AUSTRALIAN QUEEN BEE BREEDERS ASSOCIATION NEWSLETTER

INTRODUCTION by Peter Czeti

Welcome everyone to our July Newsletter. Its been quite a few months since the last newsletter in March and I apologise that it has taken this long. Our Annual General Meeting (AGM) was held via Zoom on 7th May 2022. Current members were notified by email. A new Committee was elected and though it has taken a little longer than expected to transition in the new office holders, we are all now on deck representing our members and progressing initiatives that we believe will benefit our industry. The new Committee for 2022-23 is:

- Richard Sims – President, re-elected
- Stephan Lottering – Vice President, newly elected
- Peter Czeti – Secretary, newly elected
- David Briggs – Treasurer, re-elected
- Corinne Jordan – Executive Member, transitioned from Secretary
- Jamie Baggs – Executive Member, re-elected
- Paul Reid – Executive Member, re-elected
- Terry Brown – Executive Member, re-elected

The Committee thanks the outgoing committee members – Chris Kassebaum and Kevin Tracy for their contributions.

CONFERENCES AND REPRESENTATION

Needless to say, the last few months have been hectic. Richard attended the 4th Australian Bee Congress and provided an update of AQBBA activities and upcoming initiatives (some of which we will cover in the newsletter). Coinciding with the Congress was the Australian Honey Bee Industry Council (AHBIC) AGM. An important matter before AHBIC submitted by AQBBA was our position on the development and implementation of protocols to enable the importation of improved honey genetics to Australia. This protocol is central to the recent activity by some of our colleagues importing drone semen from Europe and New Zealand. With much persistence they have worked through the Government red tape and are now in a position to undertake drone semen importation from a European VSH program and hopefully (if everything goes according to plan and passes the virus screening protocols) drone semen might be here in about one months time.

Knowing what we know now about the varroa situation, this work is likely to be critical to the availability of VSH genetics to Australian breeders and downstream queen bee breeding programs. Not surprisingly, this situation will continue the escalating demand for queens and replacement colonies - and if Varroa is not contained, the demand will sky-rocket! Unfortunately, the number of queen breeders and producers available to meet this demand may well be reduced due to some of the catastrophes facing our members around Ground-Zero near Newcastle. With 30-40 years of work and hundreds of colonies

literally “going up in smoke”, one can only imagine what might be facing some of these beekeepers as they ponder their future.

VARROA INCURSION

I suppose that it is somewhat disconcerting that Australia faces the threat of Varroa on our 200th Anniversary of European Honeybees in Australia. Taking an optimistic view, the Committee is adopting a “hope for the best, plan for the worst” position. The current view from the involved Government agencies (NSW Department of Primary Industries (DPI) and the federal Department of Agriculture, Water and the Environment (DAWE)) and AHBIC is that there is considerable optimism that the incursion can be contained and eradicated. This view of course means that the ongoing euthanizing of colonies where mites are discovered will continue. It is probably too soon to draw any conclusions about how this eradication is to be managed longer term, but what is apparent is that there is every chance that this might take a long time. Let’s hope that we are not still destroying colonies in December. At worst, we may be left in limbo and embark on a protracted eradication campaign like the Fire Ant in Queensland which has been going for well over 10 years at a cost in excess of $400 million.

Presently, a few of our colleagues have their hives inside the eradication zones in NSW. It should come as no surprise that some of these genetics will be important contributors to a successful recovery from this situation with - or without – Varroa persistence. The Committee recently made representations to AHBIC for a protocol to save these queen genetics in from colonies inside or adjacent to the eradication zones. An outline of the proposed protocol is:

- Queen bank provided from outside the zone.
- Brood-less queen bank made up from clean hives outside of zone
- Breeder queens caught and caged without escorts
- Breeder queen anaesthetised with CO2 to check for mites under a microscope
- Breeder Queens banked for 48 hours in brood less queen bank
- Queen bank treated with approved Miticide
- Queen bank to be managed in a central location under control of DPI NSW
- Queen released after freedom from mites confirmed by caging with escorts from the treated queen bank.
- Registered beekeepers recognised as Queen Breeders only.

AHBIC is supportive of this approach and we are confident that common sense will prevail.

In the immediate term we propose a strategy that takes the view that we are going to be in the shadow of varroa for months to come and recognises that all of us as beekeepers need to completely understand varroa (particularly its life-cycle and associated weaknesses), how to effectively administer treatments and improving our genetics to deal with it.

Initial steps to improve our collective information and knowledge will focus on:

- a substantial web-site effort to include information guides for Association members.
- Online advice and assistance for inspections and treatments.
- Coverage through webinars and newsletters.

Obviously, Australian beekeepers have little experience with the various treatments and techniques for managing varroa. We will investigate ways to communicate practical experience to our members including webinars and on-line demonstrations:

- Mechanical techniques (drone brood culling, queen isolation, icing sugar etc).
- "Organic" treatments such as Oxalic Acid and Thymil
- Soft and hard chemical treatments such as Apistan, Bayvarol and Apivar (depending on APVMA approvals)….

Our longer term objective as an industry cannot be breeding ever resistant mites and even weaker bees!!!! Breeding will be key and it is our wish that the imported genetics will be made available to our members through the availability of breeder queens.

PLAN BEE

Following on from the earlier request by Plan Bee for feedback on the Draft Standard Trait Selection Manual, Corinne Jordan and I attended the Plan Bee Information Day in Brisbane during April run by Nadine Chapman. The purpose of the Information Day was to walk through the Plan Bee Manual. Much of the focus of this discussion was related to the benefits of estimated breeding values (EBV) – particularly in relation to honey production which is the main example in the Plan Bee Manual.

The main messages from Nadine's presentation included:

- Best Linear Unbiased Predictions (BLUP) are a statistical method. They depend very heavily on removing randomness and focusing on consistency. For example, all colonies under assessment must be treated exactly alike. For example, all colonies under assessment for a particular trait are located in the same apiary, managed identically (feeding, treatments, harvests etc) and not "assisted" in any way.
- Bee Breeding Programs must:
    - maintain a diverse population to provide a basis for selection (more on this in a minute),
    - use a selection index of desired traits,
    - use careful, accurate record keeping,
    - use a method of controlled mating.
- Plan Bee maintains a register of queens and their associated EBVs. A queen identifier, pedigree file and trait recording file are required to access and leverage the information in this database.

Of course, your contribution to the database also assists the efficacy of the results. This information is uploaded and the team aim to return a report of the EBVs against the desired traits to you within 2 weeks.

- Plan Bee also has a genetics database that can provide information on genetic diversity or relatedness of your program. To undertake this assessment, you have to provide genetic material to Plan Bee for them to assess. The service is free. The process for collecting the required genetic samples is here. To really benefit from EBVs, you really need to know the relationship amongst your queens. It can alsso identify relationships through the male line. This testing will give you that.
- An important limitation of Plan Bee at the moment is that they do not have the capacity to take account of local effects on colonies (for example chalkbrood in Western Australia is a different strain to that in NSW and Victoria).

We recommended that you consider sending in samples for the genetic diversity study on the queen breeding population in the previous newsletter and remind you to please contact Nadine. Thanks to those of you who have sent samples in. The Plan Bee Breeding Manual can be found here. If you have questions about the program, please contact Nadine Chapman at the University of Sydney (email: nadine.chapman@sydney.edu.au, ph: 02 9351 2267) or Elizabeth Frost at the NSW Department of Primary Industries (email: elizabeth.frost@dpi.nsw.gov.au, mob: 0437 731 273).

PROFESSIONAL DEVELOPMENT PROGRAM

You might recall from previous newsletters, the Committee has been working on establishing a program for certifying and acknowledging the expertise or our queen bee breeders. An initial draft plan has been developed and is under consideration by the Committee and some key industry participants such as AHBIC and B-QUAL. We think that establishing a certification program will:

- formally document standards for queen bee breeding, production and distribution,
- provide effective and affordable training and professional development through vocational education and training (VET) accredited courses to enable the skills to meet the standards; and,
- assist with quality assurance for measuring compliance by its members with the standards as well as identifying opportunities for improvement and innovation.

In establishing this program, the AQBBA will achieve the following important industry objectives:

- build awareness of the importance of queen bee breeders such that consumers know they are purchasing quality stock from endorsed queen bee breeders and producers,
- establish authority and thought leadership so that the AQBBA is recognised as a regulated professional part of the Australian Beekeeping Industry that actively innovates and improves its products and services,
- respect for its membership through solid, highly regarded qualifications and quality assurance; and

- cultivate an active and progressive community of professionals.

We are still in the early stages of developing the plan and consultation with industry participants but by the time of the next newsletter in several months, we should be in a position to share what we wish to accomplish, the time-frame as well as the approach we will use to achieve it.

QUEEN BEE POSTAL TRACKING

Continuing on from the Hivekeepers GPS tracking tool included in the last newsletter, the Association was briefed by another provider. Binary Tech's Cicada parcel tracking technology has been successfully used to track a wide range of goods. For example, 10s of thousands of COVID samples per day with time criticality for communicating results back to testing agencies. An environmental focus on beer kegs including their location, temperature, exposure to light and amount of movement. Notifications are sent of when tracked items end up in places where they shouldn't or thresholds of movement and temperature are breached. The product is designed and built in Australia. Each sensor weighs approximately 230 grams and runs on AAA batteries. Depending on the duty cycle, batteries could last for 6 - 9 months with regular communications (every 30 mins) or five years when reporting only once or twice a day. There are many configurable options including the data upload rate, alerting if the sensor moves, tracking updates only when the sensor is moving or sending alerts. The Cicada does not use GPS but a form of wi-fi triangulation. This means that the battery life is greatly increased but sometimes the accuracy of location where there is not much 4G/5G coverage might not be as accurate.

Cost of the unit is between $59 to $99. Cicada uses SIM cards so these are the main ongoing operating costs. We are currently in discussion with Binary-Tech regarding the cost of units when they are not in use – for example in Winter.

MEMBERSHIP

We thank all our members for their continued support of AQBBA . Your support ensures Australia keeps an independent body focused on specific issues effecting queen bees, including health, advancements in bee breeding, bio-security, market access, education, training and innovation. Our Membership year runs from 1st April to 30th March. Membership for 2022 remains at $50 per year. Please consider supporting AQBBA if you are not already. As a member your contribution will be much appreciated. Follow the link for membership payment -> https://aqbba.org.au/membership

INTERESTING READING/VIEWING

To close out our newsletter on a light note, I thought I share some links that come up from time to time that are informative, amusing, controversial or just plain strange. Enjoy…..

Varroa Mites discovered in Australia. Richard and Ben Discuss the implications. A relaxed interview (1hr: 38 mins) with well known beekeeper Richard Noel from Brittany in the UK discussing the basics of Varroa treatments (26th June 2022).

The Varroa incursion in Australia 4 July 2022. Randy Oliver has a bit to say. He also chipped in with his views on the Australian Varroa crisis on Ben's Facebook page → https://www.facebook.com/ben.brown.3517/videos/818438295763644

You might be interested in reading a light-hearted exploration of The Ultimate Hive Stand by The Apiarist.

This is going back a bit, but I thought this presentation on honeybee genetics from the 2019 National Honey Show in the UK by John Chambers might provoke some thoughts. We are our own worse enemy maybe ??

My 10 year old beekeeping apprentice/son shared this Minecraft video with me on how to find a queen bee. I'm not sure I understand our kids or the parallel universe they live in sometimes…..

FACEBOOK

As mentioned previously, we continue to actively update the Facebook page for AQBBA at https://www.facebook.com/aqbba