

# BEEBIZ FEBRUARY 2024

The Newsletter of the Northern Rivers Amateur Beekeeping Association Inc.

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## February Activity 25<sup>th</sup> February 2024

The next field day is at the home of Mark Vale, 8 Long Street, Iluka (Mobile 0438 443 744).

The day will commence at 9.30 am with a welcome by the President and morning tea, and the beekeeping activities will start at 10 am. Bring your chair as there are not many spares. There will be shade and shelter under the carport and deck and trees in the back yard.

“We will inspect the colony I graft from and the colony I use as a cell raiser. I will demonstrate my grafting technique and the incubator I use to hatch virgin queens. I will describe how I introduce those to mating nucs and then ultimately harvesting mated queens and their introduction to my production hives.

Visitors are welcome to have a look at my honey extraction plant as well.”

A lunch will not be provided, but there are several lunch options available in the town.. There will be a raffle of bee equipment and donated items at about 12pm, followed by a meeting of the club committee. Members are welcome to sit in on this meeting.

All attendees are asked to bring an item for morning tea. Extra raffle items are always appreciated. Raffle tickets will cost \$2.

So remember

- Morning tea item
- Raffle items, such as vegetables, bee gear, jam, potplants etc
- Chairs ( not many spares available)
- Nametags

### **Directions**

Address is 8 Long Street, Iluka. Come into town past the golf course then take the second street Young St on the right. Long St is the third street around Young St, again on the right.

Please be considerate when you park.

## **President Report**

I encourage everyone to come to this month's field day. Mark Vale is going to show us his queen breeding techniques.

The new ABA Club Portal is now up and running, and the MemberJungle app for our membership details is operating now. ABA have also updated the swarm system so that as members you can register your name as a swarm collector.

Do not forget the NSW DPI's Tocal College will be running several "Varroa Management Training" days in the coming weeks. The Casino event will be held on Thursday 22nd February 2024 from 8.30am - 4.00pm. Location to be advised. Morning tea and lunch provided, tea and coffee facilities available. (*Course is full but there will be more courses---Ed*)

Following the wet weather we have had, my bees are producing tons of honey from the abundance of blossoms and flowers. The intermittent hot days have made them a little cranky though.

Elizabeth

## **Secretary Report**

It's been a quiet month from a correspondence perspective this month except for sending off lots of Welcome letters to new members.

This has allowed time to check out our hives. We knew one was pretty low on activity so on inspection we discovered it was a complete write off thanks to a hive beetle infestation. After dismantling the hive we did a bit of quick research and decided to wrap and freeze the frames for 48hrs to kill off any larvae. We then took all the blackened foundation off the wires and frames and decided to bury it as we can't burn off at the moment.

The remaining 2 hives are looking healthy and happy. We're yet to understand why the hive beetle will attack one hive out of 3 - a question for the next field day maybe?

Meanwhile back at the computer, the ABA have launched their new Swarm System and Club Portal. If you want to register yourself as a swarm catcher please read their next 'The Amateur Beekeeper' newsletter (with link to Quick Guide). Members who currently are on the swarm list might receive additional email communications.

Meg

## **Report on Last Field Day**

The hosts Brian and Josephine Window welcomed a keen bunch of beekeepers to their house for the field day on February 4th. Brian has eleven hives there, and like most beehives they had minor issues that he said he would demonstrate until stopped by the conditions ( personal overheating).

Hive 1 was a 3 box 10 frame hive that Brian used to collect honey as well as to draw out foundation. The queen and a nucleus had been removed well over a month ago, and Brian wanted to check that there was healthy brood in the brood box. This was done after removing the two supers and excluder, and pulling out some frames which had healthy capped brood.

To draw out good combs, the foundation needs to be vertical. Otherwise, the bees (who use gravity) will draw one face out more than the other. The hive was close to vertical.

Brian draws out wax foundation in the middle of the top box ( second super) to avoid the high temperatures immediately above the brood nest which cause the comb to sag, Brian pulled out some partly drawn frames from the top box to show that there was very little sagging of the comb on the wires.

Hive 3 was a 1 box 8 frame hive that was full of honey, including the lid. He removed the lid, scraped the top of the brood frames, placing the scrapings in a bucket so as not to encourage robbing, added a queen excluder and a super of stickies. The honey in the lid was left for the bees to tidy up.

Hives 2 and 4 were 2 box 8 frame hives that had been given to the club for beginners. They were originally from flow hives with double brood boxes, and Brian was cleaning up the frames ready to be given away. The process was to locate each queen, and put the box they were in directly on the bases with a queen excluder on top. After waiting for the brood in the top box to hatch and the hive to fill up the frames with honey, the top box was removed using a clearer board over a box of stickies.

The frames in the top boxes were in both cases from the original flow hive setup; they were very black, some were unwired, and some had the wooden strips inserted into the slots in the top bars. The old combs were very difficult to uncap for extraction with the hot knife, and spinning some unwired frames in the radial extractor led to them flying apart (no surprise). The remaining unwired frames were extracted in the small tangential extractor owned by the club.

The activity was to inspect at the frames in the brood boxes, to see if the brood was healthy, and to assess if they were also old and black and in need of replacing. The frames were in much better condition than those in the top boxes and did not need replacing.

Hive 5 was a 2 box 10 frame hive that Brian had taken a nucleus from well over a month ago, and the hive did not manage to produce a viable queen after the mating flight. Brian was expecting a laying worker situation, and was surprised by the lack of drone cells on the brood frames. This hive was closed for later examination.



Drone brood- laying worker?



Multiple eggs-laying worker?

Hive 8 was a 5 frame nucleus, which Brian also expected to be in the laying worker state, and it was! There were scattered drone cells spread out on the frame that was removed. It was difficult to see in the shade of the tree if the other characteristics of laying workers, namely multiple eggs in the cells and on the sides of cells, were present. Brian swapped a frame from hive 8 with one containing open brood and eggs from hive 9. The pheromones associated with open brood act to suppress the laying of eggs by worker bees.

There was discussion about what to do with a laying worker hive. It is possible by giving the hives repeated combs with open brood about a week apart (open brood covers eggs 3 days and larvae 6 days—9 days total) that the hive will eventually draw a queen cell and recover by itself. The extra brood which is added will act to keep the hive strength up. But there is plenty of scope for this to go wrong, and the queens could be inferior. The favoured method is to combine with a queenright hive, either using the paper method between two boxes (illustrated), or inserting a nucleus combined with a shake out of the old hive nearby.

Brian by this stage was very sweaty, so the group moved to the coffee urn.



## Flowering Report

Mostly you can just reread last months report. The main new thing is that there is some bud showing on Red Gum (*Eucalyptus tereticornis*). So far it does not seem to be a complete budding, there is still time though. It should start to flower in May. It is a top pollen producer and is most user friendly when Grey Ironbark and it flower together. Grey Ironbark being pollen deficient Red Gum being a trifle nectar shy, so they go together like a horse and carriage.

There is still plenty of Flatweed flowering, and a bit of Bloodwood, it will last later the further south you are.

Geoff

## From the Hives

The hives have been moved from Bungawalbyn to near Coraki, using a break in the wet weather. There is not much sign of a honey flow yet at the new site, but the melaleuca quinquinervia have started their random monthly flowering cycle.

Brian

## Replacing Old Combs

Here is an extract from an article by Madlen Kratz of Tocal NSW DPI.

Replacing old comb can seem like a time-consuming task, but it will not only decrease the risk of disease and accumulated toxins but significantly increase the productivity of your hive! Hives with combs replaced



regularly (every 1-3 years) store significantly more pollen, produce far more honey and rear more worker brood.

Honey bee colonies in the wild have a natural way of recycling old comb. On average, a colony can survive for about 6 years in the wild (Seeley, 1978). Any wax or honey comb that is left behind is removed and “cleaned up” by wax moth, mice and beetles and other scavengers, leaving an empty cavity free of contaminated old comb for the next colony to live in. In managed hives it is the beekeeper’s responsibility to replace and recycle old comb.

Each time a larva pupates, it spins a silken cocoon that remains in the cell after the adult emerges. Over time as more bees hatch from the same brood cells, silk accumulates against the cell wall. Eventually, the brood frames turn darker and darker and the diameter of the cell shrinks. Smaller and smaller bees hatch from these over-used cells.

### *Consequences*

- Larvae may be forced to moult pre-maturely i.e. nurse bees cap the cells before larvae have developed to its largest size potential (Abdellatif, 1965).

- Adult bees with lower body weights have reduced lifespans (Black, 2006).
- Smaller bees have a reduced capacity to carry pollen and honey (Mostajeran et al., 2006).
- Drones of smaller size are outcompeted by larger drones. Drone body size is correlated with sperm production. Larger drones produce more sperm (Rangel & Fisher, 2019).
- Old combs have less space for honey to be stored
- Workers raised from colonies with old comb raise smaller queens

### ***Impact on colony productivity***

Let's compare hive productivity of colonies with new (1-3 years) versus old (4-6 years) comb (Taha et al., 2021).

Colonies with new comb:

- store up to 67% more pollen
- store almost 90% more honey
- rear about 97% more worker brood

This vast difference in productivity is explained by larger bees being able to gather more resources, raise larger amounts of well-fed brood and therefore build and maintain larger colonies.

Weak colonies consume a large part of the collected nectar while trying to build up their populations, making for a smaller or non-existent honey crop. In small colonies, a larger proportion of the total population engages in brood rearing than in stronger colonies where a larger proportion of field bees is available to gather nectar.

Wax comb consists primarily of hydrocarbons and ester components, which act like a sponge. For this reason, wax can absorb pesticides and heavy metals, but also accumulate fungal and bacterial spores, all of which can be detrimental to the colony's welfare and a risk to spreading disease in an apiary. Often not much wax can be retained from melting down dark, old brood frames. Any wax obtained is also dark in colour. The best option is to burn old brood frames and bury the ash to comply with pest and disease management regulations.

### **Beeswax Moisturiser**

- 1/2 cup beeswax, freshly grated  
Have found to make sure it is grated for this measure. Made a batch with solid wax and came out as lip balm consistency.
  - 1 cup organic olive oil
  - 1/2 cup coconut oil
  - 1/2 teaspoon Vitamin E oil
  - 30 drops of your favourite essential oil
  - 1-pint jar or 6 – 2oz cosmetic jars with lids  
I reuse large spice jars or even honey tubs for home batches.  
Use a double boiler or heat-safe bowl, place pint jar in the pot of simmering water. Melt beeswax, olive oil, and coconut oil until melted and blended. Remove from heat and cool for 15 minutes. Add Vitamin E and any of your favourite essential oil. Stir until blended and pour into 2 oz containers or leave in a pint jar.
- From Jamie Martin

## Showing Honey at Agricultural Shows

### Harvesting the honey

The first step that is very important is to select the combs. Newly drawn white combs, fully capped with the desired honey, are selected. If all cells are fully capped the honey is at its maximum density. The combs should be held up with a bright light behind the comb and inspected for any stored pollen, if pollen

is present the comb should be rejected or the pollen cells cut out prior to removing the honey. Pollen must not be mixed with the show honey. By using a bright light you will also be able to tell if the honey is the same floral type, if it is all the same colour, remove the honey from the combs. The best way to remove the honey for showing is to press the honey from the cells.

Uncap the combs then with a clean knife or other suitable instrument and force the honey from the cells. This is the best method of minimizing air entering the liquid honey for competitions. The other method is to extract the white combs using a small hand extractor. This will avoid the risk of overheating the honey by using no heat during extracting. The extractor should be made of food grade material stainless steel or food grade plastic. When removing the honey from the extractor gate or pressed honey, pour the honey down the edge of the settling container to minimize the air bubbles. Honey is hygroscopic and can absorb moisture from the atmosphere. If possible, use a small bucket so it can be filled to the top or plastic ice cream container: ensure the lid is airtight.

Allow the honey to settle for several days, preferable at a temperature of 37C. This will cause any air bubbles, wax or other matter to rise to the surface and these can then be carefully skimmed off the surface.

### After the settling

With the honey at about 37C, pour it down the edge of a cone-shaped nylon strainer. Nylon straining material is available from beekeeping supplies and can be sewn into a cone-shaped bag with the point of the strainer almost touching the bottom of the container. The best container for the straining process is a plastic bucket with a gate at the bottom or an ice cream container. After straining the settled honey carefully remove the strainer. Allow the honey to remain in the straining container for about one week. After a week pour the honey into your show jars by opening the honey gate on the bucket or cut a hole in the bottom of the ice cream container. Vent the lid before pouring, then pour the honey down the inside edge of the jar to minimize air bubbles entering the honey. All jars in an entry should be filled to the same level for uniformity with the honey just not touching the inside of the cap when the jars are level. Equally important is the cleaning of the jars with a quality glass cleaning detergent. The jars must comply with the show schedule, usually 500g glass round jars. Store the filled jars in a dark location in a closed cardboard box with cardboard bottle partition so the jars don't touch each other. If stored in a dark location the honey colour is

unlikely to change in the short term. When storing liquid honey, storing at temperatures lower than zero degrees centigrade can inhibit granulation.

### Classes

All honey in the same entry should be of the same blend or floral type.

Flavour: Honey should be palatable free from "tang" off-flavour fermentation and acidity.

Density: Honey varies in density: highest points are awarded to the highest density. Density can be



determined with a refractometer, rating the buoyancy of the glass rod near the honey surface or by rating the rising of an air bubble by inverting the jar.

Aroma: Honey with a pleasing aroma scores the highest points. Fewer points are awarded for honey with offensive aroma or no aroma, or those with fermentation or over heated. Aroma varies according to the floral source hence honey from Clover, Stringybark and Yellow Box have their own bouquet.

Clearness: Honey must not have a dull or cloudy appearance, it should be clean and have a sparkle about it.

Brightness: Slightly warm the honey in the jars before showing to increase the brightness. This will remove minute crystals if present and give the entry more brilliance. The honey must be at room temperature for judging.

General

Your entry should be clean and attractive. The surface of the honey should be clean of any wax particles and air bubbles. This can be achieved by lightly skimming the top of the honey with a spoon. A clean surface free from wax will give you more points in presentation. If it looks good to you then it will probably look good to the Judge. As with all things, practice makes perfect. If you have never entered a show why not have a go this show season? If you are in doubt about anything such as how to get entry form or in which class to enter your honey, please just ask.

Bruce White

## **Free Bees**

Two beehives have been given to the club for beginners by a Lismore beekeeper. They were double 8 frame brood boxes from flowhives, and are being converted to double box hives with an excluder.

Brian

## **Beehives for sale**

Ray Smith has been told by his doctor to reduce his number of beehives. These are full beehives with varying amounts of honey, and are at McKees Hill. Contact Ray 0427 734 954

## **List of Helpful Members**

Kevin Virgen	Federal	6684 9213	Brian Window	Lismore	0466 790 736
Ray Smith	McKees Hill	0427 734 954	Paul Towner	Rous Mill	0418 321 305
Geoff Manning	Lismore	0400 221 602	John Bull	North Casino	0414 842 903
David Fairhall	Richmond Hill	0444 513 771			

## **Beginner Lessons**

Remember that the club is still offering to give beginners an introductory session on a beehive to get them started. Contact the secretary, or a helpful member near you.

## **Services Directory**

Summary of available products and services

### NRABA Members

Brian Window (nuclei, and advice) (Lismore) 0466 790 736

### Not NRABA Members

Stephen Fowler (nuclei, hives, all sorts of bee equipment, buys wax) (Alstonville) 0418 412 621

Merv McDonald (nuclei, hives, hive care)(Alstonville) 0439 166 016

Rob Stone (mated queens, nuclei)(Casino) 0487 598 105

Ross Wood (mated queens, nuclei)(Grafton) 0421 817 710