



All meetings have been cancelled until further notice

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President's update (this month from the Treasurer – John Burnet)

Kia Ora

We are really into autumn now – the nights are cooler and nectar sources are dwindling fast. Mainly winter flowering gums, lacebark and sunflowers flowering now producing both nectar and pollen. Koromiko (*hebe stricta*) is still flowering in my garden also curiously the odd Pohutukawa tree but not with the usual mass of red blooms that you see at Christmas time.

So robbing is prevalent by both bees and wasps. Block any holes or gaps in your hives that allow robbing bees or wasps access. Keep your entrances narrow (about 2 - 3cm) to assist the resident bees to defend their hive. Use a wasp screen or tunnel in need and put out wasp baits if you can't locate and destroy the nests. There are numerous suggestions and recipes for wasp attractants online but you don't have to buy anything. I use an empty plastic 2 litre soft drink bottle cut in half with the top half inverted into the bottom so that the neck traps the wasps inside the bottom.

It pays to monitor your hive entrances regularly. Frank checked the Club hives at Chartwell last week and discovered that three had been robbed out – we can only hope that the offenders were from our own hives nearby and therefore our bees have simply transferred the honey elsewhere in the apiary! Unfortunately, the robbing has resulted in the death of the hives and the loss of three new West Coast bred bees!

Other jobs this month –

- Remove any varroa treatment applied in Feb or March, check varroa mite levels and treat in need. Check for AFB.
- Check honey stores – each hive should have about ten frames of honey for the winter – count part filled and uncapped frames. Scrape caps off honey-



filled cells in near-empty frames and place over a robbing board (hive mat with 2-3 cm hole). This will entice the bees to move the exposed honey down nearer the cluster.

- In need feed those hives with insufficient stores with sugar syrup (2 to 1 ratio) either using a frame feeder or a top feeder or an inverted jar of syrup inside an empty super. Do not feed bees outside the hive as this will provoke robbing and can spread disease.
- Move empty boxes and frames into storage. There is no point in leaving empty boxes on the hive. Boxes can deteriorate unnecessarily and outer frames can go mouldy. If possible, freeze combs for wax moth control and/or store in heavy duty plastic bags. Wax moth can eat through light plastic e.g. rubbish bags. Alternatively, store surplus boxes and frames in cold, draughty areas outside. Cover to keep rain and mice out.
- Sort combs before storage. Old dark combs should be cut out of frames and replaced with new foundation. Re-tension frame wire on the side bar with a tack or a twist with the pliers or replace. Black combs and old wax make great fire starters if you have an open fire!
- At this time of the year I usually remove the queen excluder and store underneath the roof (after cleaning if necessary) as the cluster will move upwards over winter and may leave the queen behind where she could chill and die.
- Give some thought to insulating your hive – not just under the roof. We are planning to wrap some of our Club hives with 20cm polystyrene slabs (often left over from major home appliance purchases). Warmer bees eat less, are less stressed and colonies should be stronger in the spring. Provide a ventilation crack using a match stick or similar under the hive-mat to allow moist air given off by the bees to escape (less fanning required by the bees at the entrance). ***See the article on making a hive wrap later in the newsletter.***

Over the last three months the Club sent 87 honey samples from members to Analytica Laboratory for tutin testing. All samples proved to be negative- a great



result generally as there's plenty of the tutu bush around Wellington mainly in stream banks and regenerative native bush and of course the passion vine hoppers which feed on the tutu sap and secrete the honeydew which attracts the bees.

Wellington however is not a high risk area. If over three consecutive years your honey has been tested as negative for tutin you are only required to test one in every ten years thereafter. While all honey for sale must comply with the Food Standards code MPI recommends that hobbyist beekeepers who only produce honey for their own use follow the standard as well. Donating and bartering are forms of trade that must also comply with the standard.

While the end of Covid-19 Alert Level 4 has been announced regular monthly meetings are still unlikely for the foreseeable future. At least we have a hobby that we can continue to enjoy throughout these strange times.

Look after yourselves

Ngā mihi,

John

In My Apiary – Claire Hart

We continue with our series on "in My Apiary" and this month it is Claire Hart from Johnsonville.

Claire Hart: Beekeeper, Mum, Teacher and WBA committee member. These are just a few of the hats I wear; today you get to find out about the 'beekeeper' hat.

About 10 years ago my Dad's bees were expanding as they do in the spring and he needed somewhere to establish more hives, so my place became his second apiary. I wasn't actually interested in the hives or bees to start with. But a few Christmas' later, Dad gave me a bee suit, smoker, hive tool and gloves.

My first time opening the hives with Dad scared the life out of me. I was waving my arms around – stirring up the bees (they were angry back then!). Dad quietly



said, 'stand still and keep your arms down'. Once I got over the initial shock of how many bees came flying out at us, I really enjoyed what Dad was doing and found it all so fascinating.

The next couple of years saw me going to the beginner bee sessions on a Wednesday before the main bee club meeting. I also had lots of hands on experience by being Dad's apprentice. Three years ago my Dad signed the hives on my property over to me. He still gives me heaps of support – mainly in spring chasing swarms around my garden!

At my property in Johnsonville I have three hives. They are located at the back of our property where the bees can go about their business with little interference from our family. The three hives are grouped together. I find this works well for hive management. I can interchange frames between hives if I need to boost weak hives, or take the pressure off bulging hives. I find three hives easy to manage, and not too costly to keep with yearly fees and disease control.

I run my hives with a double full depth brood chamber, with one or two supers on top. Once a super is full and capped, I take it off, spin it and put the wet frames back on to be filled again. This year I experimented by running a single brood chamber with supers on top. This was proving to be successful with the bees filling up cells in no time. However, while we were away camping over Christmas the bees swarmed and no new queen was made. I had to add a frame of eggs from another hive. By the time the new queen was ready to lay, we missed the main pohutakawa flow. The hive never took off, and currently it's queenless, and has been robbed out by wasps. I gave them a super of honey and put a mesh entrance on to stop the wasps. Next rainy cold day I am going to add them to one of my other hives, using the newspaper method.

This year my honey harvest was the worst it has been since the hives have been here – in maybe 10 years. I probably only got about 20 litres of honey, compared to my Dad, who's in Newtown – he got about 100 litres!



A few weeks ago I was randomly chosen by the Management Agency for AFB control, this entailed a visit by AP2 Stuart Turner about two weeks ago. It's his job to undertake a full AFB inspection of my hives and put 'apitraz' strips in. He comes back the next day to check the varroa drop on the sticky boards he placed on the bottom boards. It was great to talk to another experienced bee keeper.



Stuart suggested a robbing screen on the pink hive at the back, and we talked about putting up a shelter from the southerly, which whips through the apiary. Stuart also provided the information he found out from the sticky board. The hive that is queenless with no brood had no varroa drop. The two hives in the front had one or two varroa drop. So, as we head into winter I am very happy with the health of my bees.

If I can give any advice to “newbees” – it is to come to the meetings, find a mentor in your area and, **keep coming** to the meetings to get the most out of your beekeeping experience going forward.

We'd love to hear about your apiary and your beekeeping experiences too. Send some words and a picture or two to edurrant@xtra.co.nz and we'll include it in the newsletter.



Differences between Kanuka and Manuka Honey

Kate Robertson from Analytica wrote an article about Kanuka honey which was published in the February Beekeeper magazine. Here's a quick summary of the article and a link to the whole article below.

Manuka and Kanuka trees are often confused, they look similar, grow in the same places and have similar looking flowers (until you look closely). However they are different species. *Leptospermum scoparium* vs *Kunzea ericoides*. Distinguishing the honey from the different species is also difficult as the plants can be found growing and flowering together and bees will source nectar from both plants. The pollen grains look almost identical under a microscope also.

Both honeys have antibacterial properties, but Kanuka honey has not been as well-researched as Manuka honey and many have assumed they were the same. However, research now being undertaken into Kanuka honey, has identified that Kanuka honey has non-peroxide, anti-bacterial properties (like Manuka honey) that are not associated with methylglyoxal (MGO) which is the active anti-bacterial property in Manuka honey. There is no MGO in Kanuka honey, indicating there are other chemicals present which have antibacterial properties. Research continues into what these chemicals are, and how they contribute to Kanuka honey's anti-inflammatory and immune stimulation properties.

If you'd like to read the whole article, the link is below:

<https://www.analytica.co.nz/DesktopModules/EasyDNNNews/DocumentDownload.ashx?portalid=0&moduleid=1968&articleid=61&documentid=51>



Beeswax Recovery –what to do with your cappings – Jane Harding

After you've extracted your honey, you'll end up with a lot of cappings and broken comb containing valuable beeswax. Here's a way to get clean beeswax from your cappings.

Firstly, get the bees to clean up the honey from the cappings using a tray feeder on top of your hive.



Tray feeder of fresh cappings

When the bees have cleaned up the cappings after a week or so, you'll have a quantity of clean, dry wax flakes (they look a bit like breadcrumbs). Combine this with any other burr comb or broken frame comb you have collected.



If you have old stockings or panty hose, put the cappings into these and tie them up, and put in a pot with plenty of water. Alternatively just put all the wax into a pot and add water. Using the stockings means a lot of the rubbish mixed in with the wax will be filtered out and won't need to be strained out later.

Melting the wax in the water (loose wax, not in bags)

Warm the wax and water carefully, don't let the water boil as the wax will get too hot and emulsify and the impurities will be embedded in the wax.

When the wax is all melted, take out the stocking bags with the impurities in them, or skim any impurities off the surface with a slotted spoon. Let the pot cool.

The wax will set into a hard layer on top of the water



The set wax in the pot



The wax might be quite hard to get out, you might need a hammer and chisel!

Underneath the wax there's likely to be a layer of rubbish – known as “slumgum”. This needs to be scraped off and is excellent in your compost bin.

The wax will come out in a lump.



The wax cake with a layer of slumgum



The wax cake needs to be melted again and filtered through muslin or a chux cloth to remove any final impurities. Put the scraped wax into a pot and warm gently over a water bath.



Figure 1 Melting the wax



When the wax is melted, pour it through the muslin into your containers. I use old waxed milk cartons and weigh them as I go to keep the size of the blocks manageable.



I use an old sieve to hold the muslin over container



When the wax has cooled in the boxes, peel off the cardboard and admire your beautiful wax.





HMF – The Effects of Aging and Heat Treatment on Honey

The following is a summary of an article Kate Robertson from Analytica wrote for the NZ Beekeeper in September last year. The link to the full article is below.

I found this article really interesting, it helps explain why honey changes colour and taste over time and, to a certain extent how you can avoid that happening.

HMF (hydroxymethylfurfural) is a naturally occurring chemical that occurs over a time as a result of caramelisation (the breakdown of sugars due to heat and acid) and the Maillard reaction which occurs when sugars react with amino acids. This process occurs in lots of foods and gives bread crusts their golden brown colour and causes meat to brown when seared.

When honey is first extracted it will have very little HMF. Over time this increases and the presence of HMF is one of the tests undertaken for assessing Manuka honey. International market rules specify that honey shouldn't contain more than 40mg/kg of HMF, as the presence of HMF can indicate the honey is old or has been heat-treated or been adulterated with sugar syrup.

Keeping your honey cool and dark is a way to prevent HMF forming, however it will form over time regardless.

Here's the link to the article if you'd like to know more:

<https://www.analytica.co.nz/DesktopModules/EasyDNNNews/DocumentDownload.ashx?portalid=0&moduleid=1968&articleid=56&documentid=48>

(And clearly the best thing to do with your fresh honey is to eat it straight away.....)



APICULTURE NEW ZEALAND

From the CE Karin Kos

From Monday 27 April at 11.59pm we move into Alert Level 3 - guidance for members and industry can be found in our COVID-19 update below, noting it has been reviewed by MPI. As we outlined last week, little will change for beekeepers as they have been able to continue operating under Level 4, but it will mean easier access to a wider number of services that support their work and some changes to distance rules in the workplace. I would also encourage you to check out the range of links to government agencies including an update from NZTE on services to support businesses , the Ministry of Social Development on the wage subsidy process and MPI's Guidance to Businesses Operating Under the Animal Products During Level 3.

Over the past few weeks, we have seen news stories covering strong international demand for mānuka honey particularly in Asian markets. There are also reports of increased domestic sales through supermarkets as people have stocked up over the lock down, although this is offset by a reduction in domestic retail sales from tourists. Obviously, we are in a very unusual situation but it is clear that access to healthy, natural food will continue to be a focus for consumers all around the world. Our challenge is making sure all our honeys, not just mānuka honey, is valued as a premium product around the world. We know there's some way to go and that it's a hard slog for many of our beekeepers currently. We've continued to work on our New Zealand Honey story for that very reason through the lock down. It is one small but positive step in the right direction. From Monday 27 April at 11.59pm we move into Alert Level 3 - guidance for members and industry can be found in our COVID-19 update below, noting it has been reviewed by MPI. As we outlined last week, little will change for beekeepers as they have been able to continue operating under Level 4, but it will mean easier access to a wider number of services that support their work and some changes to distance rules in the workplace.



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world. We know there's some way to go and that it's a hard slog for many of our beekeepers currently. We've continued to work on our New Zealand Honey story for that very reason through the lock down. It is one small but positive step in the right direction.

Protocols and FAQs for beekeeping under COVID-19 Alert Level 3

New Zealand will shift from a COVID-19 Alert Level 4 response to Level 3 on Monday 27 April at 11.59pm. Operationally little will change for beekeepers and their businesses, who have been able to continue operating under Alert Level 4.

The key message from the Government is that Alert Level 3 does not signify a return to normal, or business as usual.

Beekeepers do not need to register with MPI under Alert Level 3. However, all essential businesses need to continue operating in a way that minimises the risk of spreading the virus. This means the protocols prepared by Apiculture New Zealand for Alert Level 4 remain valid, with several changes, reviewed by MPI, identified below:

New protocols for commercial beekeepers:

- During Alert Level 3 all workplaces should strive for social distancing of 1 metre. This represents a reduction from 2 metres, stipulated under Alert Level 4.
- There is now the potential to travel with more than one person per vehicle, given the reduction in social distancing from 2 to 1 metre. It is still however recommended you travel as part of an existing 'work bubble'. Records should still be kept on who travelled together and to which locations. While non-essential workers are not allowed to travel between regions, those in essential services (including beekeepers) can, where it is necessary to do so.
- Businesses that include interactions with the public - for example, selling honey through a shop or 'at the gate' - will be able to operate/open to customers but ONLY for delivery or pick-up-at-door.

Other key protocols remain the same



- All people working together should regularly wash and sanitise hands.
- Establish processes for staff to report illnesses or potential exposure on a daily basis.
- Establish steps you will take in the event of a staff member having either confirmed infection or had contact with someone who has been infected.
- Physical distancing should be practiced at all times when working with beehives (keep a pallet space between each other).
- Communication with landowners should be by phone. Restrict 'on farm' interactions with landowners to a 'wave'. Make clear the hygiene protocols you will undertake when accessing farms. This should include, for instance, sanitising hands before opening and closing gates.
- Vehicle steering wheels and door handles should be sanitised daily, or as drivers change.
- Each vehicle should be equipped with a wash bucket, suitable disinfectant/sanitiser, soap, paper towels and a rubbish bag for disposals.

For non-commercial and hobbyist beekeepers:

- Hobbyist or non-commercial beekeepers can continue operating to manage their hives.
- If you do have hives away from your home property and need to feed or treat them for disease, then you should follow the protocols outlined for commercial beekeepers.

Answers to common questions can be found [here](#)

COVID-19 Update for April 20

ApiNZ is continuing to update our [COVID-19 web page](#) as new information comes to hand. Our senior policy analyst Phil Edmonds is available to answer any member queries on COVID-19. You can contact him at phil.edmonds@apinz.org.nz



General health information:

[Ministry of Health](#)

[COVID-19 NZ](#)

[World Health Organisation](#)

[Looking after mental health through COVID-19](#)

[Getting through together](#)

Information for Businesses:

NZTE has put together market updates, a collection of webinars and published many useful tools and articles on their [COVID-19 Pages](#), not just for exporters.

The Ministry of Social Development has a clear declaration requirement as part of the wage subsidy application and this is outlined [here](#). The Ministry has since advised that as part of the wage subsidy application process, it matches information in the wage subsidy application with information held by Inland Revenue, and also it will retrospectively audit samples of those who have applied and been paid the subsidy.

[Guidance to Businesses Operating Under the Animal Products During Level 3.](#)

[COVID-19 Employer support Work and Income](#)

[Business updates](#)

[Inland Revenue: tax relief](#)

[NZTE: Advice to exporters](#)

[Worksafe: Workplace preparedness](#)

[Food and Fibre sector immediate-start job vacancy listing](#)

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[Worksafe: Workplace preparedness](#)

[Food and Fibre sector immediate-start job vacancy listing](#)

[Updates for shippers](#)

The hard copy version of the April journal will be released as soon as possible after the transition into Alert Level 3.

How to access pasGet supported by ApiNZ

One big lesson to come out of COVID-19 is how important support is in a crisis. Whether its economic support from government, practical support from colleagues or virtual support from friends and family - all is essential in making it through. ApiNZ sees our role as bringing our industry together and supporting it, in the good times and in times of crisis. One of our key priorities is: together we are stronger, and this has been made very clear over recent weeks.

ApiNZ has been able to work effectively and efficiently with government to access information and support for our industry. We have developed practical tools for beekeepers including the Level 4 and Level 3 protocols, and essential



services travel documentation. We have also been available to answer members' questions individually and to help where we can.

We are committed to continuing to support and advocate for our industry as the COVID-19 situation unfolds and we face new challenges in the post-COVID environment. A big thank you to our members who enable us to continue to work for industry. If you know of someone who is interested in joining ApiNZ or would like more information about how ApiNZ can support their business or hobby, please direct them to our [website](#) or they can get in touch directly at info@apinz.org.nz

May BeeKeeper journal digital only

Due to COVID-19 restrictions faced by the publisher of the NZ BeeKeeper journal, the May issue will be a digital-only copy. It will be made available to members via a link in early May.

Updates and NZ BeeKeeper journals

Did you know that you can access past Updates and back copy of the New Zealand BeeKeeper through the member only section of the ApiNZ website? If you log in, and then select 'Members Home' from the ApiNZ Members drop down menu you will find links to archived Updates from December 2019 and journals dating back to August 2016.

In the Media:

[Sweet surprise for honey firms](#)

[Funding granted for Gisborne researcher's speedy COVID-19 test](#)

[Coronavirus global demand keeps business booming for Taranaki company](#)

[Rural Delivery: Organic beekeeping and mead making \(TVNZ On Demand log in needed. Plays at 14.38mins\)](#)

[Lockdown cripples migratory beekeepers](#)

[Scientist explores intricacies of pollen](#)



Making a Hive Wrap – Eva Durrant

Last year I wrapped my hives in building paper lined with corflute panels. This worked really well, protecting the hives from rain, providing insulation from cold winds but allowing airflow between the wrap and hive walls. The wrappings were easily stored after winter and are in excellent condition to use again.

Material used: Building paper, corflute (old real estate signs are good), timber battens, glue (or staple gun), tape for temporarily holding the wrap closed, screws for fastening the battens to the wrapper.



Job finished - Wrapped and ready for a cold winter



Building paper and corflute wrap



The demo wrap is for a three box hive (measurements for $\frac{3}{4}$ depth boxes). I also made wraps for a two box and four box hives - only the height changes, otherwise the steps are the same.

Measurements for building paper wrap:

Circumference: 2000mm including a securing overlap

Height: 2 boxes 370mm, 3 boxes 550mm, 4 boxes 740mm

Cut four pieces of corflute to fit on each side of the hive, then glue to the building paper, leaving about 20mm gaps for the corners. Tape some spacers as shown in the middle so that there is an airspace between the corflute and hive when wrapped.



Corflute glued to the building paper...



...With spacers added



Wrap around the hive and use temporary tape to stick it down while working.

Screw a baton of timber to secure the wrap to the front, and make sure the entrance is not covered!

Securing the front



Check the entrance isn't blocked!

Make sure the wrap fits snugly and then secure the back. Add a long baton over the overlapping building paper so that the wind can't pull it apart.



Back View



Top view

Cut the paper so that it sits just below the crown board. This will allow you to lift the board to check hive's food stores without having to undo the wrap.

Look from the crown board down the sides, there should be space for airflow between the hive and the wrap, to ensure that there is no condensation build-up. I also recommend a matchstick in each corner of the crown board for the same reason.

(You could substitute polystyrene sheets for the corflute - adjust the length of the building paper to allow for the extra thickness of the polystyrene sheets).



Your Questions Answered – Keeping Queens Healthy by Frank Lindsay

We as beekeepers can't do much when a queen is in the colony and laying, so here are some pointers to introducing a new queen into a hive.

Introducing a queen.

Our contribution to the queen's health starts when we receive the caged queen. Give the bees in the cage a drop of water each day and store it in a warm place away from insecticide sprays and sunlight until the queen is introduced into a hive or nucleus colony.

We can assist the introduction by putting a piece of tape across half of the top grill of the shipping cage. This allows the queen to get away from any hostile bees that can chew at the bottom of her legs. This is especially important as a queen communicates her presence on the comb by leaving a pheromone trail where ever she goes. This pheromone is produced at the bottom of her front legs from the tarsal gland. If the tarsal pads on the bottom of her front legs are chewed and damaged, the bees will detect she is injured and she will quickly make provisions to replace her.

We can eliminate this a little by putting her in a nucleus hive which contains mostly young bees. It's the older field bees that recognise that she's not their queen and will attack her.

You may have noticed that now we recommend that you put the queen cage in with the tab covering the queen candy intact and then after four day, go back into the hive and rub out any queen cells the bees have produced and that way, the bees have no option but to accept your introduced new queen. Miss an emergency cell on the face of the comb and that virgin queen when she emerges will kill your beautiful new queen.



Just two weeks ago, I introduced a caged queen into a three frame nuc thinking that I will release the tab in three days after removing any queen cells the bees have started. These are recognised as being full of royal jelly. That way the bees no longer have larvae of the right age to produce a queen so will have to accept the queen I have given them.

Note: Queens are normally produced when there is an abundance of nectar and pollen coming into the hive. We are now well into autumn. When it's warm enough, the bees are flying bringing in water as well as a little nectar and pollen.

When I went to release the tab, I found all the bees in the shipping cage including the queen were dead.

Why? She's a foreign queen and bees prefer to use their own genetics to produce a replacement queen. If there is a nectar flow, the bees will also feed the queen in the cage but there wasn't, so they didn't feed her and concentrated on producing two emergency queen cells.

What I should have done. When there isn't a nectar flow, provide one for the bees so that the conditions match normal requeening. If I had added some raw sugar to the bottom of the hive or a feeder with sugar syrup, the bees would have converted this into nectar and then would have fed the other bees including those in the cage as well as the larvae in the brood frames. Miss one little step and it's a disaster.

Making nucs and splitting hives

Only make nucs from your best producing hives as these are the healthiest.

Splitting and requeening a poor producing hive is not the answer. If that hive was full of viruses or pathogens, you have only perpetuated the virus/pathogens to spread. Scientists have changed the queen from a poor producing hive to a thriving hive and vice versa and saw no difference in either queen's performance so the problem is with the colony and not necessarily the queen.

Sometimes the queen is superseded if there is an imbalance in the population of the hive or if the mite loading is too high. The bees blame the queen and supersede her even though it may not be her fault.



Go carefully!

Improper handling of frames and working too fast can result in the queen being squashed or damaged. Mostly when we put the hive back together. Never assume a queen is in the centre of the hive as I have rolled a queen that was on the outside frame when I removed it.

The last thing to remember is that the bees have not accepting the new queen until she is laying and that's why it's especially important not to disturb the hive for 10 days after introduction, (releasing the tab).

Despite what I say, beekeeping isn't that easy otherwise every garden would have a bee hive. I have been keeping bees for 50 years and during that time I think I have made nearly every mistake and those that I haven't learnt, I repeat.

Marking your queens.

Some beekeeper mark their queens so they are easy to find and by the international colour code you can identify how old they are. Gary Jeffery doesn't mark his queens because he thinks it stresses them too much. Sometime when you catch a queen she faints and when I first saw this I thought I had killed her and threw her away. However the second time this happened to me, I left the seemingly dead queen on top of a hive and after five minutes I noticed a bit of movement in her abdomen and a minute later she was up and running around.

If you do mark the queen, use water based paint and only place a small dot on her. If you put paint on her eyes and wing base she will often be replaced by the bees. (Advertisement. SNIBG have blue paint pens and queen catchers available (left over from Camp Rangī) for \$10 a set. Available at the next club meeting.)



Your Questions Answered – What Varroa Treatment to Use? by Frank Lindsay

In principle all treatments have been developed from insecticides. Under IPM (integrated pest management) use them only when necessary (more than 2% mites). This means we should all be monitoring mite levels instead of just treating to the calendar.

It's now twenty years since mites were detected in New Zealand. We are very fortunate that we have so many products registered and that MPI registered the organic acids for us to use.

Some are water soluble and therefore can go into the honey and some are fat soluble and go into the wax. Queens before varroa could last up to four years. Commercial beekeepers changed queens every one to two years before varroa but now requeen every year. In the USA with all the use of sprays, queens in pollination hives can be changed up to five times a year to keep the hives productive.

So what you use will have some sort of an effect on the bees, drones and the queen. Mostly we never notice this physically. Whatever you use, monitor the mite population before treatment, half way through to see that the treatment is being effective. If not, change the treatment.

Initially beekeepers used both Bayvarol® and Apistan® to start with as these were very effective giving gave 96% or higher knock down of mites, plus were easy to use. Apistan has 600 times more active ingredient than Bayvarol and is wax soluble so it's recommended that 30% of brood frames be changed each year.



Because beekeepers did not use different products spring and autumn (we all individually chose to use them at different times), some mite resistance to these products has developed especially in the big commercial outfits.

Amitraz works well but this ingredient kills sperm in both drones and queens. Jeff Pettis found that this product killed 50% of the sperm in a queen's spermathica within 24 hours of it being put in the hives. One of our queen producers had to go through 5,000 drones to find enough viable drones to inseminate queens after using this product.

I'm not saying anything against this product as it is very effective in killing mites but some beekeepers recommended we use it only in the spring and now it must be removed two weeks before the honey flow so no residues goes into the honey. That way autumn queens are not effected by the product. Again, replace brood frames to keep the chemical residue in the hives to a low level.

The use of organic acids is more tricky in that any over-treating will result in the loss of the queen or young bees. Conditions vary from hive to hive, district to district so with organic treatments we have to experiment to get an effective mite kill without damaging the colony.

Some beekeepers have compared thymol products, although effective, one product had one less frame of brood in the spring when tested over 9,000 colonies. Thymol products kill mites and also have the effect of reducing the incidence of nosema in hives.

Everything that relies of fumes to kills mites will give varying results.

A Formic acid overdose will see the bees killing the queen. Depends on the ventilation of the hive but most beekeeper use 1 strip at a time. The formula for 65% formic acid on a pad or paper towel is 40 mls per two storey hive minus the temperature.

Oxalic acid dribble should only be used once a month as it's hard on bee's gut. Fumigation at 2mls is very effective but only kills phoretic mites and has to be repeated for one complete brood cycle.



Mesh bottom boards and drone brood removal also contribute to reducing mite numbers. In Europe some beekeepers are now caging the queen to create a brood break so that all the mites after 20 days are on the bees and it's then very easy to kill nearly all of the mites with just a short treatment.

A new one on the scene is oxalic acid and glycerine which beekeepers make up themselves. We are still playing with this to get an effective treatment. Some say it works better in the spring than in the autumn. I have used this for the first time this autumn but also gave the hives a flash treatment with formic acid to reduce the mite numbers down a little.

There are many websites to obtain the information. Here is one:

<https://extension.psu.edu/methods-to-control-varroa-mites-an-integrated-pest-management-approach>

The best and most up-to-date mite treatments are on the Honey Bee Health Coalition website

https://honeybeehealthcoalition.org/wp-content/uploads/2018/06/HBHC-Guide_Varroa_Interactive_7thEdition_BW_2018.pdf

Randy Oliver also has a very good website and writes the progress of all his mite treatment experiments: www.scientificbeekeeping.com



Beekeeping Around the World – In Italy with Jill and Jim Hepburn

We can't travel at the moment, especially not overseas, so we're sharing photos of beekeeping and beehives from around the world. If you've got some photos from another part of the world of beekeeping, and you'd like to share them, send them in and we'll put them in the newsletter.

Jill and Jim were in Northern Italy in July 2019, in the mountainous Dolomite region and came across a beekeeper who was requeening his hives. "We stopped to talk - but he had no English and we had hardly any Italian! However managed to find out that he was requeening his hives (see one of the photos has a queen cage). He apparently looks after many, many hives and has been beekeeping for a very long time. Very calm bees and he was just dressed in casual clothes - no beekeeping gear in sight!"



Beekeeping in the Dolomites, no beekeeping gear in sight!



An Italian apiary



Requeening the hives



Italian queen cage

Hive entrance variations on the Italian beehives - unfortunately the language barrier meant Jill and Jim couldn't get an explanation of why there were different hive entrances!





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Meeting location

Johnsonville Community Centre, Moorefield Rd, Johnsonville.

WBA Meetings are not being held during the Covid-19 Lockdown.

