

AHB SAG Minutes

Meeting Four of the Asian Honey Bee Scientific Advisory Group (AHB SAG)

Teleconference held on Wednesday 15th February 2012

Attendees: Rod Turner PHA (Chair), Sam Malfroy PHA (Secretariat), Denis Anderson CSIRO, Simon Barry CSIRO, Trevor Weatherhead AHBIC, Max Whitten FCAAA, Boris Baer UWA, (all following attendees joined the meeting as observers) Neil O'Brien DEEDI, Russell Gilmour DEEDI and Shirin Hyatt DEEDI.

Apologies: Glynn Maynard DAFF, Doug Somerville NSW DPI, Sharon De Wet DEEDI, Dave Alden RIRDC and Sharyn Taylor PHA.

Item 1: Welcome by the Chair

The Chair welcomed the Members of the Asian Honey Bee Scientific Advisory Group (AHB SAG) to the teleconference.

Item 2: Asian honey bee odour detection dog

The recently completed DEEDI review into the AHB odour detection dog was discussed amongst the SAG. There was agreement amongst the SAG that the dog had achieved good results within the AHB eradication program and had effectively demonstrated the ability to detect AHB odour and AHB nests and swarms. However, the SAG agreed with the DEEDI review recommendations and agreed that the dog did not fit within the objectives of the AHB T2M. The SAG felt that the money that was allocated to the dog and handler could achieve a better outcome for the program if it was spent on hiring field staff for the AHB T2M program.

Recommendation 1: The SAG agreed with the Asian honey bee odour detection dog review conducted by DEEDI and recommended that the dog no longer be used within the AHB T2M program.

Item 3: Discussion and Comment on the DEEDI work plan

DEEDI stated that this document clearly highlights the objectives and strategies to implement the AHB T2M. It was agreed that the SAG would provide scientific comment and feedback on the document. The Chair stated that PHA would follow up with the SAG to outline the specific areas where DEEDI is requesting feedback and that this would be compiled and presented to DEEDI on behalf of the SAG.

Item 4: Discussion and comment on the draft pathway analysis

The SAG agreed that this document provides an effective summary of potential pathway analysis into Australia of pest *Apis* spp. However, it was the SAG's opinion that the document needed to be updated, specifically in relation to the Cairns incursion and to include domestic pathway analysis of the established population of *Apis cerana* Java strain. Understanding this internal pathway would be critical in allowing an effective

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transition to management as well as understanding the risks of the Cairns population spreading within Australia. DEEDI stated that are collating evidence in relation to the spread, and modes of spread of the Asian honey bee in the Cairns region and that this data would help complement and improve the pathway analysis document.

In addition, the SAG recommended that the scope of the original analysis be expanded to cover other species of *Apis* spp and potential entry points in addition to PNG and New Zealand already covered in the report.

The Chair stated that PHA will follow up with the SAG in relation to specific areas of the pathway analysis that need to be included and/or updated.

Recommendation 2: That the draft pathway analysis document prepared by DAFF in 2008 be updated to include a domestic pathway analysis, and a section relating to pathway analysis of other *Apis* spp.

Item 5: Discussion and comment on pollen analysis

It was the SAG's opinion that this bee is highly adaptive and has the potential to utilise a range of plants as a pollen resource, and therefore the output from a pollen resource study is essentially limited to where the bee is and what is flowering in a specific region at the time. DEEDI also stated that many of the combs collected from nests since 2007 did not contain much pollen, and instead contained brood, and therefore a retrospective pollen study would be hard to implement.

It was discussed that research is currently being conducted in conjunction with UNE and CSIRO on pollen analysis on all AHB nests collected from the start of 2012. To this date, 8 nests have been collected and provided to the researchers. The SAG requested that DEEDI continue to supply researchers with nests, and that if possible, nests are collected for pollen analysis from various regions and plant communities in the Cairns region to demonstrate that the AHB can utilise a range of pollen resources in different situations.

The SAG agreed that at this time in the T2M that a retrospective pollen analysis is not necessary until the findings from the joint pollen analysis conducted by UNE and CSIRO is made public. It was further stated that a nectar analysis did not align with the objectives of the AHB T2M and that this should be dropped as a project.

Recommendation 3: The SAG recommends that the nectar analysis be dropped from the AHB T2M program.

Recommendation 4: That the nectar analysis proposed in the AHB T2M be replaced by the pollen analysis already being conducted jointly between UNE and CSIRO with specific focus on identifying pollen resources used by AHB nests collected in areas with different plant communities.

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Item 6: Update on targeted commissioning for research proposals

Plant Health Australia provided an update to the SAG of the recent discussion with RIRDC regarding the RIRDC research proposals that were submitted to the SAG for comment. PHA stated that it had discussed with RIRDC which proposals the SAG considered were suitably aligned with the objectives of the AHB T2M, and others which were not considered suitable.

PHA also stated to the SAG that it had expressed to RIRDC the desire of the SAG to put in place targeted commissioning for research projects, specifically relating to attractant research, pest and disease research and inter-specific mating research. It was agreed that PHA would write up a call for research proposals, under the guidance of the SAG, and once agreed upon these would be provided to RIRDC for distribution to a range of scientists that were deemed suitable to conduct the research.

Item 7: Discussion and comment on the call for research proposals

The call for research proposals for attractant research and pest and disease research was tabled with the SAG for comment. All members of the SAG felt that the proposals provided an effective summary of the type of research aiming to be conducted in alignment with the AHB T2M. PHA agreed to follow up with RIRDC regarding the processes that would be required to send out the call for research proposals. PHA stated that they would follow up shortly with the SAG to provide an update of the research proposal situation.

The SAG stated that once proposals from researchers were received by RIRDC that the SAG would like to comment on each of the proposals received. The Chair stated that due to potential conflict of interest that this would have to be cleared through the AHB TMG.

Recommendation 5: For PHA to follow up with RIRDC in regards to the approved 'call for research proposals' and for these to be distributed to relevant researchers in a timely manner.

Recommendation 6: To seek endorsement from the Management Committee for the SAG to be allowed to comment on the research proposals received by RIRDC.

Item 8: Discussion and comment on experimental design and methodology in Fipronil remote poisoning experiment

The Fipronil remote poisoning experimental outline was discussed amongst the SAG. The SAG stated that this experiment should build upon previous work conducted in Western Australia and the Solomon Islands, however stated there are some critical aspects that need to be determined in this project for the Cairns scenario. This includes:

- The outcomes of the trial are in a statistically valid sense so that various levels of confidence in regards to destruction of nests can be achieved

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- To determine the forager/colony size ratio in regards to how many foragers are required to take back the Fipronil to kill a nest of a certain size
- Testing how long it takes for Fipronil to kill a nest of a certain size
- To determine the distance from a remote poisoning station (i.e 500m) that you can be confident that you have poisoned all AHB in the radius
- To vary the concentration of Fipronil for specific scenarios of nest destruction
- The need to test between high density and low density areas, so that remote poisoning can be utilised in a potential future incursion

It was also raised by the SAG that Fipronil is widely used in both commercial and personal settings and it was requested that the introduction of the document be rewritten to include how, and where Fipronil is used to provide context for the public and stakeholders for this experiment to take place.

The SAG and DEEDI also expressed their desire to minimise the impact of this trial on potential non-target organisms. It was discussed amongst the SAG and DEEDI that there are two potential methods to determine if this possible. The first method is to conduct the trial at a time when the AHB has been trained to the bait station and at a time (i.e. dusk) that AHB are the dominant foraging species. The second method is to conduct a separate bait station trial which includes a form of excluder which would exclude other social and solitary insects from feeding on the bait station.

The SAG suggested that the Fipronil trial should start as soon as possible, and DEEDI agreed, stating that a number of nests had been located within the containment zone to start the remote poisoning trial. DEEDI stated that they would provide the SAG with a description of the nests and where they are and how they propose to destroy the nests and requested the SAG comment on the methodology of how these nests are destroyed and what variables are tested. The SAG agreed to respond as soon as possible on the methodology proposed and stated that the original trial of Fipronil remote poisoning needs to remain flexible and follow an adaptive approach, before refining the methodology with greater numbers of AHB nests throughout the Cairns region.

Recommendation 7: For the SAG to be directly involved in re-designing the Fipronil remote poisoning experiment based on the DEEDI document, including the testing of variables such as concentration of Fipronil, how many foragers are present on the bait station and distance to the hive etc.

Recommendation 8: For DEEDI to conduct experiments on minimising the impact of Fipronil remote poisoning on non-target organisms with direct scientific input from the SAG.

Recommendation 9: For the beginning of the Fipronil experimental document to be rewritten to include how and where Fipronil is used to provide context of how widely used this chemical is in order to provide information for the general public and stakeholders.

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Item 9: Future Meetings

The Chair stated that PHA would follow up with all Members of the SAG shortly to arrange the next meeting.

Item 10: Summary and close of meeting

The Chair thanked all Members of the SAG for attending the teleconference and closed the meeting.