BEELINES

NEWSLETTER OF THE BEEKEEPERS CLUB INC

February 2018

Don Muir demonstrates honey extraction at the January club meeting

Upcoming Events

Club Monthly Meeting

Beeswax: its processing and use (various speakers)

15 Feb 2018, 7:00 PM

Doncaster Secondary College,
123 Church Rd, Doncaster 3108

Club Apiary Hive Inspection

A routine hive inspection will be held at the club apiary for any new or interested members. Bee suits and gloves will be available to borrow.

Saturday 24th Feb 2018 11:00 AM

St John's Anglican Church,

1 Burgundy St, Heidelberg 3084

Please register on club website so we know expected numbers.

Intermediate Workshop—Improving your Beekeeping

10th Mar 2018, 0930-1630

Lower Hall, St Johns Anglican Church,
1 Burgundy St, Heidelberg 3084

Please register on the club website:

https://beekeepers.org.au

Committee Contacts

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Testing for American foulbrood (AFB)

The following article has been contributed by John Treloar, Andrew Wootton and Don Muir and incorporates information adapted from beeaware.org.au

AFB is the most widespread and commercially significant bee disease that is currently present in Australia. A major factor in successful management of this disease is early detection. However, AFB can be difficult or even impossible to detect visually in the very early stages of inspection.

Laboratory honey culture tests are used to detect AFB spores in honey. Gribbles Honey Test kits are currently available from Stuart Stone (Treasurer) at club meetings. All members with hives are encouraged to submit a sample. The cost of the test (around $38.50) is fully reimbursable upon showing your receipt of payment to the Treasurer.

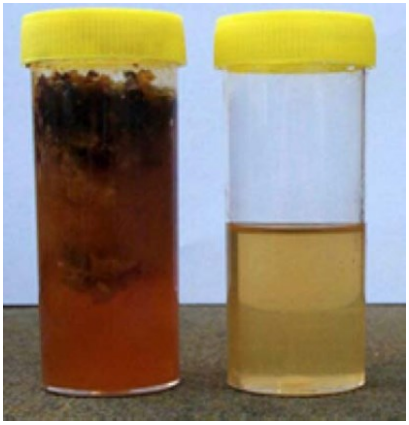
Collecting the sample

It is important that where possible the sample contains extracted honey from all the hives in one yard (apiary).

- Fill the sample container with 120 ml of honey as shown below – the test cannot be done if not enough honey is supplied.
- The honey must be clean – that is, free of wax, dirt and parts of bee bodies.
- Seal the lid of the container with tape to prevent leakage of honey.
- Write your name, beekeeper registration brand and yard (apiary) identification on the label of the container and also on the request form provided.

This container holds the right amount of clean honey for the AFB culture test.

- Place the container in the provided zip-lock bag and the request form for that sample in the pouch of the same bag and mail it off.



Examples of poor samples which cannot be tested. Left: The honey must not contain dirt or wax. Right: The container must be completely filled with honey.

Negative results from an AFB test

A negative result provides a good indication that there are no AFB spores present in the hives the honey came from. However, it cannot rule disease out completely and regular brood inspections for signs of AFB should always be a part of your beekeeping practice.

Positive results

Positive results are usually expressed as +1, +2 or +3 with the scores representing the likelihood of visual symptoms of AFB appearing in the hives the honey was collected from.

Note that if the sample you had tested was pooled from several hives and tests positive, you will not know which specific hive or hives from that group is infected. You will then need to go and inspect all the hives that contributed honey to the sample for symptoms of AFB.

Some members may be aware that the AFB test done recently on the club hives returned a positive 1+ reading, indicating AFB spores were present in the sample. In order fully to understand the implications of this result we have held discussions with the senior apiary officer at DEDJTR and looked further into the test.

The culture test interpretation is based on a study of commercial honey samples which

found " *the higher the concentration of spores in the sample, the more likely it is that AFB is present in the hives or there is a recent history of the disease. In an examination of 505 bulk honey samples in New South Wales, six (100%) of '+++', 11 (78.6%) of '++' and 22 (56.4%) of '+' honey samples were from diseased hives or those with recent histories of the disease*"[1]. Unfortunately it is not possible to tell if the other 43.6% of '+' results were false positives or represented latent disease.

Recent molecular studies using high throughput sequencing indicate that small numbers of *Paenibacillus larvae* are detectable in bees from non-infected colonies[2]. This "enzootic" state may occasionally overcome colony resilience and result in disease outbreak.

This means AFB bacteria and spores may be more widespread than previously thought and perhaps the honey test occasionally picks up sub-clinical infection that is safely eliminated by the colony. Our advice is to re-test in approximately 6 weeks to confirm or rule out infection. In the meantime, we are implementing a strict biosecurity policy that isolates the apiary. No protective, inspection or hive equipment should be transferred in or out of the apiary. Do not bring your own gear and use only club supplied equipment until further notice.

1. Hornitzky MAZ, Clark S. Culture of Bacillus larvae from bulk honey samples for the detection of American foulbrood. J Apicult Res 1991; 29: 199-205.

2. T Erban, O Ledvinka, M Kamler, M Nesvorna, B Hortova, J Tyl, D Titera, M Markovic & J Hubert. Honeybee (Apis mellifera) -associated bacterial community affected by American foulbrood: detection of Paenibacillus larvae via microbiome analysis. Nature Scientific Reports 2017; 7: 5084.

Announcements

Beekeeping and Honey Festival

J Bee Keepers School

Sunday March 4th 10:00—16:00

35 Duncans Lane, Diggers Rest

Geelong Field Day

The Geelong Beekeepers Club is pleased to announce its 2018 Field Day to be held at Eastern Hub on Sunday 18th March 2018. All welcome!

http://geelongbeekeepersclub.org/2018/01/17/gbc-field-day/

Banyule Arty Farty Festival

This event takes place adjacent to the St Johns Community Garden on Sunday 18th March 10 am until lunchtime. The gardeners are planning 2 stalls- one at the Arty Farty Festival itself and one in the garden. They are also running tours of the garden during this time. The Environmental art children's activity with artist Felicity Gordon are going to make some river based decorations for the fence along the edge of the garden. They will bring it down to the garden to install- exciting! The Beekeepers Club have kindly made jars of honey available for the stall.

The official estimate for the value of Australia's honey and beeswax production is $90 million.

It has been estimated that pollination services from honey bees contribute $4-6 billion annually to the Australian economy.

National Residue Survey 2016–17 — Honey

*Excerpts from the **Department of Agriculture and Water Resources** report http://www.agriculture.gov.au/SiteCollectionDocuments/agriculture-food/nrs/nrs-results-publications/honey.pdf*

The National Residue Survey (NRS) residue monitoring programs monitor the levels of, and associated risks from, pesticides and veterinary medicine residues in Australian food products. The programs help to facilitate and encourage ongoing access to domestic and export markets.

Honey Program overview

The honey program has been operating for over 10 years and is funded by the NRS component of the honey levy. The program involves the testing of Australian honey samples for a range of pesticides, veterinary medicines and environmental contaminants.

The number of samples collected is based on Australian production levels and/or overseas export market requirements.

Honey samples are screened for a range of chemicals, as shown in Table 1.

TABLE 1 Chemical screens for honey

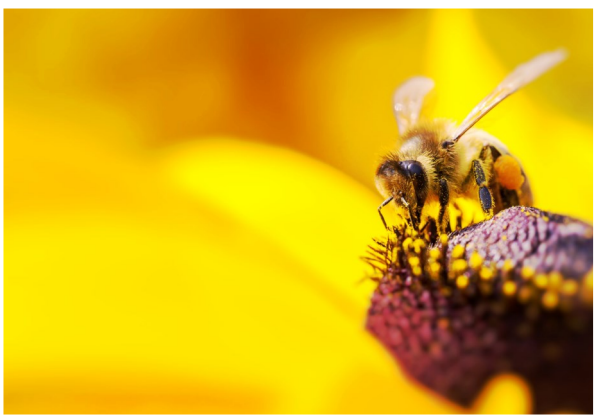
Chemical group	Chemical screen	Analyte
Veterinary medicines	Antibiotics	Including aminoglycosides, fluoroquinolones, macrolides, nitrofurans, phenicols, sulphonamides and tetracyclines
Pesticides	Fungicides, herbicides and insecticides	Including synthetic pyrethroids, organophosphate insecticides, carbaryl, boscalid, fluorquinolones, 2,4-D and fluquinconazole
Contaminants/ elements	Organochlorines	aldrin, chlordane, dieldrin, DDT, endrin, HCB, HCH, heptachlor, lindane, mirex, toxaphene and PCBs
	Elements	aluminium, lead, selenium and zinc

Results

In 2016–17, a total of 126 honey samples were collected and analysed. The results were compared with the relevant Australian standards and where appropriate relevant international standards. The results over the past six years provided in Table 2 highlight Australia's excellent compliance status against Australian standards which helps maintain the reputation and integrity of Australian honey in international and domestic markets.

TABLE 2 Compliance rates over the past six years

Years	Samples collected	Compliance rates (%)
2011-12	213	100
2012-13	167	99.5
2013-14	167	100
2014-15	126	99.2
2015-16	126	98.4
2016-17	126	100



Harvesting and Extracting Honey

Don Muir

Following on from the January meeting, I thought I would outline my ideas on harvesting and extracting honey. The general wisdom is that frames should be around 90% capped before harvesting. You can take a frame that is less than 90% capped if the honey does not spill out when you give a couple of shakes when holding the frame horizontally.

Removing Bees

The frames you want to extract should be placed in another super or container carefully after you have removed the covering bees. To remove these you can:

1. Use clearer board which has small bee escapes that you can place on the hive the day before between the brood and honey supers. As the night cools the bees move from the honey supers down to the brood nest and cannot get back up, thus reducing the number of bees in the honey supers. I personally think them a waste of time requiring double handling.

2. Remove frames and shake or brush bees. I find this the most efficient method. Caution needs to be used when brushing the bees as it can upset the bees. I find a gentle brush is best and you need to keep an eye on the brush and if it starts to clog with honey, put it aside and use another brush. I always use tufts of grass or leaf twigs as a brush with much better results than the purpose designed brushes.

3. The last and commonly used by commercial beekeepers method is to blow the bees from the frames with a leaf blower.

For the hobbyist I suggest the brushing method.

Pre-extraction chores

Check all equipment and the immediate work area is clean and gives you ample working room. Assemble the equipment which consists of a decapping tool (hot, cold or steam knife or a multipronged scratcher) and a cappings container (purpose built units with a strainer can be bought or it is simple to make your own with a plastic container. A bar with a protruding screw makes swiveling the frames easy).

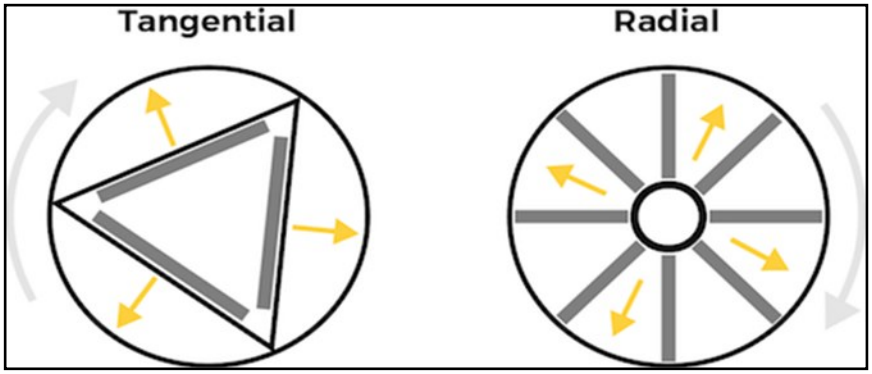
Decapping

To avoid burns and cuts, start approximately 50mm from top and work down, before inverting and removing the remainder. Try not to dig or cut into the honey too much. When the frame is free of wax, place into the extractor.

Spinning

There are two types of extractors, tangential and radial. Most small hobbyist units are tangential. Place the frames into a tangential extractor with the top bars facing the same way. Bees build comb cells at 13° angle to reduce the chance of honey spilling from the cells. Ensure the rotation of the extractor is in the direction with the top bars leading.

First rotate one side of frame 75 turns, this should remove around half of the honey from one side. This reduces risk of damage to foundation after the initial rush of honey has come out.



Turn the frame and rotate the next side for 150 revolutions; this should remove all the honey from that side.

Return the frame back to its original posi-

tion and spin a further 75 turns to complete extraction of all honey.

Be careful not to overspin or spin too fast as this may damage the comb.

Check comb, if all honey is removed go on to next frames, if not repeat the process with half the spin numbers.

Filtering

Stainless steel double filters are the most commonly used. If you allow the honey to settle for a day in the extractor before filtering, the majority of the wax particles will rise to the top, which ensures the honey flows through the filter much more quickly without it clogging.

Bottling

Let the honey settle either in the extractor or a settling container for a couple of days to allow any foam to rise to the top.

It is a personal choice to use either glass or plastic. Both are satisfactory. If you use glass jars and wash them before use, ensure they are clean. Place in warm oven for a time or wash 2/3 days before to make sure they are dry. Do not use jars that have previously contained spices, pickles, or foods that have strong odours.

Clean up

On completion give the extractor a good cold water pressure wash and dry off with soft cotton towel. Warm but not hot water can be used if you wish. Hot water can melt wax and may leave a coating over surface which is just as hard to remove. For that reason I prefer cold water. I do not use any detergents.

Do not leave stickies (extracted frames) or any equipment outside for the bees to clean up. Stickies can either be put back into hives or frozen and stored in plastic bags until required.

Cutouts – sticky, stingy and stifling, but someone's got to do it. And sometimes it goes swimmingly!