sharing what I've learned," Oliver says.

"That's what the website is about. Just to inform others what I have learned myself about bee biology and how it applies to beekeeping."

Oliver first started keeping bees in the 1960s, before earning a biological sciences degree, specialising in entomology, and then launched a more-than-40-year commercial beekeeping career.

Randy Oliver speaking at the 2017 ApiNZ national conference. This year he will do so again, but via video link.

He has long conducted beekeeping field trials and for the past 15 years has been regularly presenting his findings through the American Bee Journal, his website and in person.

As he heads towards retirement, those trials are now his major focus.

"I love it. I worked out a deal for my sons to take over the business, under the condition that I'd have a thousand hives at my disposal for research at any time. That puts me way ahead of any researcher in the world," Oliver says.

It's an enviable position and currently he is putting those hives to use exploring the effectiveness of pollen substitutes and attempts to improve them, plus varroa mite treatments for use during the honey flow, which includes extended-release oxalic acid treatments.

Oliver's presentation to the audience in Rotorua, scheduled for day two of the conference, will provide an update on his recent research findings.

"I've only got an hour to speak, so I have to choose what will be of most interest to beekeepers. The pollen substitute work will be very interesting. It looks like I have made a breakthrough in understanding how to analyse pollen substitutes and predict how they're going to perform. That breakthrough will be of great value to any manufacturer of pollen subs, in that they can see what it is deficient in."

Many New Zealand beekeepers will know Oliver from his trials with extended-release oxalic acid treatments for varroa, a method he has thoroughly tested since 2015 and disseminated the results.

In his previous visits to our shores, Oliver says he has found Kiwi beekeepers behind much of the rest of the world when it it comes to the learning curve for managing varroa mite – simply because the destructive parasite has landed on our shores so recently, compared to other nations.

"What I see in New Zealand lags behind our experience in the US, and the US lags behind Europe. Beekeepers are always reinventing the wheel, rather than looking at countries that are ahead of them. Looking at the European model, you can see our future.

"When I go to New Zealand and speak there, it's like deja vu, the guys are on the internet and all the things we talked about 10 years ago, are now current events. I think, you're taking me back to ancient history again, why don't you guys just jump ahead 10 years?"

That's a fair question to ask for someone who doesn't just talk the talk but who walks the walk by helping others make that "jump ahead" through the myriad of information made available on ScientificBeekeeping.com.

His work is funded, in large part, by donations made by fellow beekeepers who appreciate his trials and reports. For Oliver, the financial donations from beekeepers all over the world make his research work possible, but their moral support is what motivates him.

"The appreciation from beekeepers worldwide is what keeps me going. I get letters from countries I've barely heard of and they say, 'Randy, you're our main source of beekeeping information here for those of us who are making a living beekeeping'.

"That really is very gratifying to me to think that I am helping out people worldwide with just good honest information."

California's Big Dry

Randy Oliver may have largely retired from his family's 2000-plus hive beekeeping operation based in the Sierra Nevada mountain range of California, with his two sons taking the reigns. He still keeps a close eye on operations though and says that a prolonged drought is the biggest risk to Golden West Bees' business.

"Climate change is affecting California more so than most of North America. We are in a mega-drought right now, a drought that occurs every 500-1000 years. That makes beekeeping very difficult and we're changing our practices to adapt to the changing climate," Oliver says.

California suffered drought from 2012-16, but since a wet period in 2019, the last two years have seen the huge state suffer severe dry.

"Wholesale trees dying off, changing vegetation types and just lack of forage for the bees," are the biggest impact to honey bees Oliver says. Then there is the risk of wildfire, something his family's operation has managed to avoid, but not all beekeepers have been so lucky as the state has suffered large-scale fires in recent years.

June and July will see the honey flow continue in California, but after that the severe dry could mean a lean "fall" and winter period for the bees.

Science Symposium to Bring Beekeepers and Researchers Together

For those who want to know more about the wide range of research work into the honey bee that is going on around New Zealand, there is one place to get clued up. The 2nd Annual Honey Bee Research Symposium will take place on June 23 in Rotorua, providing researchers an opportunity to present their studies and network, and beekeepers the chance to gain a fuller understanding of the research into their workforce being undertaken.

A year on from the initial symposium, which took place online due to Covid-19 restrictions, organisers are excited to bring scientists and beekeepers together in person. The symposium will be held a day prior to Apiculture New Zealand's national conference at the same venue, Rotorua Energy Events Centre.

"We finally get to have the in-person event which we were hoping to have last year," co-organiser and Plant and Food Research scientist Dr Ashley Mortensen says.

"A face-to-face event really helps with connectivity and increasing interactions with other attendees during teas and lunch. Following on with three days at the national conference really helps too."

About 25 people will speak at the event, with topics as broad-ranging as the impact of metal on honey bees, to bee activity patterns in cherry orchards. Among the researchers presenting are Dr Megan Grainger from Waikato University, both Mortensen and Dr Michelle Taylor from Plant and Food Research and

The 2nd N.Z. Honey Bee Research Symposium

June 23rd 2021, Rotorua

Dr Heather Hendrickson's team of Massey University scientists working on American foulbrood bacteriophages.

Speakers will have 15 minutes to present their work and field questions, with the day-long event broken up into four sessions.

The symposium shapes to be a valuable opportunity for researchers to find common ground, with the hope it can foster collaboration, Mortensen says.

The event might not appeal to all beekeepers, but there are benefits in beekeepers and researchers getting together.

"There are things that are being presented that will have direct application in the hies, but there is also always value for beekeepers in being aware of the type of thinking that is going on in the research community. Also being there to participate in the questions and answers, as well as during the breaks, to have some influence in the research space and provide guidance on what the practical considerations are, which as researchers we may not have thought about," Mortensen says.

With the symposium programme having only recently been released, organisers are expecting registrations to build in the lead up to the event. However, already they have nearly as many people registered to attend as what logged on to the inaugural symposium last year.

Registration is $30 and includes lunch and both morning and afternoon teas.

A full programme of speakers and registration is available ***here.***

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Exit Interview: Peter Bray, Part 2

Director Peter Bray has taken a step back from the day-to-day running of 111-year-old Canterbury company Airborne Honey. However, he has plenty of knowledge to impart, built up over 40 years at the helm of the business founded by his grandfather. In the second part of a conversation with **MAGGIE JAMES**, Bray discusses the future of New Zealand beekeeping and honey, the "BS" surrounding manuka honey, as well as testing for glyphosate, American foulbrood (AFB) and tutin.

Maggie James: *With regard to honey analysis and honey being offered to Airborne – have you noticed an increase in AFB & glyphosate showing up on analysis?*
Peter Bray: AFB does not poison consumers, therefore analysis is not required. Unless there is data stating AFB spores and counts in honey were to get out of control, why would we bother?
There has not been an increase in glyphosate on analysis – there has been a decrease.

MJ: *What happens if glyphosate is detected?*
PB: The honey gets blended to non-detectable. We try to balance consumer's perception to science. The glyphosate issue is a classic example of nonsense. The public have been swept along and we must try to minimise levels using analysis. Common table salt is more toxic than glyphosate.

Peter Bray, stepping down as managing director of Airborne Honey.

Unfortunately, the honey industry will not be able to educate the public. If humans stop using glyphosate, food production will be minimised, and the world needs to maximise food production. Zero use of glyphosate, suggested by some politicians, would have devastating consequences on the NZ economy, setting us back 150 years.
We need to keep the glyphosate issue in context. With the NZ maximum domestic default rate of 0.1mg/kg of glyphosate levels, you would need to eat 230kg of honey daily your entire life to reach the World Health Organisation, Acceptable Daily Intake for glyphosate.
Another toxicity issue that somehow regularly raises its head is honey containing pyrrolizidine alkaloids (PAs). To my knowledge no one has ever been poisoned consuming honey containing PAs.

MJ: *Considering glyphosate appears to be through the entire food chain, do you think the honey industry has been unfairly targeted?*
PB: Not at all. It's a consequence of legislation. We need to manage risk, so you manage default levels. Export and domestic levels are different. Export levels vary country to country.

MJ: *Your thoughts on managing the risk of tutin?*
PB: The industry has been regulated to death with the tutin issue. Tutin poisonings are rare and, except for one case in the 1950s caused by a commercial beekeeper, all have been at the hands of hobbyists. The multiple poisoning outbreak in 2008 was instigated by an inexperienced hobbyist beekeeper. So, we now have significant industry regulation with toxic honey, and the focus is not on the right place i.e. hobbyist beekeepers.
Prior to the Animal Products Act (APA), the Ministry of Agriculture and Forestry recommended that designated areas be closed to beekeeping mid-December to early May the next year i.e. in that period those areas legally were hive free. This remarkably simple, risk management was effective, easily administered, protected consumers and the industry, every year filtering down to ground level. Unfortunately, since 2001, tutin areas legally have permanent all year apiary sites. Many of our industry regulations have now been rolled into the APA and tutin exposure is signed off by the beekeeper at extraction or sell point to a packer. Yet, most hobbyist beekeepers do not use a contract extractor or packer.

MJ: *Where do you see the NZ beekeeping industry going long term?*
PB: Manuka has been an absolute phenomenon. There has never been a polyfloral like it, since the time of NZ commercial honey trade commencing in the 1920-30s. There have been numerous papers published on manuka, and the likelihood of another polyfloral phenomena to this extent is unlikely.
The world honey crop is 1.5 to 1.8 million tonnes per annum, yet with NZ producing approximately 1.4% of the world crop, the chances of the industry coming up with such a phenomena were remote. There are millions spent on research throughout the world, with countries trying to provide data for the next polyfloral phenomena.
Manuka has become famous from the gut health aspect for treatment of gut ulcers and there have been brochures published prescribing two tablespoonfuls orally four times daily. This demonstrates the level of BS being put across to the consumer before the issue started to be reigned in and regulated.
The manuka craze has set our industry backwards ten years. Many monoflorals and beech dew were blended with manuka. Internationally, competing countries took that opportunity, jumping into our empty shelf space. We need to re-establish these markers and It could take us another 20 years to go forward with our unique monofloral products.
Other countries have gone forward with their unique product, For example, Turkish dew is sold in Germany on our previous shelf space.
NZ produces flavourful, unique native monoflorals, not produced anywhere else. We produce excellent viper's bugloss (blue borage) and clover honey. We must market all these varietals as NZ produced honey, naming our country on the label. Therefore, these cannot be substituted. We must work out how to maintain and increase our shelf space, otherwise we will fail.
These days, probably 70% of the beekeepers in the industry, have less than ten years beekeeping experience. It takes ten years with full time hands on practical experience and quality networking, to learn about yields in your area. These beekeepers know how to produce monoflorals, factors that impact on monofloral production and how to maintain quality product.
In tutin producing areas, these are the beekeepers, with knowledge to manage this risk, helping to protect our industry.
Beekeepers with less than ten years' experience came into the industry when clover was $10 plus per kg, and they expected this not only to continue, but increase. Quite simply, this wholesale price makes our product unmarketable on the world market.
Canada is a major producer of clover, and if the world commodity price is $4/kg, then NZ beekeepers need to know how they can produce enough kg to survive, and how to utilise their labour, fuel, etc. In recent years honey production per hive has dropped significantly.
So, has the beekeeper done better? Ultimately if they have some manuka sites they have done ok. Manuka producers need to be concerned that manuka doesn't, other than as a topical

application, have any medical efficacy proven. Its profitability has been led by false medical claims.
Unfortunately for beekeepers, mainly in the name of bureaucracy and marketing access, extraction costs have sky rocketed. Yes, it's good that extraction plants using 12 frame extractors easily do hundreds of boxes daily, but some of the equipment in extraction plants, such as $17,000 per extractor, does not have to be as expensive and lavish as it is.
Once upon a time, many beekeepers had their own extraction plants, and they were quite simple and economic to construct, and no one ever got poisoned from using good working order rudimentary equipment. These days they use someone else's premises.
Labour is another cost that has risen. But at the same time, sugar, repairs and maintenance, and truck running costs have decreased.

MJ: *Where do you see the NZ honey industry going?*
PB: NZ needs to get rid of its surplus honey. Non-manuka honey is accumulating, and the oversupply situation is getting worse. Right now we need to sell at the world price. Canada produces large volumes of clover, and we must accept countries will not buy our clover at a higher price.
Total domestic and export honey sales might be 15,000 tonnes, and we have got 20-25,000 tonnes production per annum. Non-Manuka is approximately 15% of honey exports. It is calculated that there might be 40,000 tonnes in NZ storage. Therefore, we must question whether this honey mountain is a reflection of uncertainty.

Nuc-ing Downtown Balclutha

With decades leading apiculture training behind him, David Woodward has more than his fair-share of beekeeping yarns to share. He took time out to Zoom in with PETE THOMAS who relays a series of yarns, with one particular misadventure during Woodward's days at Telford standing out.

If anything, 2020 has taught us how to work remotely through the assistance of technology. So, when Dr David Woodward, the Director of Pollination Lab ltd in Mosgiel first appeared on my monitor to confess his own "Sting in the Tale" story, it all seemed quite natural. However, this wasn't such the case back in 1997 when one particularly memorable event took place.

David had just left Adelaide and landed his first job in New Zealand as the Apiculture tutor at Telford Rural Polytech. Young and eager to impress, he was responsible for several hundred hives while coping with a tide of even more impressionable novice students learning the art of bee manipulation, or possibly not to bee manipulation?

Such was the case when one of David's students had the misfortune to experience one of his teaching aids getting in under the hood and into the student's ear. Freaking out and distraught with the buzzing beastie, the student sprinted off down the banks of the Clutha river while smacking himself in the head like a raving lunatic.

On another lesson, David mentioned how warm the inner depths of the hive would feel if you didn't have any gloves on. "WOULD" being the key word during this demonstration, but that seemed to slip the mind of one spritely student who caught David's eye in the penultimate second as they jammed their novice arm into a demonstration hive up to their elbow. Remaining calm and collected, David nodded and suggested "that'll do for now…" to casually divert a near disaster.

The sleepy South Otago town of Balclutha probably didn't know what hit it when Telford students nuc-ed it one summers night in 1997.

David Woodward, a beekeeping trainer of considerable experience has his fair share of stories to tell.

These were the days before the health and safety we know today. When the use of flat deck Bedford trucks ruled the road and not a nylon tie-down in sight. A period when Boy Scout 101 knot-tying was a prerequisite for any aspiring beekeeper, which probably appeared soon after one particular venture upon David's curriculum during that summer in '97…

David rallied up his students one evening to transfer several dozen nucs from Clydevale as part of a queen rearing routine for the course. It was "a bit of a Flintstone affair" according to him with the old Bedford truck teetering around corners under heavy load and a strange affair of odd-shaped nuc boxes on the back. His students' either rode in the cab or bounced on deck under a cover wearing a haberdashery of donated bee suits.

Despite their cobbled together state, their mission to retrieve the hives from the rural outpost up the Clutha valley appeared to go without a hitch. So, David thought nothing else of it when he returned to the polytech, weary of the work and effort, but nonetheless content.

So, once they placed all of the nucs down with the rest of the donated equipment, he thought nothing more other than they appeared somewhat less when gathered up together. Apparently he had a great sleep that night to awake fresh and prepared for the next day of adventure at "the poly".

At 8am his covert mission was unleashed to the world when the receptionist informed David about an announcement on Big River Radio about some hives scattered across the road in the centre of town!

Without hesitation he grabbed his student crew by the scruff of their necks, jammed them into the cab of the truck and rushed off like Barney Rubble to where the accident took place. As he rounded the corner, he probably muttered some new learnings to his unlearned crew when he saw the road carnage out in front of a local community centre. By now a small, but slowly growing, group of curious bystanders were gravitating toward the mess.

As you can now doubt imagine, there were agitated bees flying everywhere, gathering increasing attention from uneducated members of the public. The distinct and bulbous Bedford truck rolled up to the disaster where his motley crew needed first to usher the stubbie-wearers and gawkers away from harm before trying to collect broken nucs and sticky honey from the roadside.

In the distance, a lunatic was spotted running down the creek, whacking himself in the head…

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Don't Jump Ahead, Monitor Mites Instead

Jumping to the conclusion of "mite resistance" can be a big mistake, when varroa damaged hives are discovered. That's the warning from proponents of mite monitoring, who say regularly testing hives for varroa mite loadings is the easiest way to gain an understanding of what might be going wrong.

The need for a better understanding of varroa mite loads in New Zealand has been highlighted by the loss of hives to the parasite and the viruses it carries this autumn, say those behind the Mite Monitor project.

Concern of mite resistance to some synthetic treatments is nothing new, with varroa having been confirmed in New Zealand since 2000 and therefore subjected to repeated use of some miticides. This autumn the issue has been raised again.

Beekeepers around the Te Puke, Bay of Plenty, area say they are seeing higher than usual losses due to varroa damage, despite having previously effective treatment regimes in place.

In spring, Te Puke sees thousands of hives moved in, many from outside the province, to help pollinate the many kiwifruit orchards in the area. Congestion of hives aids mite drift between hives and this not only impacts hive health through higher mite loadings, but some beekeepers say it is getting harder to kill those mites.

However, jumping to the conclusion of "mite resistance" runs the risk of inaccurately diagnosing the problem and therefore potentially missing better solutions, South Island beekeepers Martin Laas and Rae Butler say.

Laas and Butler are the driving force behind the Mite Monitor programme, which brought together Canterbury beekeepers to regularly monitor their hives for varroa mite over the past beekeeping season. Only by gaining an understanding of the infestation level of, first, individual hives, then the collective hives of a region and ultimately New Zealand, will we be able to best understand and solve some of the key concerns with varroa, such as reinfestation and resistance, the team at Mite Monitor say.

"If you are not monitoring as you take your autumn treatment out, to see what your mite levels are, then it is very easy to say 'my treatment has failed'," Laas warns.

"That is because you assume there were high mite levels when you took the strips out. As we have found though, it can go from zero to very high quite quickly, depending on what is happening around you."

Butler recently witnessed an example of this, in a friend's hives. Mite loadings were tested when varroa treatments went into two hives in early March, with a mite count of two in 300 bees in both hives. That count had lowered to 1/300 on removal of the treatment on April 30. However, the hives were showing signs of viruses by mid-May and so another count was taken in both hives, resulting in 63/300 and 16/300.

"It is impossible for the mites to replicate that much in that period, so horizontal reinvasion is presumed," Butler says.

"If we hadn't carried out our alcohol-wash tests, or alternatively sugar-shakes, then we would have been in the dark and could have, wrongly, assumed the treatments had not worked."

To help beekeepers better understand the range of factors which can lead to high mite loadings following treatments, Laas has created a flowchart (see next page) to work through. Before exploring the possibility of resistant mites, the flowchart sees a beekeeper determine if the product was used correctly, if there has been reinvasion, or if they have received a faulty product.

"Before you blame your neighbour, or the manufacturer, you should ask and answer the questions at each step," Laas says,

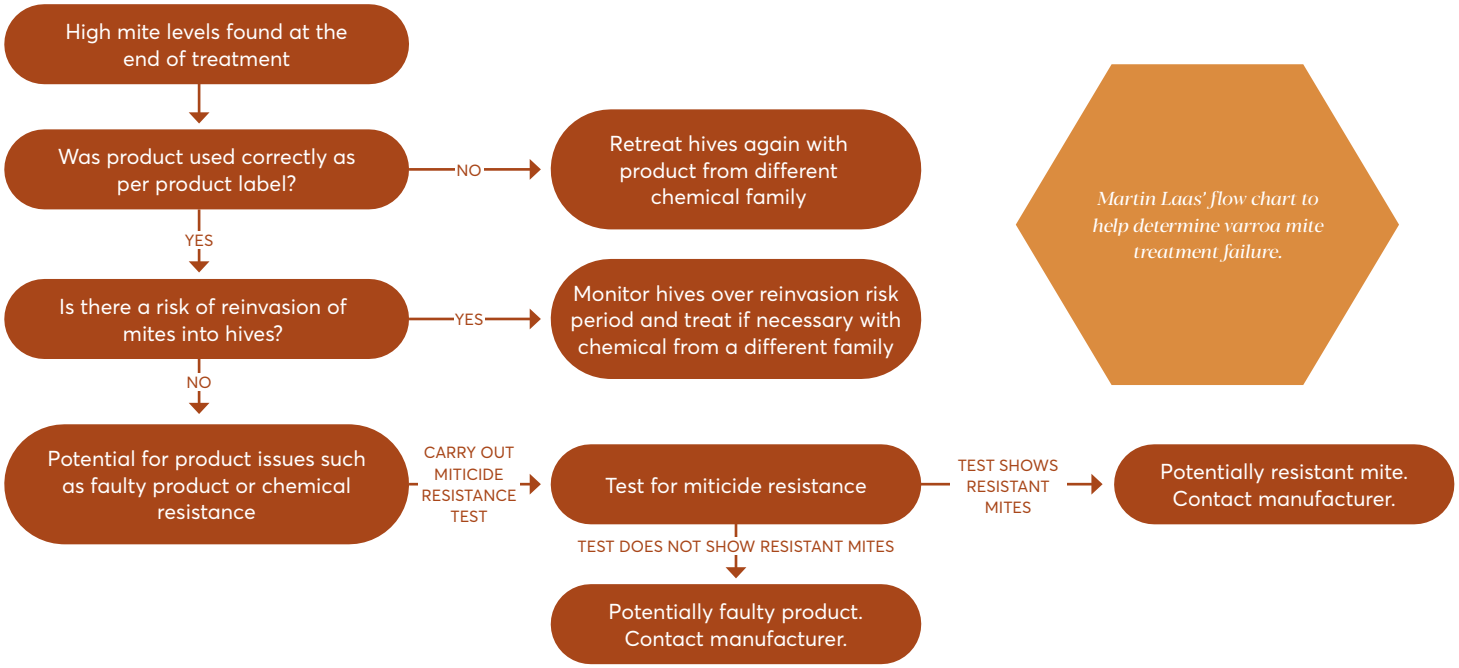
"I am finding people jumping to the resistance step, and I am not saying there isn't some resistance, but it is hard to take people seriously when they haven't considered the other options."

Mite monitoring in autumn is particularly important, as that is when varroa problems often manifest. Those beekeepers in the Mite Monitor program were encouraged to test a representative

sample of their hives with alcohol washes four or five times in the season, firstly in late winter/early spring, then as spring treatments came out, followed by a mid-honey flow test. Further testing was sought before autumn treatments went in and upon their removal.

That sort of testing regime will help any beekeeper better understand what factors are influencing varroa populations within their operation. Ideally, a programme such as Mite Monitor would be replicated nationwide though, to assist a range of research – including the always topical issues of "mite resistance", Laas says.

"If we could get it rolled out across the country it could be a very useful dataset for research organisations to use, for things such as determining what treatments are working best."



Martin Laas' flow chart to help determine varroa mite treatment failure.

Keeping Bees in Residential Areas, by Council – Northland, Auckland, Waikato, Bay of Plenty

PHIL EVANS, the hobbyist beekeeper who fought to have restrictive beekeeping rules in Waipa overturned, has compiled a series of articles summarising various Council's requirements for keeping beehives in residential, urban areas. This month he starts in the north of the country, detailing 19 Councils.

Of the 19 Councils in Northland, Auckland, Waikato and Bay of Plenty, 12 have (as best I could research) no rules pertaining to beehives in residential or urban areas, while seven have specific rules.

Complaints about bees are managed under the bylaw stated for each Council. This means the council will investigate, and may suggest changes to location, entrance direction, water availability, fence height, or removal on a case-by-case basis.

Disclaimer – *The information presented here should be used as a guide only, and has been found on the Council's websites and by my best research. For full details of rules, restrictions, fees etc. for keeping bees in your region, please contact your local Council.*

The following councils have NO formal restrictions, other than nuisance guidelines in the associated bylaws below.

Auckland Council	Animal Management Bylaw 2015
Hamilton City Council	Animal Nuisance Bylaw 2014
Otorohanga District Council	Keeping of Stock, Poultry and Bees 2019
Waipa District Council	(Animal Nuisance Bylaw being developed)
Waitomo District Council	Mention of Bees in Stock Policy (no bylaw)
Waikato District Council	Keeping of Animals Bylaw 2015
South Waikato District Council	Keeping of Animals, Poultry & Bees Bylaw 2017
Kawarau District Council	General Bylaw Control of Stock, Poultry & Bees 2019
Opotiki District Council	Consolidated Bylaws 2020
Tauranga City Council	Keeping of Animals Bylaw 2018
Whakatane District Council	Control of Animals Bees & Poultry Bylaw 2018
Rotorua Lakes Council	General Bylaw 2017

The following Councils have specific rules, and may require permits and fees. Nuisance rules are included in the associated bylaws for each Council.

Far North District Council
General Bylaws, Chapter 13, Keeping of Animals, Poultry and Bees 2007
- Licence required to keep hives.
- Cost is $108 per application (as at June 2020)
- Council may prescribe location and number of hives

Kaipara District Council
Consolidated General Bylaw 2020, Part 6, Keeping of Animals, Poultry, Stock & Bees
- Restrictions on the number of hives in urban areas
  - < 1000m^2 – 2 hives
  - > 1000m^2 – 4 hives
- Permit required for additional hives (fees may apply)
- Extensive guidelines for keeping bees are included in the Bylaw.

Whangarei District Council
Animals Bylaw 2017
- Restrictions on numbers of hives
  - < 700m2 – 2 hives
  - 701-4000m2 – 4 hives
  - > 4000m2 – 6 hives
- Permit required for additional hives
- Fees: $168 per application, plus $168 per hour of time required.

Hauraki District Council
Nuisance Bylaw 2019 (as amended 2020)
- Permit required to keep bees in urban, and low-density residential zones
- Application fee of $60, and property inspection fee of $100, and adjacent owners' opinions are required. Entrances must face away from neighbours and a 1.8m fence between adjacent dwellings is required. The usual nuisance rules apply.
- Rural areas no restrictions or costs.

Matamata-Piako District Council

Public Safety Bylaw 2014 (amended 2019)

- Written permission is required, generally 2 hives only in residential areas.
- All neighbours must give permission. If one refuses, the application may be refused, or specific restrictions put in place (location, direction of entrance).
- The Bylaw is quite vague, with full details only provided by asking very specific questions. No fees are required.

Thames Coromandel District Council

Animal Nuisance Bylaw 2019

- If 1.8m boundary fence or taller, hives must be 3m from boundary.
- If fence less than 1.8m, hives must be 5m from boundary.
- Hive numbers:
  - < 500m2 – No hives
  - 500-2000m2 – 2 hives
  - 2000-4000m2 – 4 hives
  - > 4000m2 – 6 hives
- There is no option for more than these numbers of hives.

Western Bay of Plenty District Council

Animals (excluding dogs) Bylaw 2019

- Only 2 hives in residential urban properties as defined in District Plan

Avoid Hive Killer 1 this Winter

BY JOHN MACKAY

The colder winter days certainly are telling us that winter will soon be here. Concerns may be high as there are a number of reports of high varroa levels being seen in many apiaries.

High varroa means the potential for high levels of Deformed Wing Virus (DWV) – or as we think it should be called, Hive Killer 1. This is the virus that piqued our interest in bee viruses and prompted us to start looking at bee pathogens a decade ago. A paper from the UK (1) indicated that high levels of DWV were associated with overwintering losses. There's the common mantra 'control varroa, control the viruses', meaning that if you kill the varroa then viruses are no issue.

Not quite that simple unfortunately – as viral levels can continue to rise in the bees even as the varroa levels reduce during treatment. Therefore, the precautionary principle should apply – if you've got signs of high varroa levels, assume you likely have high levels of DWV and these hives are at risk of dying overwinter.

But is that death a bad thing?

Should these weaker hives be culled in order to reduce viral loads and any increasing virulence that DWV causes? As a review in 2021 said "If virulence is not punished, it will proliferate" (2), suggesting that to maintain weak colonies or combine with stronger ones was to encourage the survival and proliferation of this damaging virus.


John Mackay

The paper also suggests that our AFB control practices (ie culling these infected hives) is one of the most important, yet rarely seen, practices for virulence management.

Beekeepers suffer from the fact that these viruses are often named after visual symptoms. Often beekeepers will assume their hives are virus-free because 'all the bees look fine and there are no stunted wings'. Don't fall for it. We can often detect very high levels in bees that show no visual symptoms at all. Again, if you have, or had, high levels of varroa going into these cooler days, assume the levels of virus are higher as well.

John Mackay is the technical director at dnature and has a range of experience in applied science and molecular diagnostics spanning 25 years.

Sources:
1 *Deformed Wing Virus Implicated in Overwintering Honeybee Colony Losses* (read for free **here**)
2 *Varroa destructor: A Complex Parasite, Crippling Honey Bees Worldwide* (read for free **here**)

ApiNZ Submission Lost in the Shuffle

Apiculture New Zealand (ApiNZ) are regularly working for the good of beekeepers when it comes to consultation with local councils and authorities, but the misplacing of one of their submissions has led to an incorrect belief they did not submit to consultation, chief executive Karin Kos says.

A claim from Waikato beekeeper and social justice advocate Phil Evans in last month's *Apiarist's Advocate* that ApiNZ needs to "step up and make submissions to any Council that proposes rules that are unfair and unreasonable", are off the mark the chief executive believes.

Kos says her organisation, the largest beekeeping industry body in New Zealand, did submit a submission to the Waipa District Council regarding urban beekeeping rules.

Evans spent 18 months challenging, and eventually overturning restrictive rules, and Kos says an administration error within the Council means their submission was misplaced and not made publicly available to the likes of Evans. She has been assured by the Council, which covers the towns of Te Awamutu and Cambridge, that it was received and considered though.

Further to that, ApiNZ is regularly consulting on rules and bylaws which will affect beekeepers, Kos says.

"Just in the last two years we have made submissions, mostly on bylaws, to Kaipara District Council, Stratford District Council and the Hauraki District Council. We also assisted the Taranaki Beekeepers Club in submitting on New Plymouth District Council's bylaw, and responded to Auckland Council's survey regarding its animal management bylaw review," Kos says.

"We are also often contacted by local authorities before they go out to the public on beekeeping proposals to get advice on proposals, allowing us to ensure that industry interests are represented early."

As well as those dealings on local levels, ApiNZ are also regularly submitting to government departments and agencies on issues that could impact beekeeping, such as food safety, organics, new biocontrols and introduction of herbicides. Beekeepers can therefore be assured that ApiNZ is "stepping up" for them in areas that require consultation, Kos says.

The Coromandel Way

In Thames there is a bee club that reflects the laid-back nature of the Coromandel area from where it draws its members, along with the neighbouring Hauraki Plains. In this month's Club Catch-Up we learn that while the Thames Bee Club might not share some of the formalities of other beekeeping clubs from around the country, it still manages to share a wealth of knowledge between members and provide a connection to the apiculture industry.

The club does not hold an AGM or appoint officers, instead relying on continued involvement from its approximately 50 members at regular monthly meetings to maintain the cohesion that has seen it survive for about 10 years now.

Jill Pauling acts as spokesperson for the club while also "sending out the emails and keeping everyone interested," says the keeper of seven beehives whose father also kept bees.

"If we get any bigger we might have to go the more formal route, but at the moment it is fine. I have stated that I am happy to keep people engaged though," Pauling says.

Three key commercial beekeepers are instrumental to the functioning of the club. Graham Harrison, John Bassett and Mike Green give their time and share a wealth of knowledge with other members.

Bassett's Kerata Bees business has a small apiary in Thames which the club uses for in-hive demonstrations. It is conveniently located at the Kerata Bees' extraction facility, over the road from where the club meets at the Bright Smile Gardens in Thames on the last Saturday of the month at 2pm. Meetings usually attract 10 to 20 members.

"We are lucky to get such good support from our commercial members. That provides three guys who we can pick the brains of and work with. They are great and really come into their own," Pauling says.

Being based between two distinct regions, Coromandel and the Hauraki Plains, makes the Thames club different to most. Members are often are facing differing beekeeping conditions.

Having mentors like commercial beekeeper John Bassett, seen here conducting an assessment of a hive for fellow club members, means a wealth of beekeeping knowledge is imparted at Thames Bee Club's small monthly gatherings.

"A group of guys will come over from the Coromandel side and talk about what they are doing with their bees, but it might be different to what we are doing on the plains.

"We can have a drought in Hauraki while the Coromandel is getting the easterly storms coming through and be fine. It is an absolute mix, but it is still good to hear what other people are doing."

The predominant honey varieties differ between the two regions as well, with the Hauraki Plains providing much clover and multifloral honey, whereas the Coromandel has a lot of manuka and pohutukawa.

October and November on the Coromandel peninsular sees manuka flowering, followed by pohutukawa from late November. The past two summers, into autumn, has seen the Hauraki plains hit by drought, meaning an early burn off for clover flowers and challenging beekeeping conditions, Pauling says.

Those dry conditions have led to discussions at club meetings about methods to prevent bees from robbing in the apiaries. Passing on tips and tricks like that are the reason why the club exists, even if it is largely informal. So far, that arrangement is working for members Pauling believes.

"We are taking it month to month, but if we get to a point where someone wants to formalise the club then I am certainly open to saying, 'step up'," Pauling says, adding "at the moment everyone seems quite happy with the way it is going."

Thames Bee Club
Meets last Saturday of the month 2pm, Bright Smile Gardens, Thames.
Email: *jill.pauling@fonterra.com* ***Phone:*** *027 221 7639*

Practical Beekeeping on Weed Control

Kia Ora Patrick.

I am an apiculture tutor for EIT in Hawks Bay and have been reading all the issues of the magazine. I find it very informative.

On the issue of glyphosate there were some good points, with researchers and influential people giving their view point.

One of our resources for our course is the "*Practical Beekeeping in NZ*" book and it was not mentioned on neither of the articles. On page 86 the recommendation is to spray weed killer around the beehives as needed, or to use a slow release weed killer (that is highly residual).

This is a common practice among beekeepers to do so and is probably one cause of the contamination.

I just wanted to point it out as, in my opinion, it is one of the most probable sources.

Thankfully.
Gui Vilhena

Editor: The passage referred to is in the "early spring management" section of the "Colony Management" chapter and states:
"An easy solution is to use a long-lasting herbicide in spray or granular form around the hives. Generally herbicides are not toxic to bees, although you should take care not to spray directly into hives entrances as some wetting agents used in herbicides can be toxic to bees."

Andrew Matheson (co-author of *Practical Beekeeping in New Zealand*) responds:
We are planning a (further) revised edition of *Practical Beekeeping in New Zealand*, though don't have a definite release date at this stage. All the content will be reviewed and revised in light of new evidence or changes in practice, including the comments about weed control in apiaries.

Conference Season

We lead this month's eMagazine with stories on conferences and symposiums, even though I know full well not all of our readers will be attending the ApiNZ conference and even less the Honey Bee Research Symposium. However, this year more than most, it seems right to promote the opportunity to gather as an industry.

Further to that, it is always our intention to be a medium for knowledge transfer, and the national conference is always a great place to learn plenty. The Research Symposium, now in its second year and first In-person event, is obviously only going to add to the range of beekeeping knowledge which can be gained. Conveniently scheduled for the day before the ApiNZ conference, and at the same Rotorua venue, it will hopefully become a fixture on the calendar and one which conference attendees can add to their schedule.

For about 120 beekeepers in the South Island, an early taste of "conference season" was had on May 16. *Apiarist's Advocate* had a stand at the Beekeepers Day Out at Lincoln University and I was impressed by the event which the Canterbury Hub of ApiNZ put on. A few highlights:

- The chance to talk face-to-face with readers, as well as many of the people we have been dealing with over the phone for the past two years.
- Peter Dearden's explanation of the Future Bees NZ work and an interesting comparison of honey bee genotyping to Covid-19 genotyping – both complex!
- James Sainsbury from Plant & Food Research who detailed their "Beekeeping Outside the Box" project, which got me thinking about different methods of providing hives for pollination – can nucs deliver benefits over traditional hives?
- Tips for financial success from Russell Marsh … with honey prices the way they are, a long-time beekeeper, accountant and recent ApiNZ board member is worth listening to.
- Sean Goodwin's (general manager 100% Pure New Zealand Honey) straight talking assessments of the honey market always interest me, and his contribution on the topic of AFB and glyphosate testing did too. From his position as a honey exporter, Goodwin sees China's stance on AFB testing as a "far greater risk" than that of Japan and glyphosate, as it can't nearly as easily be blended out or managed.

About 120 attendees made their way to Lincoln University for the Beekeepers Day Out on May 16, a taster for the ApiNZ national conference which will draw about 1000 people to Rotorua June 24-26. ***Photo:*** *Charlotte Lee-Smith*

- Midlands Apiaries' beekeeper Reagan Martin's presentation on trying to determine the ideal amount of honey frames per super for optimal honey production... Among many other things, it highlighted how much consideration must go into the large number of variables at play in any apiary-based research.

That's just a small selection of what caught my attention at the one-day event and so the four days in Rotorua are bound to get the beekeepers in attendance thinking.

Apiarist's Advocate will have a stand in the trade exhibition in Rotorua, which I will be manning. So, don't be a stranger, come by and say hello. Tell us what you like, or don't like, to read in the eMagazine, or just have a yarn.

For those who won't be in Rotorua, hopefully we can convey a little bit of the conference and symposium to you in our next issue – there is bound to be plenty to tell.

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

Editor: Patrick

To make comment or send press releases please email **editor@apiadvocate.co.nz** or phone **Patrick, 027 383 7278.**

Creative

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