Amateur Beekeepers Australia

NEWSLETTER

Presidents Report

Vincent Schnyder, President

Dear Members,

It seems time flies by and we are already at the end of summer. I hear that some members had great honey flows and for others it was not that great. My own hives in Sydney did quite well, but the ones I have in the Wollombi Valley struggled a bit and only in the last few weeks I saw some honey coming in.

Thus far the regular Varroa monitoring of my hives has not identified any mites yet, however, when I look at the Varroa Mite Heat Map I know it's just a matter of time and I will find the first mite like so many members of the association already did. It is important not to become complacent with monitoring and if required management before the bees can't cope with the mite load.

In early February the old Emergency Order was replaced by the NSW DPI Control Order and after intervention from the Australian Honey Bee Industry Council (AHBIC) and others, the original order was adjusted and simplified.

This evolving situation makes it challenging to know what options we have as a beekeepers to manage the mite in our hives. AHBIC maintains and regularly updates a Varroa Chemical Treatment Table with options currently available and what is in the pipeline for approval. It's good to see that Oxalic acid based products are now also in the approval process which will give us wider options for treatment.

On the 1st of February Barambah Amateur Beekeepers Inc. based in Kingaroy, South Burnett, joined the ABA family. Further details later on in this newsletter.

Earlier this month we relaunched the ABA Portal and the Swarm System and members can now elect to be added to the Swarm List on our website. In addition, those members who purchased the optional Public Liability Insurance can now download their Certificate of Currency from the portal as before. Clubs now have access to the committee details of other clubs and all club executives have access to their clubs insurance certificate of currency.

This is the second big step forward after implementing the membership system in October last year.

The next step is to review our website to determine the best way forward. If you are a web designer or web publisher and would like to get involved in this project, please let me know on it president@beekeepers.asn.au ■

Happy Beekeeping

NEW ABA BEECLUB BARAMBAH

Junior Beekeeping Course 2023

In 2011 a small group of beekeepers from the South Burnett region met for the first time in the Wax room of Kingaroy based Burnett Beekeeping Supplies, to discuss how they could help each other with their beekeeping endeavours. Not long after that first meeting, the number of attendees increased with the meetings moved to Kingaroy RSL and Barambah Beekeepers was formed, using the Aboriginal name adopted for parts of the South Burnett region.

Over the next few years, the membership numbers had grown to an extent that it became apparent the club needed to be formalized and in April 2019, Barambah Beekeepers Association received its Certificate of Incorporation. A small shed, initially shared with the local garden club, is currently leased from the Council to store equipment, and to have our meetings. A property owner on the outskirts of Kingaroy township offered his land as a place for the Club to maintain hives, where we currently have various types including a Kenyan Top Bar, Flow, Nuplas plastic, Hive IQ high density expanded polystyrene and timber Langstroth's.

We now meet on the 2nd Saturday of every month, starting at the club's hives, where our newer members are given hands on learning experiences during our inspections, then we return to the shed to discuss relevant issues, practices and share our knowledge, placing an emphasis on bee biosecurity.

Our members range in age from teens to their eighties, with beekeeping experiences covering recreational backyard 'beeks' to commercial apiarists, all of whom are willing to mentor and impart their knowledge to beginners and enjoy the camaraderie of fellow beekeepers.

In 2023, we started to conduct basic beekeeping courses, having great success with our Junior Beekeeping course which includes a visit to Burnett Beekeeping Supplies factory to show how timber hives and frames are made as well as the wax foundation.

Although small in membership numbers, compared to other clubs, we cover a large area of southeast Queensland and include the townships of Blackbutt, Yarraman, Maidenwell, Nanango, Kingaroy, Wondai, Murgon, and Goomeri. To help promote beekeeping within our region the club mans a trade stall at the annual Nanango and Kingaroy Shows as well as the Goomeri Off Grid Lifestyle Expo, where we have received a great deal of interest and new memberships.

Our committee is continuously looking at how we can improve our members beekeeping experiences and are very pleased to now be affiliated with Amateur Beekeeping Australia ■

Biosecurity Buzz

Mike Allerton ABA Biosecurity Officer

Transition to Management

As we move closer to the September 2024 deadline for Varroa management, our obligations are a little less onerous. Hive and component movement requirements are now much simpler. Declarations are only required if moving from the Management Zone to the Suppression Zone.

We are still required to test for mites at least every 16 weeks and report the results within seven days of the test. You must report both positive and negative results.

The DPI is directing more resources to enforce the testing and reporting requirement and intend to catch up with those that have not yet reported. Get your test done and reported now.

Registration of treatment chemicals by the Australian Pesticides and Veterinary Medicines Authority (APVMA) is a slow process with only Apivar and Apiguard registered as of 2nd February. Bayvarol, Apistan, FormicPro and Apitraz are still under emergency use permit.

There are now two Oxalic acid products undergoing registration. Api-bioxal with delivery options via dribbling and fogging. Aluen CAP is a strip that works via contact rather than vapour and can be used with supers on.

I talked with the manufactures of Aluen CAP at Apimondia last year. It has over a six-year history in South America and seems suitable to our environment. The strips can be left on for multiple brood cycles effectively knocking down emerging mites.

Beekeeper education. I have received many volunteers from clubs to participate in the Train the Trainer sessions. Thanks to you all.

There has been no announcement of the training schedule, nor the number of ABA positions allocated. I'll notify club executives as soon as the information is available.

Nuc Aid For Individuals

There are still many nucleus hives and full hives available. As mentioned last newsletter, I'm extending Nuc Aid to individual beekeepers that lost everything in the eradication phase.

If you want to start beekeeping again, Email biosecurity@beekeepers.asn.au with your name, phone, suburb, ABA member number and hive brand. I'll put you in touch with a Nuc Aid donor to work out the details.

AFB Minimisation Program

The NSW DPI have continued the AFB Minimisation Project in 2023 with many clubs helping me gather honey samples from over 70 apiaries. There were some positive detections, but by far most tests showed no AFB.

The 2024 Program is now open, Club biosecurity officers email me to join the program. Each club can have three tests. Larger clubs can have more.

Club Presentations

I offer to speak at your meeting on virtually any biosecurity topic. AFB is still our biggest biosecurity challenge so is a regular topic. Varroa is top of mind for many.

With the new year in full swing , clubs are booking for the year. Illawarra, Shoalhaven, Southern Highlands already underway. Let me know when you'd like me to speak at your club meeting. biosecurity@beekeepers.asn.au n

VENTILATED HIVE BASES

Drew Maywald

A subcommittee of GCRB members met last November to discuss and look at the design of ventilated bottom boards for bee hives to combat Varroa when it arrives, and also to help control small hive beetle. Our club Biosecurity Officer and ABA Executive officer, Fiona Fernie, kept bees with Varroa mite in Scotland for many years so her input into the design of the new bottom board was invaluable.

In researching the benefits of ventilated boards we found reports of increased honey yields and hive populations by up to as much as 30%, It is believed that the increased ventilation in a hive with a ventilated bottom board, means that less bees are required to work in the hive to increase air flow so there were more bees out foraging.

For our design we bought and looked at commercially available boards and came up with a design based on these boards and experience from overseas beekeepers. One of our members sourced all the materials and came up with a sturdy design using double thickness 18 mm marine plywood for the front and sides.

The base of the ventilated bottom board consists of stainless steel mesh with an aperture of 3.3 mm, sourced locally from a supplier who has been supplying many beekeepers in the NSW Varroa areas. This mesh will allow Varro mite and small Hive Beetle to pass through it but not bees, and the diameter of the wire in the mesh is 1 mm so it is easy on the feet of our little buzzers.

The base is 70 mm deep and includes an optional stainless steel Crim Safe mesh bottom tray *(as used on security doors)*, and a ventilated door to access the tray at the back of the hive. The Crim Safe bug tray works a treat because it allows us to put an oil tray on it for SHB if we want to, or lay any other traps, chux sticky mats etc on it. The big advantage to having this tray is that once the back door is closed no other, bugs, flies, beetles etc can get into the hive through the bottom.

Top View of Ventilated Base

In comparing our base with commercially available ones we found that many commercial bases have been designed to combat Varroa, whereas these bases have been specifically designed by GCRB Personnel to:

1. Improve ventilation in the hive – which will improve honey yields and hive populations by up to 30%.
2. Control small hive beetle.
3. Help in the control and monitoring of Varroa when it gets here.

I can report that I have had these bases on two of my hives since November 2023 and had no bearding on the front and sides

Back door of the base

of my hive during our hot summer. On the other hand my hive with a solid base bearded every day.

We have finished new bases for each of the club's five hives and are now going to make them available to our members and other beekeepers, using the resources of the Veterans support group Men's Shed.

Members will be able to buy the ventilated bottom boards as a flat pack or assembled ready to be painted regardless of whether their hives are Langstroth or Flow hives. The flat pack will include the SS mesh, all the timber required cut to size, screws, nails, hinge, and hook and eye, as well as detailed assembly instructions. Cost of the flat pack will be $50 + $10 if you want the stainless steel Crim Safe tray and $5 if you want copper wire across the hive entrance. We are also selling them assembled ready for painting for an extra $40. For more details please contact me on gcrb.secretary@beekeepers.asn.au

Base showing slide in Crim Safe tray

ABA Swarm System and Insurance Portal (ABA Portal)

In early February we went live with our new Swarm System and Insurance Portal.

Since we implemented the new membership system in late October last year, the Swarm System and Insurance Portal has been reconfigured and streamlined.

Members can now elect if they want to be listed on the ABA Swarm Page as swarm collectors and members who purchased the optional Public and Product Liability Insurance can download their Certificate of Currency once it has been issued by our insurance broker.

To access the ABA Portal or the Membership System go to the ABA Website www.beekeepers.asn.au, click on "sign-in" on the top right hand side which will take you to our sign-in page.

Note: The membership system and the Swarm System and Insurance Portal are on two different platforms and thus the passwords are not synchronised. You will need to set a new password first by using the "Password (forgot?)" link.

For further details please refer to the User Guide: https://drive.google.com/file/d/1OEgZWbwFvDtRunJbn-Mv7AQ7N8kU9uai/view?usp=drive_link

NATIONAL BEE BIOSECURITY PROGRAM

How to best determine when and which varroa mite treatments you should use

Rod Bourke, Bee Biosecurity NBBP

Managing varroa mite numbers can sometimes be a complicated issue, so here are some tips to make it easier for you to achieve ongoing success with controlling your mites and keeping hives healthier and more productive.

1 Be organised
2 Be consistent
3 Keep good records
4 Do not become complacent
5 Educate yourself using trusted sources

BE ORGANISED. Organisation is a type of behaviour that some people undertake easily whilst others find it extremely hard to muster. For those that do not naturally embrace "organisation" this may be present in many areas of your life, including your beekeeping operation being "a bit of a mess", plus less successful than it probably could be. If this sounds like you then you will need to do something about it so that varroa does not eventually impact your beehives in a particularly devastating manner. This is not only because you will lose more hives (and money), but also because you could negatively affect other nearby beekeepers by breeding up mites that later infest their hives. Any mite breeding source makes it harder for everyone to manage their own mites, so please don't become one of the problems.

Being organised means having some plans in place for what your hives may be doing in the short term (next 3-4 weeks from now), medium term (during the next 1-4 months) and longer term (up to a full season ahead), so that you can get the most out of your bees. By knowing "your area" (where you normally place and work your bees), conditions and looking at the floral resources developing over those periods of time you should be able to get a rough idea of when your bees may be on honey or be ready to do so. That is really important in determining what varroa treatments can be done and when, because many cannot be used whilst on a honey flow or in the weeks prior to one starting. You wouldn't want to mistakenly use one of those and set back your chances of getting bees onto a honey flow.

In countries where varroa transmitted viruses impact bee colony health in a devastating fashion, it becomes far more important for them to prioritise treating colonies for mites over collecting honey. Whilst we do not currently see viral impacts here, we will still see negative impacts to our bee health if we allow our mite numbers to get too high, so we need to start planning how we can manage that.

If you are on a honey flow when your mite numbers reach a critical level you would have three main choices;

1 Use one of the few treatments that can be used whilst on a honey flow (please remember that most common synthetic mite treatments CANNOT be used on honey flows). The approved treatments are often either limited in their mite killing effectiveness, require more frequent visits and applications, may have taint issues or can only be used when temperatures fall within a certain range on the day of and up to a week after application.

2 Pull your bees off that flow and use one of the other registered miticide products, which often have 6-8 or longer week treatment duration and may have withholding periods afterwards. Your honey yield would be reduced.

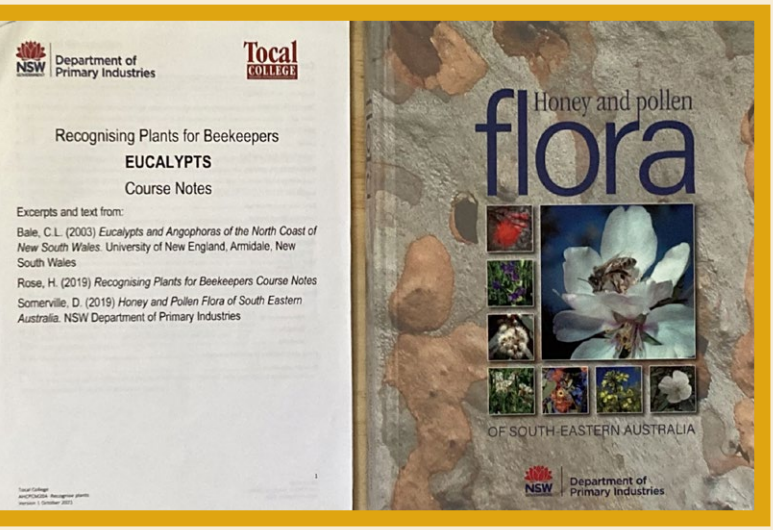
3 Pull your bees off that flow to treat them and at the same time bring another cleaner load in. This would require you to already have cleaner bees waiting elsewhere (that were treated earlier, finished any withholding period and ready to collect honey). This requires more work on the part of the beekeeper and so at times the economics may not always stack up.

Please note that using miticides in a manner that contravenes the label (such as using on a honey flow when the product says it cannot be used) is an illegal activity, will result in residue levels that the packer will detect and cause rejection of your honey and are also extremely unsafe, so please don't even consider it!

If you made the decision to hold off treatments and just leave your bees in place to collect more honey you may be ignoring an emergency order currently in effect, so please check the DPI website for the latest requirements. If your mite numbers keep on increasing (as they quickly will), then you will also likely spend many months cleaning up your weakened (and dead) hives, as they became unhealthy. The slightly more honey they collected before they crashed would not be worth the longer period of lost production whilst you built them back up again.

But don't despair, there is another really good option in this entire scenario, which is to manage your mite numbers to get them well down before the anticipated flow starts, so that your bees remain healthy during the honey flow. This option requires the most pre-planning and organisation, but will give you the cleanest honey crop without fear of miticide residues, plus healthier bees. This is by far the gold standard in the entire varroa beekeeping scenario, so being more organised will assist you to pull this one off nicely.

Just remember, that keeping your bees alive becomes more important and critical to your ongoing beekeeping survival (and that of your bees) than ignoring mites and prioritising collecting more honey, so at times quite tough operational and financial choices may need to be made by you.



All beekeepers need to know what floral resources will be available to their bees in the coming periods, so make sure to learn up if you are not yet adept at this (it's definitely an acquired skill that makes you a far more successful beekeeper). Being able to determine anticipated honey flows makes planning upcoming varroa treatments much easier too.

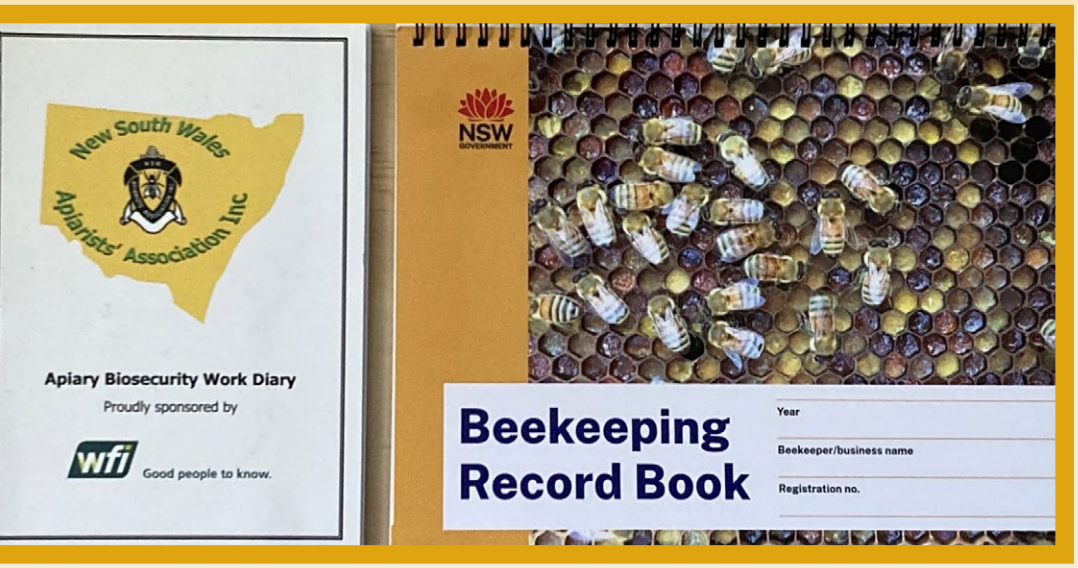
BE CONSISTENT. To get the most out of your bees you need to manage them consistently well, keeping good healthy colonies and trying to minimise the negative effects of mites/miticide treatments and bee health/queen problems as they arise. **CONSISTENCY IN YOUR APPROACH** to management is really important, as you should always be ensuring that you do a good job on each apiary visit and follow up in a timely manner if any additional work needs to be done. Varroa is only one part of the entire bee health issue, and if varroa is managed properly then American foulbrood (AFB) and small hive beetle (SHB) will continue to be the most destructive issues that we face, so don't just go all out on controlling varroa and ignoring those other ones. SHB can kill a colony within days (especially if varroa has already worn them down), AFB can take months and varroa make take years, but if they are all mixed up together and not managed properly then it can become very difficult for the beekeeper.

KEEP GOOD RECORDS. There are many good reasons why keeping records is really important, including that it enables you to be better organised and manage consistently good bees by being on top of the work and equipment required each time you visit. It allows you to track the work that was done on each apiary to keep them within the appropriate zone of strength and health, plus to revisit the apiary within the appropriate time frame instead of potentially losing track of time between visits.

When it comes to monitoring for varroa, installing or undertaking varroa treatments and determining how effective the treatments were, it is always extremely beneficial to have all the facts recorded. For instance, record the mite numbers before you treated the colonies, at completion of treatment to see how well it worked, and then again 4-6 weeks later to determine how your hives are tracking.

You need to achieve a good balance between how much data you record and how long (or onerous) it is to record it all. You may not necessarily like filling in records, but their value can become very apparent when they get called upon to determine why apiaries are not going well.

Don't become complacent. Many beekeepers already work extremely long weeks managing and operating their hives, often because they run a high number of hives per beekeeper. As a result of that



There are many good record books out there, so pick one that suits you and keep all your relevant data in there.

there are times when it is physically impossible to undertake all of the required management on your bee colonies. Adding the additional layer of work required for varroa management to this equation means that this ratio of hives per beekeeper and beekeeping style may no longer be viable, as colony losses may increase to unsustainable levels. It has been shown worldwide that when varroa arrives to any region that the number of beehives able to be managed per beekeeper drops (as work per hive increases), so it is vitally important that Australian beekeepers also plan this factor into their operation and make adjustments. This preparation work should be done now, not when the problems have already brought your operation to its knees.

If you want to keep healthy and productive hives then beekeepers MUST monitor their apiaries for varroa at least 4-5 times per year, which is more than the minimum required by law. Once varroa becomes established in them there is the additional task (and cost) to also treat them when required. This additional time and financial requirement to do all this extra work can be off-putting, especially if finances are a bit tight, but please don't put it off. Allowing your mite numbers to increase and not treating when you should can lead to high colony losses and a far greater financial loss than "spending money that you don't have" on labour and treatments.

EDUCATE YOURSELF ABOUT VARROA using trusted sources. The amount of online information available about varroa is mind boggling, but for a number of reasons extreme caution should be used when believing some of this online material.

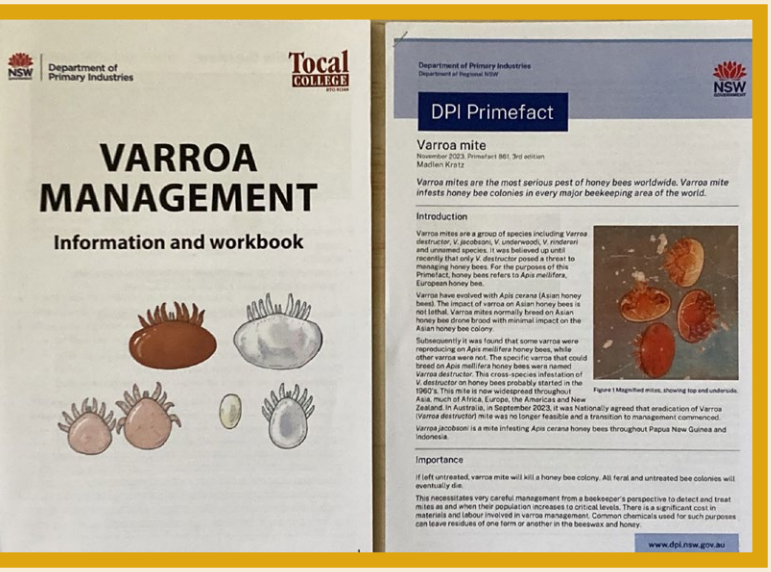
1 much of the material is not geographically relevant to NSW, or Australian beekeeping conditions in general.

2 laws in those source locations vary considerably from those in NSW, and many techniques promoted online are definitely not legal options here (often for good reason).

3 the NSW varroa mite situation is currently in its early stages, and so far without noticeable viral impacts (unlike much of the rest of the beekeeping world that manages varroa).

Many techniques promoted overseas are used out of desperation, as the mite associated viruses are wreaking havoc upon their colonies health and their losses are staggeringly high. Some of the miticide chemicals that are currently being used here (very effectively) had already became ineffective decades ago overseas due to varroa becoming resistant to them, so the overseas cocktails that may be used do not have any place in NSW in 2024.

Some beekeepers concerned about putting chemicals in their hives have been experimenting with various "alternative therapies" as seen online, such as applying icing sugar to bees on brood combs. This technique has not been shown to be very effective (only small numbers of phoretic mites are dislodged) and can put a lot of stress upon hives. I heard from a beekeeper on the Central Coast this week that the technique has recently caused some significant small hive beetle activity (stressing bees causes alarm pheromones, that attract SHB to that hive) and the bees absconded 3-4 days after the treatment. Doing something that causes you to lose a colony a few days later is a far



worse outcome than holding off until you can obtain effective (and legal) miticide treatments.

Tocal College has been developing Varroa management Training, that will be rolled out as a one-day course during the Transition to Management period. This training arms beekeepers with much knowledge on the varroa life cycle and the various methods to manage it and will be available to all beekeepers.

What beekeepers really need to be aware of though is that the actual products used by them to manage their mites will vary considerably during one season, between successive seasons, within regions, between nearby beekeepers and even within different apiaries managed by a single beekeeper. We will not be able to just go out on a certain date each year and treat an apiary with the exact same product as used last year, and we will not be able to just use one product constantly without changing it out for something with a different Mode of Action (MOA), unless we want to hasten chemical resistance and to waste money.

Keep an eye out for available Varroa management training in 2024. As well as face-to-face and online training and resources the DPI Bee Biosecurity Officers are also available to assist you with queries about your own varroa management.

Your own individual miticide treatment plan will need to be developed thoroughly by yourself (with assistance from DPI staff if you require) to best deal with your own unique operation and requirements. It will be important to learn about the many pros and cons of each particular product and when they will work best in your own unique area or operation. What works in one part of NSW will not necessarily be any good in another area, or work at a different time of the same season. I would therefore urge caution to adopting extreme mite control techniques that are used overseas, as they may be gross overkill for managing your current mite problems and may even kill or seriously affect your hive due to chemical interactions.

We are all on this journey, and the DPI bee team is working as hard as it can to develop relevant control methods that can assist all beekeepers ■

BBO's showing a visiting commercial beekeeper live varroa for the very first time (my clean Nov made nucs are now singles that just recorded 3-9 mites/wash in the management zone, so they are about to be treated). If you have never seen real varroa then it may be helpful to do so, so keep on alcohol washing and report your washes to DPI.

Preparing Beehives for the Storm Season

Many Beekeepers get caught out when the summer storm season hits and end up with damage to their hives. However, the good news is that bees can survive storms and cyclones if hives are properly prepared. Here is some information to help you better prepare your hives for storms.

What Do Bees Do During a Storm?

Bees don't usually fly when it's raining. Even if it's just a drizzle of rain, the small droplets can interfere with the bee's flight, making it dangerous for them to do so. The water will weigh the bee's body down and interfere with their wings speed rate.

If the bee is out of the hive when rain starts to fall, she will try to seek shelter and stay there until the rain stops. When a bee is inside the hive when rain hits, they will usually stay inside.

So if they can't fly, what do they do?

Staying in means the bees do housekeeping activities that will help them survive the rain. There are several things such as filling in any holes and crevices in the hive with propolis. The propolis acts like a glue to help secure the hive. This will prevent any chance of water coming into the hive. Since the foragers can't fly out, they will try to manage the humidity and temperature in the hive.

Wet Weather and Flooding

Honeybees can sense when it's about to rain from atmospheric changes, and will return to the hive before the rain starts to fall, or not even go out to forage at all if they sense that rain is coming. They're reportedly even better than the Weather Bureau at predicting rain and its intensity.

If bad weather is due to arrive in a day or two, honeybees sense that and they work harder by foraging more intensely in the day(s) before the storm, taking advantage of food while it's

available. Hence, they don't even have to go out of the hive on a rainy day.

Among the ways they may sense oncoming rain, are changes in barometric pressure, humidity, and temperature. Even humans can smell when rain is coming; the smell of approaching rain is called petrichor, and honeybees and other insects may be much more sensitive to this and other relevant atmospheric odours than we are. I know of one GCRB member who knows when rain is coming by the activity of her bees and what the ants are doing.

There are reports of beekeepers seeing masses of bees returning in a rush to the hives in the middle of the day, only to hear a crack of thunder five minutes later and then rain begins pouring down. The bees know!

Here are some things you can do to prepare for very wet weather and flooding.

- Check the orientation of your hives and make sure the entrance faces towards the morning sun, so it warms quickly early in the day, and away from the prevailing wind, so that rain isn't driven inside through the entrance. Usually both are achievable.
- No point in keeping the hive under a shed, unless you have Slovenian hives, as the bees need to know if it's raining or not. Rain on the hive and dripping by the entrance will tell them, otherwise by being under cover they may fly out thinking it's dry and then get chilled or wet when they emerge from under the shelter of the shed and get rained on.
- If the hive leaks a little it's no big problem, the bees will either use the water dripping down a wall to dampen the stores they'll need to feed on while they're confined by the weather, or more likely they'll seal all the gaps up themselves with propolis.
- Make sure that the roof of the hive is water tight as getting water in the centre of the hive will chill the brood.
- Check that your hives are tilted forward to ensure moisture runs out.
- Be aware that the ground under your hives may become soft from the rain causing issues with previously stable hive stands.
- Check for holes or cracks in your hives that will allow water to come in.

If you have noticed your boxes have holes and the timber is starting to deteriorate, replace the boxes with new ones. If time doesn't allow that, place a temporary extra roof on your hive to prevent the timber from getting wet.

If you have a hive with a solid base, drill a couple of 3 mm holes in the base to allow water to drain out.

When it rains, it knocks pollen off of flowers. Pollen is the source of protein for bees and critical to ensure your hive continues to grow. Rain also prevents your bees from being able to forage for nectar, which is your bees source of carbohydrate. Without protein or carbs, your hive will slowly become weak and many hives won't survive sustained and ongoing rain. To survive, bees will eat the honey that they've stored in their hives, and If they run out of honey stores, they will sadly starve, without your assistance.

Move hives that are on the ground, or on a lower lying area, or on a flood plain to higher ground, so that they don't float away during a flood event, drowning all the bees.

If your hives are on the ground move them to a secure raised platform off the ground otherwise they could get flooded through the entrance to the hive.

Strong winds

Gale force winds are at least 63 kilometres an hour while cyclonic winds are a minimum of 118 kilometres an hour. Sustained gale force or cyclonic winds present a real threat to honey bee hives losing their roof or being blown over. Hives with honey supers on can easily be blown over during strong winds because they can be top heavy if they are filled with honey.

Here are some things you can do to prepare your hives to survive strong winds.

- Be sure that your hives are on sturdy stands on flat level ground.
- Strap your hive to the stand using EMLOCK style straps or ratchet straps. If cyclonic winds are forecast then you may want to put a second strap around the hive and stand. A simple brick on the lid is not sufficient to keep the lid of your hive being blown off.
- If cyclonic winds are forecast consider strapping or wiring your hive stand to a post.
- If there are no posts handy then drive a star picket in the ground alongside the hive and

secure the base to it with fencing wire or strong rope.

- Beware of falling trees and tree limbs. These can be particularly problematic for beehives since they can completely crush all equipment and kill the entire colony. It is almost impossible to prevent falling trees and branches so if your hives are in a heavily wooded area, you may want to consider moving them temporarily.
- Remove or put away any hive equipment that is not secured, such as feeders, or extra hive boxes, that could be blown away and possibly damage your hives.
- Preparing your colony for possible sustained gale force or cyclonic winds is better done in advance before the storms hit. However, if you are unable to do that do not do it when the storm starts. Your life is more important than your bee hives! Never risk your life or safety for your hives.

- Move your hives away from power lines as you don't want your hives electrocuted by a fallen live wire during a storm.
- Moving your hives to higher ground when a storm is imminent is a good idea but do not move them onto your roof. The roof is a dangerous place during a storm. Cyclones, gale force winds and tornados can destroy roofs very quickly by sucking off roof tiles and roof sheets, or by breaking a window and letting high-powered wind get in, which can "pop" the roof off. A roof is like a giant wing and during severe storms there is a chance that it could "fly". Don't put beehives on the roof.
- For obvious reasons do not move your hives to the safety of your shed or house, unless you have Slovenian hives which are already in a shed!
- Close up screened bottom boards. Much like a broken window in a home during a cyclone can result in dangerous wind tunnels, the high winds during a cyclone are dangerous for bees and can create a high-pressure environment inside a hive. Make a wind barrier with corflute or sheet of timber under the screen in order to help prevent a potential wind tunnel.
- Close the entrance of your hive or reduce it to as small as you can. Closing the entrance fully helps prevent wind and water from getting into the hive but, depending on the season, may also create unsafe high-temperature conditions inside the hive or prevent an escape by bees in the event one is needed. This is why many beekeepers reduce the entrance as much as possible without closing it up entirely during severe storms. Additionally, after the storm, if you are not able to get to your hives immediately, this allows bees to exit the hives.

A Word on Lightning

Lightning is an electrical discharge that happens within and between clouds, but also from clouds to the ground and into the atmosphere.

Grant Kirkby from Lightning and Surge Technologies, says the frequency and risk of

lightning strikes is often underestimated. "Forget all the myths you hear, lightning does strike the same place and it strikes fairly regularly," he said.

The Q1 building in Surfers Paradise gets struck several times a year, and on New Year's Eve 2023 got struck 7 times. You just don't know where the next lightning strike will be.

Mr Kirkby — who has worked in lightning protection services for more than 20 years, says that while it was rare for people to be struck directly, there was still a significant risk of injury and death. "This is one of the biggest fallacies out there, only three to five per cent of all statistics are people that are struck directly," he said. "The majority of the injury and fatality statistics are from people that have been exposed to indirect strikes when the ground becomes highly electrified from a nearby lightning strike or if you're touching something which has been electrified."

On the Fraser Coast, north of Brisbane, five of Aaron Broom's cattle were killed in a storm on December 30, because the ground became electrified over a large area. A couple of years ago the ground became electrified during a storm in Norway and killed 323 reindeer.

The energy released during a lightning storm is immense and must never be underestimated. A single lightning bolt can contain 5 billion joules of energy which is enough energy to power all of the Gold Coast for a minute.

How do you Avoid Being Struck by Lightning?

Mr Kirkby said the safest place to be during a storm is indoors, as building standards require lightning protection and grounding systems to mitigate the damage.

The worst place to be is to shelter under a tree (the photo above left shows why). 13 per cent of all lightning fatalities occur in people that have sought shelter under a tree. Do not go onto golf courses, ovals and other outdoor playing fields where you're the highest object in a relatively flat section of ground, as this will present a greater exposure to risk and injury from lightning.

During a thunderstorm you need to be indoors in a substantial building and not outdoors trying to help your bees.

Caring for Beehives After the Storm

Don't dawdle on cleaning up dead hives. Hundreds of dead bees will stink to high heavens after just a few days. Don't hesitate to clean them up.

- If your hives have been blown over during the storm, stand them back up as soon as it is safe to do so, but make sure that you are well suited up as the bees are likely to be rather cranky.
- Don't bother your bees too much. An inspection can wait, as the bees will likely be very pissy, hungry, and defensive after a storm.
- Be prepared to feed your bees. After a storm, flowers, vegetation, and other things that the bees eat may have been blown away, so there will no nectar or pollen for the foragers Keeping sugar and water on hand for sugar syrup or pollen supplements can prevent starvation after the storm.
- Watch for robbing afterwards. A dearth created by all the flowers and plants being blown away by the storm will affect all hives, including neighbouring and wild hives in your area. To avoid this use internal feeders which makes the food easily accessible for your bees, and harder for robber bees.
- Reach out to Gold Coast Regional Beekeepers. If you need help with your bees after the storm. GCRB is a great resource for assistance or for information about the storms and the subsequent clean up, plus the club has a pool of members who are prepared to lend a hand.

HELP WE NEED A NEW LOGO

Over the years the ABA has had a number of logos from one that was described as an angry bee about to sting to the current logo that some people have said only has two wings and looks like a fly.

We need a new logo that represents the ABA as a beekeeping club with happy bees please. If you have an idea for a new logo or have the skills to make one we need you!!!

Actually while we are talking about logos and design can you help with the redesign of our website, we will supply all the content we just need a designer who can lay it all out for us using our existing platform.

Please email via president@beekeepers.asn.au

What is Bee Space?

In 1851 the Reverend Langstroth realised that in a hive spaces narrower than 6mm were treated like cracks and filled with propolis by bees. Spaces wider than 10mm were treated as potential new construction zones, and bees filled this space with burr comb. The only exception to this is the very bottom of the comb, where the bees would build ladders from the bottom board to the bottom of the comb to improve rigidity. This had previously been noted by the blind beekeeper François Huber in 1806, yes I know a blind beekeeper and you thought going gloveless was hard.

Langstroth made good use of this information when he designed his now famous hive that originally opened like the pages of a book. In order to make the frames moveable, he designed all the areas above, below, and around the combs to provide bee space. His original hive design is no longer in use but a derivative of it is the Langstroth hive most of use are familiar with.

Many other successful hives have been developed over the years, but they all rely on the concept of bee space to make them work. And as any beekeeper knows, you violate this rule at your own peril. Leave out a frame or two for a week and you will have a mess on your hands and a lot of honey.

Bee space is generally defined as 4-6mm but it's a bit variable because its derived from the size of the bees and the cell size they prefer, bees will fill smaller holes with propolis, wax and other glue like substances.

Every beekeeper has forgotten to replace a frame at some time or other and ended up with a mess, so remember you take it out put it back or you might end up with something like this to deal with, oh and if your wondering that's the brood box ■

Looking for a lifestyle change?

How about running an urban beekeeping business, managing bees in some of the most iconic sites in Sydney? After more than a decade of urban beekeeping Vicky and Doug are looking to move onto different beekeeping projects.

Their urban beehive honey business is for sale with strong sales and very unique sites included.

bees@theurbanbeehive.com.au

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Nucleus boxes generously donated by the Illawarra ABA bee club, Bruce White OAM provided the queens and Lamorna Osborne provided the rest of the bees.

Hunter Valley brought up boxes as the nucs were strong and varroa free at this stage and had already outgrown their nuc boxes! Heather brought a spot of colour with her beesuit.