WE DID IT

Australia is one of the few places in the world to successfully eradicate the Varroa mite. The National Management Group (NMG) has declared that the *Varroa jacobsoni* incursion in Townsville has been eradicated and we are now free of this pest in Townsville.

My mind goes back to May 2016 when I received a call from the Federal Department of Agriculture asking if I could go down to the quarantine office at Eagle Farm in Brisbane to look at combs from an Asian bee nest that had been found in a container rack in the port of Townsville and had been identified as also having *Varroa jacobsoni* on the bees.

Examining the comb I could see that it was old and, as the container had been there for about 2 years, it was obvious it could be up to 2 years old.

Photo: DAWE 2016 nest

As AHBIC is the signatory to the Emergency Plant Pest Response Deed (EPPRD) we were part of the Consultative Committee on Emergency Plant Pest (CCEPP) which met to consider the response to the incursion. An eradication plan was developed and put in place. This incursion was officially declared to be eradicated by the NMG on 1 July 2020.

Whilst the eradication program for the 2016 incursion was being enacted, there were two other separate incursions from unrelated Asian bees found at the port of Townsville and these also had *Varroa jacobsoni* on the bees. These were in May 2019 and April 2020. Examination of the comb showed that these had not been there for long before they were discovered.

An eradication plan was put in place for the May 2019 incursion and then extended to account for the April 2020 incursion.

In August 2021 these two incursion were declared eradicated.

Over the five years that the eradication plans were in place the major reason for the successful eradication of the Varroa mite was the dedication of the staff that were part of the eradication program. From the manager down to those out walking the streets looking for bees, they all put in the hard yards and industry says thank you for your efforts and professionalism.

Over the time there were many other factors that also led to the successful eradication.

After the agreement to the eradication plan in 2016, AHBIC organised and paid for beekeeper volunteers to go to Townsville to help out with the program. Initially the main emphasis for

the volunteers was to train the local beekeepers in how to conduct sugar shakes, alcohol washes and drone uncapping to check for Varroa. Thanks to those volunteers for their work. Also there were bottom boards put on hives that allowed for sticky mats to be put in when the acaricides strips were put in the hive and the volunteers were able to do this work. As it had been reasoned from the beginning that *Varroa jacobsoni* would probably not be reproducing on the honey bees the same way as *Varroa destructor* does, then it was vital that local hives be tested on a regular basis. The experience from Papua New Guinea was that it took up to 20 years before *Varroa jacobsoni* learnt how to reproduce on honey bees. So no destruction of hives was carried out but monitoring was vital. There was no movement of hives allowed out of the Townsville City Council area.

Photo: Author Teaching local beekeepers how to use the sugar shake method of mite detection

Whilst getting out and looking at flowering plants for Asian bees, the host of the Varroa, was to the forefront, the response from the communication with the public was a crucial role in finding the nests of the Asian bees, particularly in the 2016 incursion. The majority of nests found subsequent to the 2016 incursion were from reports from the public

Many different tools were used. The main one was the gathering of regurgitated pellets from the rainbow bee eater bird, *Merops ornatus*. This method had been developed in 1998 by Dr. Glen Bellis from Darwin when we had the Asian bee incursion in Darwin. It proved crucial in detecting the April 2020 incursion when undigested wings of the Asian bees were found in the collected pellets and alerted staff to the presence of Asian bees that had not been seen out foraging on flowers.

Photo: Peter Bray Rainbow bee eater bird

Putting up a helium balloon with queen bee pheromone attached attracted drones of Asian bees. This was developed from work by Dr. Ros Gloag in Cairns.

Beelining also played a vital role. This had been developed in the 1990's from the initial work by the late Dr. David Banks, Barbara Waterhouse and Judy Grimshaw. This method was refined during the unsuccessful eradication attempt on the Asian bees in the Cairns area starting around 2010.

Photo: Author Using helium balloon to attract Asian bee drones

I estimate that around $5 million was spent on the three incursions.

Over the 5 years the affected parties have been:-

- Almond Board of Australia
- Apple and Pear Australia
- Australian Lychee Growers Association
- Australian Macadamia Society
- Australian Mango Industry Association
- Australian Melon Association
- AUSVEG
- Avocados Australia
- Canned Fruit Industry Council of Australia
- Cherry Growers of Australia
- Grain Producers Australia
- Raspberries and Blackberries Australia
- Strawberries Australia
- Summerfruit Australia
- All State Governments
- Federal Government

AHBIC thanks the contribution of these industries to the eradication program.

So overall a successful eradication program. Work is being carried out to look at the pathways of Asian bees coming into Townsville so that incursions of the Asian bee, particularly when it is carrying the Varroa mite, can be prevented.

Trevor Weatherhead AM

Chair - Australian Honey Bee Industry Council (AHBIC)
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