THE AMATEUR BEEKEEPER

FEB-MAR 2025

Varroa mite is keeping me up at night

Page 6

INSIDE

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Presidents Report

Vincent Schnyder, ABA President

Dear Members,

As we are already in February it's probably a bit late to wish everyone a Happy New Year, anyway, I wish you all a great year and good health and success with your bees.

For me the year started with a Small Hive Beetle slime out triggered by a high Varroa mite load. I treated the hives a few weeks before but didn't realise how quickly the mite count goes up with all the feral colonies and untreated hives around. Next time I checked the SHB maggots were already crawling around the box.

When I speak to members I realise that I'm not the only one who suffered the same fate and it shows that we all have to be vigilant and embark on the same journey to learn and to adapt to the new environment. It will be for all a new experience as some of the information available from overseas might not be applicable here as we are the only country that had SMH before Varroa arrived, others had the mite first and SMH arrived later.

Varroa Training

On 17 January the National Varroa Mite Management Program announced an additional series of training sessions for most states (Registration link). I highly recommend taking the time to attend one of these workshops to learn more about Varroa and treatment options. It will broaden your understanding and enable you to make the right decisions for your own beekeeping activities.

The Program website www.varroa.org.au is a great source of information including links to the approved treatment options.

Citizen Science Australian Bee Observation Project (ABON)

At the AGM in Mittagong last November we had Prof Sasha Mikheyev as guest speaker. His team runs the Australian Bee Observation Network (ABON) that aims to collect pre-Varroa data on feral genetic diversity, follow the impact of Varroa in Australia and ultimately identify resistance mechanisms among surviving feral honey bee populations. This project runs in parallel to the National Baseline Project which samples managed colonies in each state and territory and test them for the presence of any of eight viruses.

Clubs will be invited to participate in the ABON project, so reach out to your club committee if interested.

ABA Planning Workshop

On Saturday 11 January the ABA Executive met for their annual full day planning workshop in Blacktown where we reviewed the progress in addressing the findings of the 2023 Review and to ensure that our goals for 2025 align to the feedback received and the Objectives of the Constitution.

Budget Review 24/25 and Planning 25/26: As we were at the half point mark of the current financial year we took the opportunity to update the budget of the current year and planning for the next year. For the current year we anticipate a surplus mainly due to higher than expected membership, cost cutting (e.g. non-renewal of personal accident insurance $8,618, membership pack & postage reduction from $32,786 to $9,475). By purchasing our own equipment to stream the AGM, the costs of around $3,500 for hiring an external provider could be eliminated. The budget for 2025/26 will be finalised in Mar/Apr once we know the costs for our insurance.

Committee Positions: The Constitution allow for up to ten committee members and although I don't think that we have to expand to that level, we still have a key vacancy as the role of the Secretary is vacant for some time now and we are looking for someone to fill this role. Please reach out to me president@beekeepers.asn.au if you are interested or want to know more about the role.

Field Day / Conference: We are on track to implement most of the recommendations from the review and agreed to hold a Field Day / Conference together with the Col Pulling Competition most likely in September or October 2025. There are still a few open points in relation to location, format and date and updates will be provided in a later issue of the TAB.

Club Forum / AGM: As pointed out in my last President's Report, we received feedback from

several members who missed the Conference in November as they deleted the email once they saw the acronym "AGM" and did not realise that we had full program with guest speakers. Thus, and in line with the 2023 Review, we decided that the AGM will be held together with the Club Forum at Hornsby RSL *(most likely on 30 Aug 25)* and members can attend the AGM either in person or via webinar link. A Notice with further information will be sent closer to the event.

We had a great time on the day and I really enjoyed to see how well the committee members worked together as one team to move the ABA forward for the benefit of members and clubs ■

Happy beekeeping

Biosecurity Buzz

Mike Allerton ABA Biosecurity Officer

Aluen CAP® Emergency Permit??
The first of the oxalic acid options, ApiBioxal was issued an emergency permit and should be available February. Refer to the December issue of TAB for more information.

The second oxalic acid product currently working through APVMA registration is Aluen CAP®. If things go well, an emergency permit will be issued in coming months and product will hopefully be in stock for spring. The ABA has submitted a letter of support for the issue of an emergency permit pending registration. You could help secure the permit by writing to the APVMA. More on that later.

AluenCAP Strips in hive

Aluen CAP® is a slow-release oxalic acid strip that is placed into the brood chamber in a similar way to other strip-based products. As with most of the currently registered or permitted products, it only affects mites on adult bees. Each strip contains 10g of oxalic acid that is released on contact over the 42day treatment period, covering multiple brood cycles. As the bees touch the strips, some oxalic acid transfers to them and through normal bee social behaviour is spread throughout the hive. It does not harm the bees, but is fatal to mites.

It has eight years of field use in South America where it was developed and is manufactured. If used in accordance with the manufacturer's instructions, the efficacy exceeds 95% over 42days. That compares well with the synthetic acaricides and performs better than home-made oxalic acid strips which is closer to 75% efficacy.

South America spans a very broad climatic range, more so than in Australia. Aluen CAP® does not suffer the temperature restrictions of some treatment products. Delivery is through contact instead of vapour, which is much gentler on the bees, particularly those already parasitised by mites.

It is not clear yet what restrictions the Australian label will apply. The ApiBioxal label restricts its use to twice per year even though current research endorses much more frequent use. Hopefully the Aluen CAP® label will be more in line with the science.

As with other non-synthetic products, **there is no record of mites developing resistance**. During the unstable period with high mite reinfestation rates, it is often necessary to treat almost continuously. I have seen mite counts rise from below threshold at the end of a treatment cycle, to over 60 within a week. Our choices of treatment

options become more restricted when back-to-back treatment is necessary to keep mite levels under control. The synthetic treatments of the same chemical class or mode of action must not be used sequentially to delay mites becoming resistant.

Adding Aluen CAP® to our range of treatment options gives us another choice that has some other advantages. Aside from the high efficacy at any time of the year, it has no effect on honey and wax. It can be used with supers on. It is safe to use with appropriate care and inexpensive PPE. The strips are ready to use and is easy and fast to apply. If you aren't comfortable working with liquid or powdered acid such as ApiBioxal, this could be your solution.

You can help support the application for an emergency permit by emailing a short letter of support to enquiries@apvma.gov.au. Here is suggested wording with which you could model your letter:

We are writing to express our strong support for the Aluen CAP® Emergency Permit application, aimed at bringing this varroa treatment into Australia.

As beekeepers, we understand the critical need for effective solutions to control varroa, a serious pest threatening the health of our hives. We believe that the Aluen CAP® treatment offers a valuable addition to the range of tools available for varroa management. Its low impact on bees, honey, and wax makes it an ideal candidate for use in our apiary and throughout the wider beekeeping industry.

Having access to this treatment would not only enhance the sustainability of our own hives but also support the resilience of the Australian beekeeping sector as a whole. We strongly advocate for the approval of this emergency permit and trust that it will contribute significantly to the ongoing fight against varroa in Australia.

Thank you for considering this important matter.

Heavy Colony Losses

I continue to receive calls and messages from beekeepers finding their hives have absconded, perished or slimed out. Some suspected poisoning and I don't dismiss that possibility.

One case of apparent poisoning had some evidence in the form of the empty pesticide container left nearby "Atlas Advanced Insect Bomb". So far, the local council and DPIRD haven't helped.

By far, the greatest cause of colony losses is unmanaged or inadequately managed varroa infestation. The initial estimations of colony collapse from varroosis was within two years of first detection. The reality has proved to be much faster. It has been taking from a few weeks to months for colonies to either completely collapse or abscond. Absconding colonies take mites with them, so they are likely to be doomed in their new location.

I now mite wash my hives every two weeks after losing hives within four weeks.

As for slime-outs, again its mostly varroa. Yes, we have huge numbers of small hive beetle this season. But SHB are opportunists. They take advantage of a colony when it is not strong enough to defend its space.

Mike Allerton prepares Susan Templeman MP for a Hive Dive


Susan Temple MP holds her first frame of bees

With any slim-out, investigate the actual cause. In varroa areas, mites are the likely cause of the colony weakening leading to SHB overcoming them. In all areas, take a close look for any signs of AFB. Strong colonies robbing AFB weakened colonies will soon succumb to AFB and then SHB will take over.

Own Use Exemption Update

There was no progress over the holiday season, but at the first opportunity I met with my Federal Member, Susan Templeman, Member for Macquarie. I informed her of the varroa situation and the reason for an Own Use Exemption clause for organic treatments. Susan wanted to see bees first hand, so I suited her up to dive into a hive.

Susan was very interested in the cause and said she will discuss it with her colleagues, several of which are beekeepers.

Susan is also chair of the partitions committee and suggested it would be a useful tool for the cause. Partitions only require 50 signatures, but I'm sure we can do better than that. As chair of the committee, she has the ability to advance it along the line.

Before I launch a partition to parliament, I want to talk to as many MPs and senators as possible. It doesn't matter what side of politics they're on, if their support can be gained, we take another step forward. If you would like engage with your federal member, I'd be happy to join you to help them to see the importance of bees and helping us care for our bees. Perhaps they would like to Hive Dive too. Let me know.

AFB Minimisation Program

The last of the AFB tests have been done for the 2024 program. Unfortunately, we had some positives and they've been dealt with accordingly. All but one showed no signs of AFB at the time of the honey harvest.

If it wasn't for the positive test result, the beekeeper would still be unaware of AFB in their apiary which could lead to further infection. Remember, it's the strong colonies that rob out weaker colonies. If the weak colony is collapsing due to AFB, the strong colony is likely doomed to suffer the same fate.

For most of the country, AFB is still the primary health concern for bees. Do your thorough inspections with the bees shaken off the frames. Check every cell for signs of AFB.

You are NOT a bad beekeeper for finding AFB in your hives. But if you don't take immediate action on that discovery, that's another story. If you find or suspect AFB in your hive and you're not sure what to do, call your club biosecurity officer, mentor or me. Don't be afraid to call a DPIRD biosecurity officer, they want to help.

I'll be calling for more honey samples when/if DPIRD announces the 2025 AFB Minimisation program.

Club Visits/Presentations

The invitations are coming in to speak at club meetings mostly about AFB and varroa. Many just want an extended question/answer/discussion session mainly on varroa. Sometimes I talk about my pet project Back Friendly Beekeeping. Let me know if you'd like me come to your club meeting.

Until next time ■

Mike Allerton ~ biosecurity@beekeepers.asn.au

Varroa mite is keeping me up at night

Doug Purdie, Vice President

After dealing with the Varroa mite for almost a full season now, we're realising there is a lot to absorb and many habits to break. For me personally I am now comfortable with sacrificing a few hundred bees to get an accurate picture of the mite density in a hive, and to be able to wade through the complexities of choosing the right treatment for the right parameters.

I also have a pretty robust social media filter and can spot a Varroa disbeliever when I see one... they are the people complaining about their hive being poisoned when the culprit is really Varroa. When asked about whether they're testing for Varroa, they give the standard answer: "I do my checks".

So it's been pretty concerning to see Canadian beekeepers talk about massive hive losses coming out of winter. Surely these folks know a thing or two about Varroa management as they have been doing it since 1989.

What's really got me concerned

Recently I've been looking at some modelling done by Randy Oliver. He has a spreadsheet model that has settings for hemisphere, climate and how much spread there is due to untreated hives.

I have used his model to forecast the health and longevity (or otherwise) of our beehive at the Sydney Bee Club in Randwick, Sydney. I inputted the treatments I have done so far into the spreadsheet. Based on his model, our hive will collapse in March. *(See Figure 1.)*

The treatments we have applied so far are Bayvarol (95% efficacy) in August, Formic Pro (70% efficacy) in November, and ApiBioxal in December (45% efficacy).

The model predicts that if I do a wash in February, my mite count will be around 38 mites. It takes into account the collapse of surrounding hives and our winters with brood.

Assuming my mite count is as high as predicted and I apply another chemical treatment with a high efficacy of 95%, my hive will still collapse - but now not until June. *(See Figure 2.)*

With another Formic pro treatment in April, the hive will make it to July where the predicted alcohol wash counts are in the high 40s. *(See Figure 3.)*

Of course, this is only a model so it's all guesswork until I actually do the alcohol washes. The reason I'm talking about this and the potential for disaster now is that if you're like me, you were thinking: it's OK, I've put my treatments in for winter; there's no need do washes while it's cold as it stresses the bees... Well think again.

As the queen slows down and the number of bees drop moving into autumn and winter, the effective

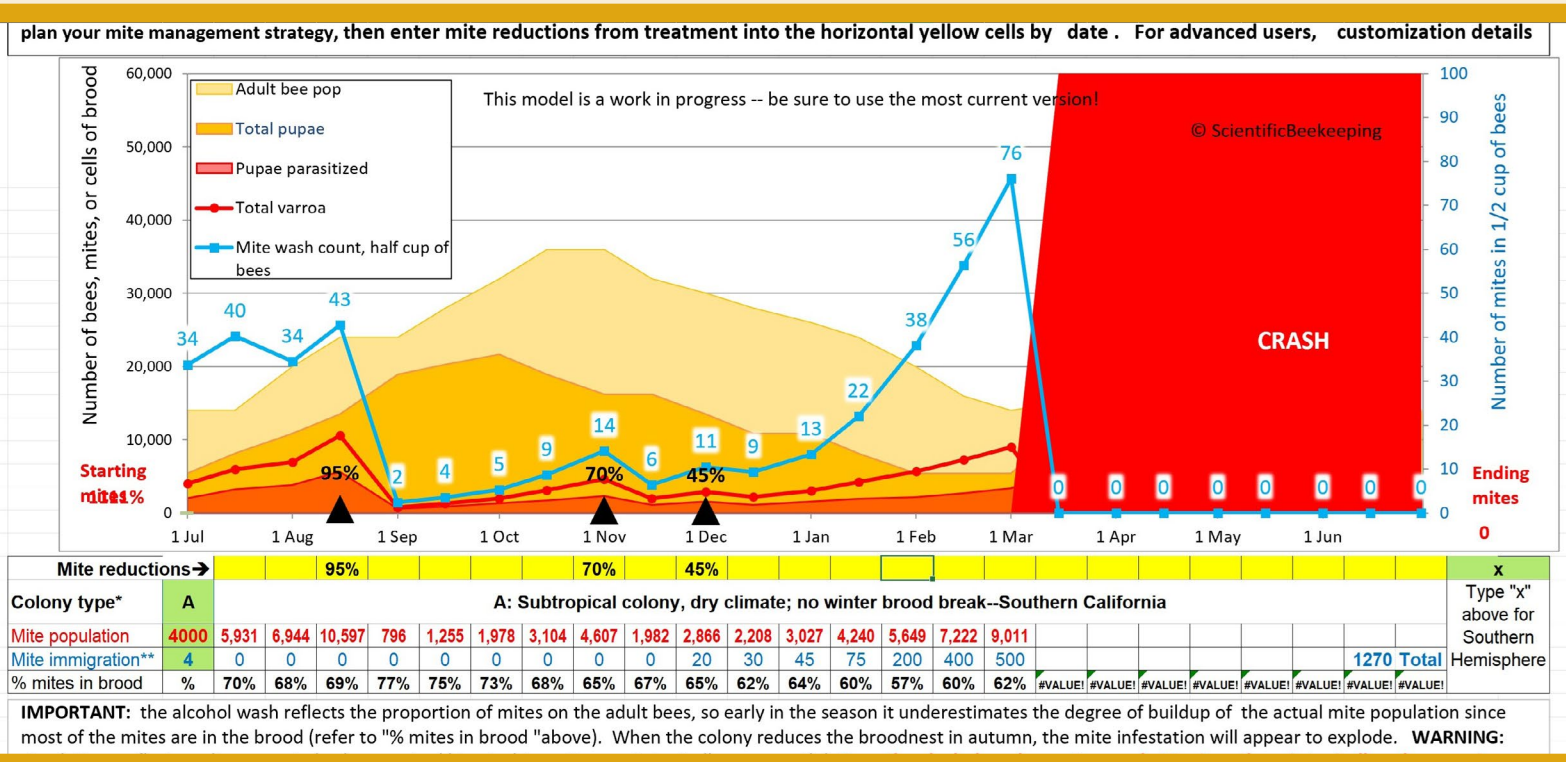


Figure. 1.

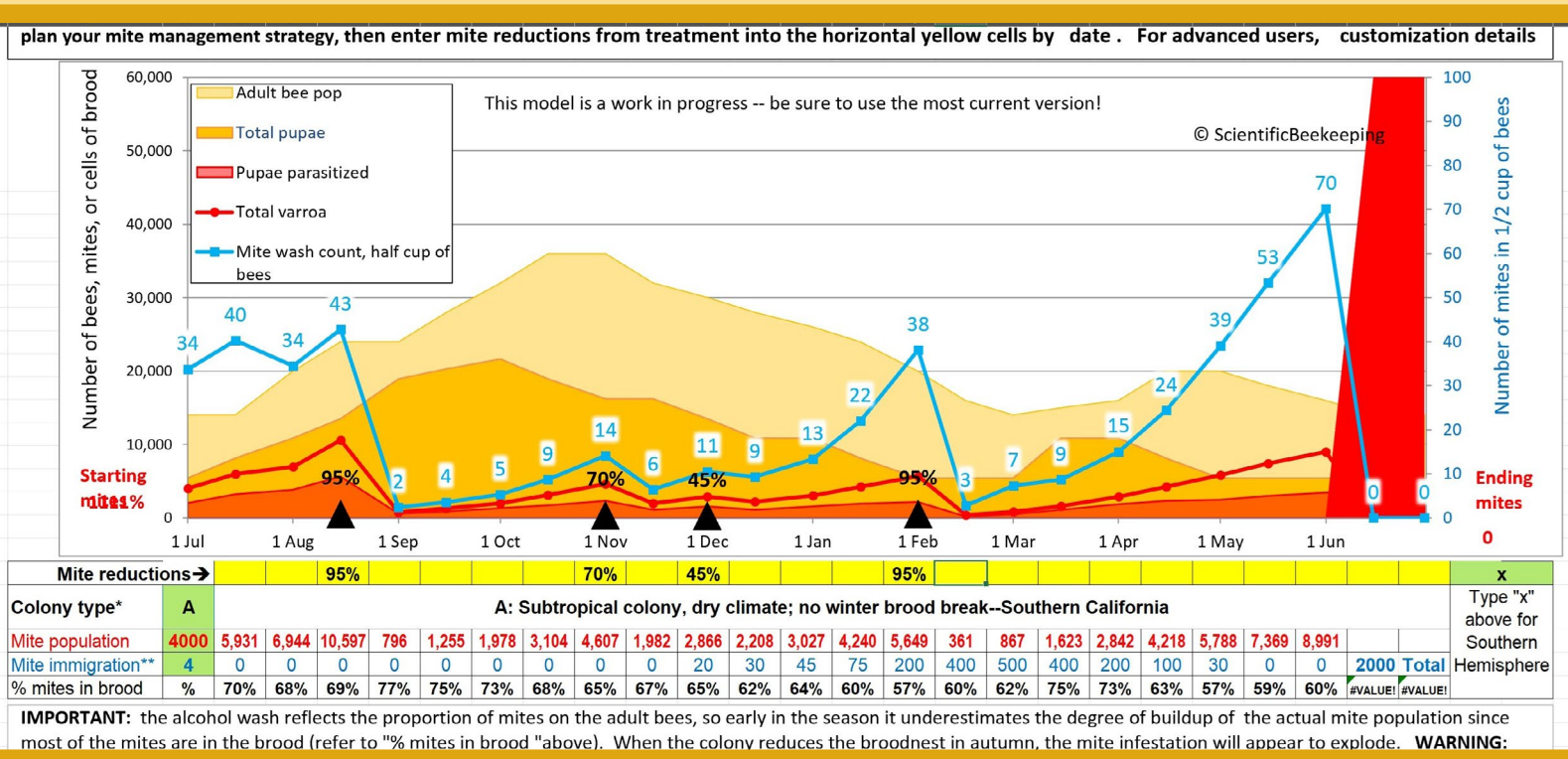


Figure 2.

density of mites increases, leading to hive collapse.

Back to the Canadian situation

While they don't really know why there's been a large number of collapses in Canada, the suggestion so far is that their chemical treatments are dropping in efficacy and assumptions about how well a treatment worked were being made to the detriment of the hives.

The lesson here is that you need to seek out education on Varroa management. Check out varroa.org.au for sessions near you. You also need to keep checking with a reliable surveillance method such as alcohol wash.

It's imperative that you work out a treatment plan for your hive and understand that you need to mix your treatments or, like the Canadians, we'll be in a world of trouble when our chemical treatments start to fail.

If you need help or have questions about Varroa management, ask your club; or send an email to support@beekeeper.freshdesk.com

As always, keep on buzzing ■

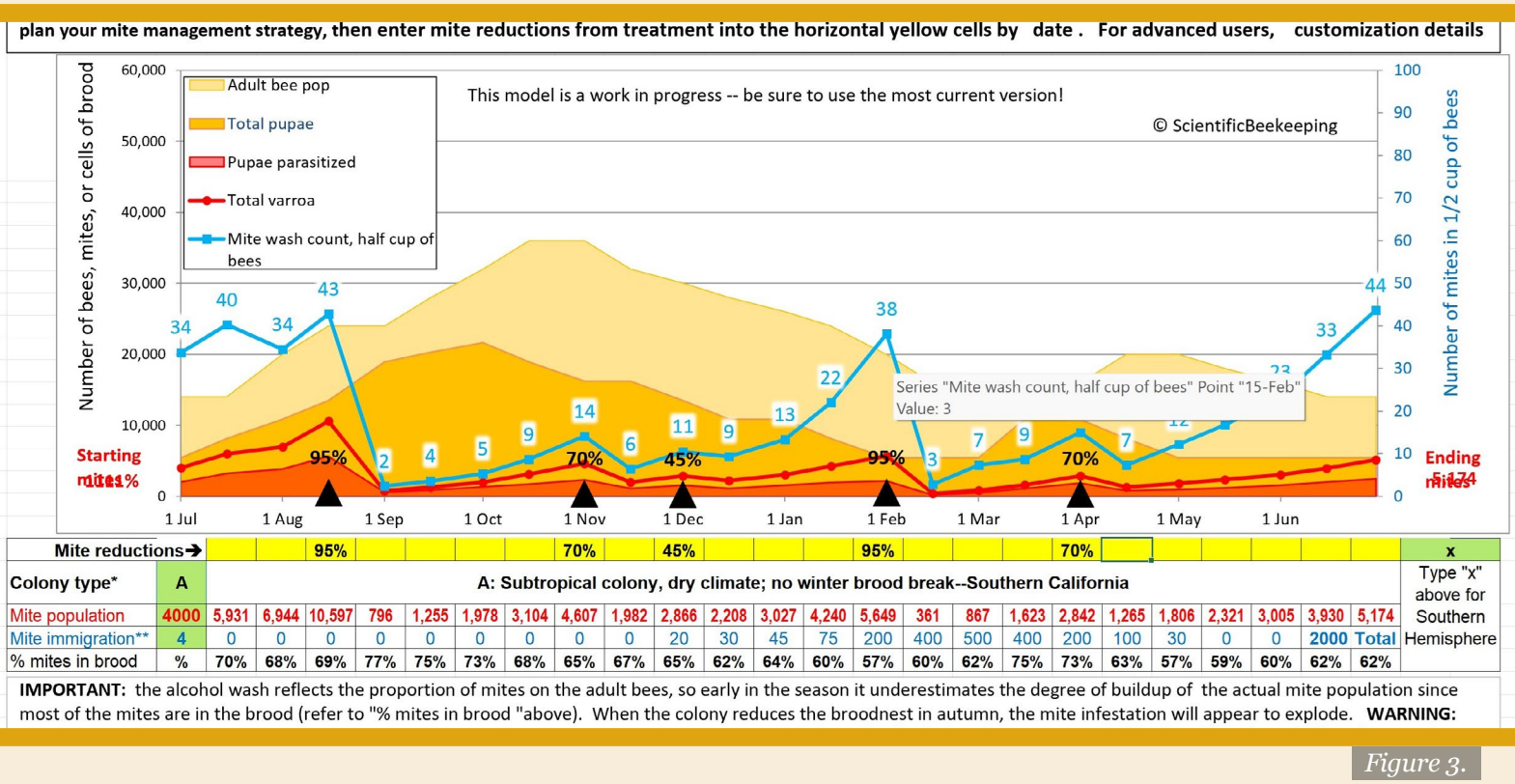


Figure 3.

RECIPE HONEY CHOCOLATE PANFORTE

INGREDIENTS

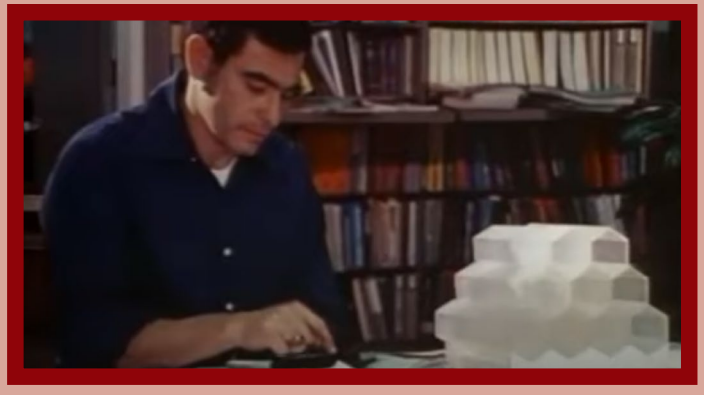
- 200 grams dried figs chopped
- 150 grams raw sugar
- 200 grams honey
- 50 grams water
- 100 grams dark cooking chocolate
- 20 grams cocoa powder
- 2 teaspoon ground cinnamon
- 215 grams plain flour
- 125 grams blanched toasted, almonds
- 115 grams shelled pistachio nuts
- 60 grams glace ginger chopped

DIRECTIONS

Preheat oven to 130^{C} fan-forced (150^{C} conventional). Line a 22cm cake tin with baking paper

1. Put raw sugar honey and water into a small pan heat slowly until all sugar has melted
2. Add chocolate to Honey mixture and heat until chocolate is melted
3. Pour honey mixture over remaining ingredients and mix with a wooden spoon until well combined
4. Press the mixture into the cake tin. Cook for 30 minutes in a moderately slow oven at 160^{C}
5. Cool in pan/dish before turning upside down on a serving plate/chopping board to slice ■

DOCUMENTARY MATHEMATICS OF THE HONEYCOMB



A fascinating two-part documentary exploring the mathematics of the honeycomb. It delves into the scientific study of its design and how its structural efficiency allows it to support 20 times its own weight. Produced in the 1970s, it features some impressive graphics and remains a captivating watch. ■

USE THE LINKS BELOW:

Part One: https://youtu.be/rougBpI-rzA?si=MfAs11qFBzroeROw

Part Two: https://youtu.be/A9E7mPhdVp4?si=GEHlAWynW13qD7SO

8TH MARCH 2025

SAVE THE DATE

NSWAA Southern Tablelands Branch

Beekeeping Field Day

Exhibition Park in Canberra - EPIC

Fitzroy Pavillion & Magpie Park, Federal Highway, Watson, ACT

8.30 am to 4 pm

beekeepingfieldday@gmail.com

Follow us on facebook
Southern Tablelands Beekeeping Association - NSWAA

Presentations

Beekeeping Supplies

Information about Varroa Management

Demonstrations

Entry Tickets Available Online Soon

Contact

NSWAA
Southern Tablelands Branch

Beekeeping Field Day Committee

Therese Kershaw

Georgian Vasilescu

Stephen Targett

Pete Czeti

Australian honey bees are in danger and we need your help to save them!

Sara Bryant

Almost all the wild honey bees in Australia are at risk of dying because of Varroa mites, which were first detected in New South Wales in 2022. This parasitic mite is spreading fast, and if we follow the pattern seen in other countries, it will soon be all over Australia.

BUT THERE IS HOPE!

In other parts of the world, some feral honey bee populations have evolved natural resistance to Varroa mites. These resilient bees can survive without pesticides and could become the foundation for breeding stronger, Varroa-resistant bees. To do this, we need to figure out which genes are responsible for their resistance.

WE NEED YOUR HELP

To uncover the genetic changes that allow resistance, we need to collect bee samples now, before the mites spread and mass die-offs begin. As the last continent to face Varroa, Australia offers our final chance to do this. However, no single person or organisation can cover such a vast area over several years—that's where you come in.

We need Equipment Hubs!

We are launching a statewide citizen science program in NSW, to collect feral Drone honey bees living in the wild. Our hope is that this program will allow us to collect the volume of data we need to map the coevolution between Honey bee and Varroa mite in real time.

My name is Sara Bryant, I am a beekeeper, bee enthusiast and now the PhD student who has taken on this project. I would like to ask all the clubs in the ABA to please help me in my project and become an equipment hub for the Citizen Scientist volunteers.

All that is needed from you is to receive the equipment for the project *(we will mail this to you)*, store the equipment for the project, and keep a record sheet of the volunteer in your area who has picked up the equipment.

It is with your help that my dream of becoming a beekeeper came true, and I believe that with your help I can help be part of the solution to save the bees

Please reach out to your local club to discuss how your club gets involved ■

New Horizons for Macarthur Beekeepers

Ed Napiorkowski, MBAi President

The Macarthur Beekeepers Club (MBAi) has entered an exciting partnership with Wests Leagues/Lakeside Golf Club Camden (Wests).

With the unfortunate closure of the Macarthur Centre for Sustainable Living due to loss of their council funding, the Macarthur Beekeeping Club was forced to vacate the grounds of Mt Annan Botanic Gardens which had been the location of the club apiary for over 20 years.

At the time this was unfolding we were in communication with Wests discussing their interest in hosting bee hives on the grounds of the Lakeside golf course. Wests were keen to expand their environmental program and had already commenced significant revegetation in sections of the course. Coupled with a desire to attract bees for improved pollination as well as expanding into community education on the importance of bees and beekeeping were all topics being discussed. Several enthusiastic meetings occurred, and it became clear a common interest and unique opportunity was emerging. This combined with the need for our club to establish a new home led to the development of a formal 'Licence to Occupy' agreement being drafted with executives from both parties working through the legalities and practicalities of establishing a formal partnership.

The exciting result is that Wests have allocated a section of land adjacent to the newly constructed greenkeepers maintenance facilities for the Macarthur club to use as our new home.

In addition to a security fenced area for the club's hives, two 50 sqr metre sheds will be constructed specifically for club use. One shed acting as an equipment store, workshop and field day wet weather training area, the second as a honey store and extraction facility. Those attending the monthly field days will have access to the carpark and toilet facilities in the adjacent greenkeepers maintenance complex.

This partnership presents a significant opportunity for the club to expand on our mission of educating and supporting beekeepers in the Macarthur area. Unlike the scenario at the Botanic Gardens where we were permitted to keep hives but no other infrastructure, the new facilities at Lakeside will allow club equipment to be stored securely adjacent to the apiary as well as conducting improved education sessions on field days. There is room for the club to expand and combined with the strong community focus and links from Wests there are significant additional educational opportunities to explore.

Plenty of work to do in setting up the new facilities once constructed, but I am confident this partnership represents a tremendous opportunity for our club and beekeeping in the Macarthur region ■

Overview of how Veterinary Chemicals are registered in Australia: A Guide for Beekeepers

Nikki Potgieter

In Australia, the regulator of agricultural and veterinary chemicals is the Australian Pesticides and Veterinary Medicines Authority (APVMA). According to the Australian Agricultural and Veterinary Chemicals Code Act 1994, bees are considered food-producing animals, and therefore any chemical product that is used to control parasites such as Varroa, must be registered through the APVMA.

Veterinary products developed to control parasites usually contain at least one active constituent, as well as a variety of excipients. While the active constituent is the ingredient that actually kills or repels the parasite, the excipients help the active to work better by delivering it to the right place, preserving the product so it lasts longer, or by making the product easier to use. In addition, excipients and the way a product is packaged/formulated can control how quickly the active ingredient is released. The combination and concentration of actives and excipients in each product are carefully selected and tested to achieve a specific outcome when used in a particular way – changing the concentration of any of the ingredients or using the product in a way that it was not intended will change the way the product works.

Application Submission:

Manufacturers / distributors must submit an application, including a complete dossier, to the APVMA. The data in the dossier must prove the product's claims and demonstrate safety and efficacy.

Data Assessment:

The APVMA uses a scientific, evidence-based approach to evaluate the data in the dossier, combined with a risk analysis framework. The risk assessments determine how toxic the product is (to humans, as well as plants and animals in the environment) and the extent to which people, plants or animals are likely to be exposed to the chemical when it is used according to the proposed label. For food producing animals, this includes the risk of chemical residues remaining in products consumed by humans (eg. honey and beeswax). Potential risks to trade are also considered during the assessment process.

Information from other countries regarding the performance, efficacy and safety of a veterinary product can play a significant role in the registration process. If a product is already approved and has been used safely and effectively in other countries, the data can be very useful. The APVMA often considers overseas data and assessments to help inform their decision-making process. However, conditions in Australia – such as our unique wildlife, climate conditions, and farming practices – may be different from those in other countries and the APVMA will therefore consider whether the overseas data is relevant and applicable to the Australian context.

The assessment period can take up to 18 months but may be longer if additional information or data is requested. More complex products may also require a more detailed assessment and therefore take longer to review.

Registration and Permits:

Once the APVMA is satisfied that all criteria in the application have been met, registration of the product will be approved.

In addition, the APVMA administers a permit scheme that allows for the legal use of chemicals in certain ways that are contrary to the label instructions or allows for the limited use of an unregistered chemical product under certain circumstances. Emergency Use Permits can be a vital tool for managing unexpected and urgent threats to agriculture and animal health in Australia such as when Varroa was first detected in NSW. The assessment process for Emergency Use Permits is significantly reduced, they are only issued for a limited period and may contain specific conditions to manage any potential risks.

Post-registration Stewardship:

Post-registration stewardship is another critical aspect of the APVMA's regulatory framework. Monitoring and reporting of adverse events (side effects, lack of efficacy, residues in food, harm to people and/or the environment) are mandatory.

Conclusions:

- Before an agricultural or veterinary product can be legally supplied, sold, or used in Australia it must be registered by the APVMA.
- Extensive testing in the development of a product or formulation provides high quality, reliable data to demonstrate a product's efficacy and safety.
- Unregistered products have not been assessed by the APVMA for safety and efficacy. Therefore, their use can pose significant risks to animals, humans, and the environment.
- Using unregistered products is illegal in Australia under the Agricultural and Veterinary Chemicals Code Act 1994. Violations can lead to penalties including fines, imprisonment, or both.
- The APVMA controls the narrative of how the label looks and how it is applied in Australia. The way a product is used in Australia may be different to other countries
- Always follow the directions on the label – this ensures that the product will work as expected.
- Overusing a product, or not following the directions on the label, can lead to the development of resistance. Creating a population of parasites that are resistant to an active ingredient means the products will no longer work as we expect and our options for controlling pests and diseases are reduced.
- Registered veterinary products have been formulated and tested to work in a specific and consistent manner. Simply using the active ingredient, or using a different formulation designed for another purpose, may save money in the short term but will not produce the same results.
- Don't rely on the internet and social media for advice on 'home remedies' and off-label use. Anecdotal accounts are definitely not the same as scientific evidence and can lead to serious efficacy and safety issues (for you, your bees and the environment).
- If you experience any adverse events when using a registered product – including unexpected side effects (to your bees, or yourself) and lack of efficacy – report it. Either directly to the APVMA or to the contact details listed on the label ■