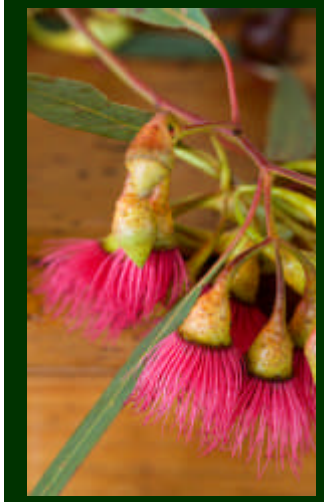

Submission into the Senate Standing Committee on Rural Affairs and Transport Inquiry into the Science Underpinning the Inability to Eradicate the Asian Honeybee – March 2011

Prepared by: Jodie Goldsworthy – Director Beechworth Honey Pty Ltd

Introduction:

- My name is Jodie Goldsworthy and I am a founder and Director of Beechworth Honey and provide the following introduction to myself to be considered when referring to the remainder of this submission.
- I grew up in a beekeeping family and am a 4th generation beekeeper.
- My first international beekeeping expedition was with my parents to PNG in 1978 where we saw beekeeping in that country when I was 8 years old.
- My entire life has been surrounded and impacted first hand by the developments that have occurred for the Australian honey industry over the last 4 decades coupled with opportunities to see international beekeeping.
- I completed a Bachelor of Applied Science in 1991 and graduated as a Secondary school teacher that year.
- As a teacher I have taught Secondary and Tertiary level Science, Mathematics, Physical Education, Health and Communications.
- My practical first hand industry experience combined with my methodical, analytical and questioning skills gained as part of my Science degree mean that I am qualified to make observations in regard to the scientific process that has been used to declare the Asian bee endemic.
- Along with my husband Steven I have been responsible over the last 19 years for developing Beechworth Honey from a small primary production partnership producing bulk honey and selling it as a bulk commodity to a major honey brand in the Australian honey category.
- Beechworth Honey is now the countries largest independently owned specialist honey company and both myself and our company hold numerous business awards for achievements as a financially independent first generation company.

- In 2008 together with my husband Steven we developed the highly successful honey education centre the “Beechworth Honey Experience”.
- In 2011 the centre earned a special award for its contribution to “Science” by the Victorian branch of the Australian Institute of Food Science & Technology (AIFST) in recognition for the public education value of the centre in regard to bees and food security.
- I now hold a post graduate degree in Strategic Marketing and am passionate about regional business development, Australian agriculture and food and the environment.
- I was a member of the “Regional Women’s Advisory Council” from 2002 - 2007, appointed by the Deputy Prime Minister at the time to give advice to the Australian Government about issues affecting rural and regional Australia.
- I was an attendee of the Australian Governments 2020 Summit.
- In February 2011 I began an appointment as a member of the Australian Governments “Food Processing Industry Strategy Group” tasked with developing a more competitive Australian food processing sector with the Minister for Innovation, Industry, Science and Research, Senator the Hon Kim Carr.
- In 2009 I authored my first book “Cooking, Tasting, Living Honey” which showcases a world of Australian honey.
- In 2009 I became a Director on the Wheen Foundation set up to improve the health of honeybees and assist in protecting food security by arresting some of the threats facing natures most efficient pollinators.
- In February 2011 I assisted in initiating the Food Security needs Bee Security Campaign to support the work of our industry to raise awareness with the aim of having the Asian bee decision overturned because of its serious consequences.

Inquiry Terms of Reference:

I understand the inquiry is looking into 4 things:

(a) the science underpinning the technical assumption that Apis cerana , the Asian honey bee, cannot be eradicated in Australia;

(b) the science underpinning the assumption that the Asian honey bee will not spread throughout Australia;

(c) the science relating to the impacts of the spread of the Asian honey bee on biodiversity, pollination and the European honey bee; and

(d) the cost benefit of eradication of the Asian honey bee.

- As part of this submission I wish to make a number of brief comments and observations based around the scientific process which lead to the decision that the Asian bee was not eradicable
- I also wish to submit points for consideration in regard to the cost and benefits of eradication of the Asian honey bee.

Comments and observations in relation to the science in regard to: (a) (b) (c) of the Inquiry terms of Reference

- The practice of imposed or perceived "confidentiality" on the participants of the various meetings of the CCEAP, CCEPP and National Management Group and their committees has not assisted the scientific process or the useful dissemination of information to industry, other stakeholders or bee experts within state departments who have had limited opportunity to contribute or be more widely consulted on this issue. Even just trying to glean an insight into what has or is happening makes you almost feel the need to change your name to "Erin Brockovich".
- This practice has limited the gathering of the important science and also limited the important process of science being challenged and clarified to produce a well balanced outcome

3. The eradication process undertaken to date and resultant scientific evaluation has been limited and impacted negatively by:

a) Inadequate funding and funding uncertainty
b) Inadequate time to gather any meaningful scientific information from the eradication efforts and a failure to manage funding to appropriately or effectively gather data that could be used to make a meaningful scientific decision that was based on consensus.
c) DAFF departmental changes which shifted the decision making between committees, and interdepartmental sections and honey industry capacity limitations
d) Government departmental representatives who are not expert in the field of entomology, Asian honey bees or European honeybees
e) A process which did not look early enough or ever in totality at a costs / benefits analysis of eradication
f) The lack of an adequately funded or communicated scientific based plan for eradication that included:
    a) Measurement criteria to determine the effectiveness of any such program
    b) Appropriate make up of all the necessary scientists to take into consideration impacts of the Asian honey bee on the environment, food security, the Australian honey industry or public health and amenity
    c) Scope, objectives, actions and terms of reference for the plan
g) A failure to ask for an early written review and eradication recommendations for the Asian honey bee and its impact from one of the worlds foremost bee scientists Dr Denis Anderson from CSIRO before any real or perceived a policy or position on the part of DAFF to allow an “unencumbered” scientific view to be achieved from Dr Anderson
h) A formal search and review of any other international science or developments in regard to Asian bees control in any other parts of the world
i) Poor initial planning because of a failure of successive Governments to adopt the recommendations of the *More than Honey Report* 2008

4. The influence of DAFF's perceived or real "position or view" taken in late 2010 determining that the pest was non eradicable may have played a role in influencing some of the States to adopt that position without questioning or asking for further science to be presented because of funding implications of the Category 2 classification.
5. The scientific process and consideration has been limited by the Category 2 classification and the scope of the State and Australian Government departments invited to or contributing to the Scientific process. There has really been no focus on the environmental risks if not eradicated.
6. There is a belief that when you look at the National Eradication Program that took place under the deed between April and November 2010 costs were more likely to be around $1million not $3 million.

Specifically in relation to the lack of information contained within the 4 page report provided by Dr Paskin I provide the following observations:

I. The report does not contain a number of important aspects one would expect of even a very simple scientific Analysis or report.

II. It is void of the usual and expected credible Scientific signs of rigor as it does not provide adequate content in regard to scope and limitations of the report, qualifications on the assumptions used or generalizations made, or references to other relevant scientific reports or opinions which would help to mitigate any limitations of the report. It is simply unacceptable that a report with these limitations has carried such weight in the eradication decision made.

III. Some of the report language is also significant in terms of the state based audience it was designed to be read by. For example the comparison to Johne's disease in livestock and the comment in the report that *"After many years of effort, Johne's disease has proved ineradicable"* may not mean much to anyone outside these persons. However, to a target group predominantly with disease and animal based background the ramifications and risks of comparing the Asian Bee to Johne's disease which is known to have caused these people and their Departments much angst as they attempted eradication could be seen as being a "red beacon" warning signal intertwined within the language chosen that could be anticipated to elicit a response based more on a previous experience rather than on an open minded ability to take in science without prejudice.

IV. Given the significance of this decision it was clearly illogical to make a decision to cease eradication based on such a narrow viewpoint with the above mentioned limitations which was not substantiated by other Scientific views at the same time. Furthermore, the Pasking conclusion is contradicted by other experts such as Dr Ivan Sargeant, Dr Denis Anderson, Dr Max Whitten and Mr Trevor Weatherhead.

What the science seems to have missed – NSW Government Information

Report titled "The Solomon Experience with Asian Honey Bees" by Nick Annand, NSW DPI Bathurst published in the Australian Beekeeper in August/September 2008 issue of The ABK, p.66 which states:

"There is belief that the major biosecurity threat posed by *A. cerana* to Australia is the possibility that it may carry and introduce a mite into the country and the bee itself is only of nuisance value. Yes, the introduction of certain mites could be extremely damaging to the apiary industry, but please **also consider the bee itself as a major biosecurity threat to beekeeping in Australia.** The damage it has caused to the apiary industry on infested islands in the Solomon's has been major and in some situations wiped the industry out. A similar impact could well occur with the establishment of Asian honey bees in some areas in Australia, particularly in the hot humid tropical regions of North Queensland. **The threat of Asian honey bees should not be taken lightly**. They are a major pest in the Solomon Islands to beekeepers and the community and could cause similarly problems here in Australia. Which areas of Australia will be impacted, lets hope we never find out.

Denis Anderson on a recent trip to PNG found that a varroa mite is now reproducing on *A. mellifera.* ***The extent of the outbreak indicated that the mite is well established in the A. mellifera population, is wide spread, and cannot be eradicated.*** This will have major implications regarding biosecurity issues for Australia. Investigations into the identity of this mite are in progress as I write. An important question with no answer to date, is whether this mite can breed and be vectored by the local Asian honeybees. This latest finding by Denis Anderson only amplifies the need for very rigorous biosecurity for Asian honey bees across the north of Australia, particularly in the Torres Strait and on boats coming from PNG and neighbouring Indonesian Papua."

What the science seems to have missed – NSW DPI Bee Experts:

- NSW Government Fact sheets both before 2008 and as recently as March 2011 confirm the science and beliefs of the bee experts within the NSW Department at those times which are based on the work of the CSIRO with contributions by their own staff member Nick Annand

- May 2006 NSW DPI Bee Diseases Fact sheet referencing what had been occurring in the Solomon Islands indicating that the research being considered by

http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0005/63878/Exotic-pests-of-honey-bees-Primefact-46---final.pdf

- In March 2011 the NSW Government stated in its Asian Bee Fact Sheet "The evidence in PNG and Cairns strongly indicates that the Asian bee is a highly invasive insect and has the potential to inhabit most of the Australian landscape."

http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0003/382161/Asian-bees.pdf

International Emerging Research

The “Science” did not see any new international developments or pick up any possible new international eradication techniques as part of its work.

One such example is:

- Japanese research which may provide a clue to possible detection for Asian honey bees from Kyoto Gakuen University in Kyoto, Japan.
- The research is based around the aggregation pheromone which is being trialed in Japan and in Taiwan to lure Asian bees. The researchers concluded “An oriental orchid *Cymbidium floribundum* is know to aggregate the *Apis Cerana Japonica (Acj)* and not to attract *Apis mellifera (Am)”.*
- This researcher is interested in conducting trials in Australia and this research needs to be followed up and evaluated to determine if it is helpful in any eradication or detection efforts
- Because a literature review is not evident it is unknown as to any other possible international clues which may be of assistance in other parts of Asia particularly.

Environmental Research

- It is clear that the science has not considered any targeted environmental research in regard to the impact of the Asian honey bee on the environment or biodiversity
- According to Anne Dollin from the Australian Native Bee Research Centre there are roughly 1,500 native bees, most of which live a solitary existence nesting in small holes. A few species, the stingless bees, live socially in hives and produce honey mixed with tree resin.
- There is no evidence that the process or the “Science” consulted this organisation nor any other environmental organisation for advice on the impact of the Asian Bee.
- Given the CSIRO’s belief that biodiversity and the environment stands to lose most then this is a significant oversight.

Public Health & Amenity Research

- A RIRDC report titled “Estimating the Potential Public Costs of the Asian honey bee incursion” was produced May 2010.
- https://rirdc.infoservices.com.au/items/10-026
- This work was not used to feed into a cost benefit analysis as one was not finalised or agreed upon and therefore not tabled as part of the eradication attempt process to date.
- Similarly no tourism or indigenous research in relation to Queensland or other states was fed into any cost benefit analysis either.
- Sadly the make up of the committees was lacking diversity in regard to members from any of the above sectors. It could be described as a case of the science being lacking because of not knowing what you need to know in these areas due to limitations with diversity in the make up of the decision making group.

The Best Cost Benefit Analysis in Existence Ignored

- In 2008 the *More Than Honey Report* was produced as a result of a bipartisan Australian Government Inquiry into the Australian honey industry.
- A major part of that work was the justification provided by CSIRO at that time that the benefit of spending around $50 million annually to address the complex, cumulative and interrelated threats to European honeybees would be in the national interest. This information provided a logical recommendation within the report which has sadly not been acted on.
- This information clearly should have been taken into account in the absence of, and failure of the process to produce any other specific cost benefit analysis pertaining particularly to the Asian honey bee.

More generalised research ignored:

- There is no evidence in the process that international positions and recommendations in regard to threats to European honeybees was taken into account. Examples of important analyses include:
- International Risk Governance Council *"Risk Governance of Pollination Services"* September 2009
- United Nations Environment Program *"Global Honey bee Colony Disorders and other Threats to Insect Pollinators"* - 2010

- In addition **new research** has been produced since the decision was made which adds considerable weight to the importance of the decision for all of our futures in terms of food security.
- Verwijs, R - Rabobank *"The Plight of the Honeybee"* 2011 – information from this report is beneficial to determining long costs of not eradicating Asian honey bees.

Comments and observations in relation to the science in regard to (d) cost benefit of the eradication

- Cost benefit analysis is a term that requires the careful consideration of the total expected costs, expressed in terms of money, social and environmental impacts, weighed up against the total expected benefits.
- Unfortunately despite the eradication attempt period a cost benefit analysis was not produced and technically the decision should never have been made without this important piece of information.
- It could be argued therefore that the current decision to declare the Asian bee endemic is technically invalid and should be immediately reversed until such time as this important process step can be completed and this oversight rectified.
- Whilst the dot points provided in this submission are in no way intended to be an exhaustive list which would be expected to be developed should proper process be followed the following provides a range of examples which should have been considered as part of this exercise based on my personal knowledge and business experience.
- Other submissions by our industry will give further examples of costs to our industry which will complement this submission

Costs to continue eradication:

- The Queensland Government estimate has been used by our industry to develop the position that $10 million will be required initially for two years followed by adequate funding to demonstrate freedom from the pest over the following 18 months for eradication to be achieved.
- The Category 2 classification currently expects our industry to cover 20% of these costs. The beekeeping industry simply can't afford to meet the full industry contribution. Nor should it as the pollination dependent sector and the environment will capture the major benefits of eradication. And nor is it our role to bring on board other beneficiary industries. That's the government responsibility.
- The Governments own initiative "Pollination Australia" alliance has failed to even have the capacity to carry out this role since its inception to date.

Costs of not eradicating – what is at stake?:

Indigenous Culture and way of life:

- Our company has been providing information to the Thathangathay Foundation who are working with the Wadeye and Port Keats indigenous communities to develop the Native Bee Industry as part of the Australian Governments indigenous social welfare and development program for those communities. The Native bee development initiative allows the practice of traditional culture and skills and is an important planned development activity for traditional people to use traditional skills to make a living. Clearly the environmental impacts of the decision to declare the Asian bee endemic negates any current efforts being made in this regard. The social cost to the young indigenous males and their communities who have become interested and are part way into this initiative is of real concern. The Asian bee decision is currently being looked at by the Foundation in consultation with the Thamurrurr Development Corporation.
- To our company the opportunity to bridge a gap between commercial honey production and a niche and new indigenous honey industry and the possible value adding opportunities for the Wadeye and Port Keats communities is something which we value as part of our corporate social responsibility obligations we set ourselves. These opportunities will be lost as a result of this decision and given the Australian Governments priority for the above communities this information should be taken into account in any future cost benefit analysis.
- Without an inquiry such as this and with a largely closed eradication process to date it is unlikely that this information would ever have come to light.

Environment & biodiversity

- Fragile biodiversity and ecosystems dependent on nectar foraging, small cavity inhabiting native bees and insects
- Endangered species such as the Superb Parrot in the Riverina of NSW

Costs of not eradicating – what is at stake?:

Free Pollination by European honeybees:

- **Pollination dependent industries future ability to contribute to Australia's food security**
- **Australia's agricultural production**
- **Even the relevance of the Australian Governments own National Food Plan currently under development**
- **The RIRDC publications from Pollination Aware provide all the necessary information to include in a cost benefit analysis in regard to this topic**
- **Even the CRC bid currently being developed for a honeybee and pollination CRC is likely to be impacted by this decision as we desperately try to enlist financial support from food industry stakeholders for this important resource. The uncertainty over the industries future is likely to impact the decision making of not only potential funding partners but also decision makers in this process**

Costs of not eradicating – what is at stake?:

Honey Industry Sustainability:

- Devaluation of honey industry worth and assets by lending institutions and valuers as a result of the increased production risk status of the industry
- Ability to attract new entrants to the industry due to increased production costs and uncertainty over production in the next 10 years. Personal correspondence with CSIRO and State Department Bee Experts indicate that within 10 years there will not be an Australian honey industry.
- Threats perceived or real by lending institutions in an economically cautious environment have already put many of our suppliers and our own business development plans “in a holding pattern” until future certainty can be ascertained.
- Emotional stress due to uncertainty on the back of a sustained drought which has impacted seriously on our industry
- Unknown additional costs to try to keep bees with Asian bees, chemicals, management, etc. CSIRO personal correspondence paints a picture of every hive across Australia needing to be modified in order to try to reduce the entrances of our hives. If modification of the hive in materials and labour cost $10 per hive (our companies estimate) then this cost alone could be in the order of $6 million to the nations beekeepers
- Cost of regulatory restrictions whilst there is an attempt to slow the spread of Asian bees
- The development of a sense of hopelessness on the part of industry as a result of feeling abandoned on the Asian bee decision, on the back of small hive beetle, chalk brood disease and the More than Honey report which will impact our ability to function as an industry and develop suitable industry leaders and support industry structures and networks.

Costs of not eradicating:

- ***Containment and Management also have a cost*** – our industries view is the current containment and management phase which we now involuntarily find ourselves in is only delaying the inevitable. Costs associated with this option would be far better thrown at a concerted eradication attempt in order to avoid this waste of resources, time and effort. This action does little to manage many of the costs of not eradicating that are outlined above.

- If each of the above costs of not eradicating were to be avoided clearly the benefits would far outweigh the cost of any attempt to eradicate the Asian bee whilst we still have a chance

Conclusions:

- In a short space of time this inquiry, assisted by this submission and others, will find that the **Science Underpinning the Inability to Eradicate the Asian Honeybee** has been clearly inadequate when balanced against what is at stake in terms of the environment, food security, public health and amenity.
- This submission points out that without a specific cost benefit analysis the eradication efforts should not have ended and the decision taken to declare the Asian bee endemic should never have been made.
- This submission provides observations that support the view that the process used to gather the Science and the entire management of the Asian bee eradication program to date has limited both the outcomes of the eradication effort and the Science to date.

Recommendations:

- In the national interest the Australian Government should reclassify the Asian bee as a Category 1 incursion and fully fund its eradication by reprioritizing its current budget
- In developing the new eradication plan the Australian government needs to appoint a sufficiently diverse, skills based and appropriately funded Management Board to gather the necessary technical and scientific information to achieve eradication. Bee scientists who can be deployed to this task should be totally unencumbered from their departmental positions or views past or present to provide impartial science based information without fear of retribution.
- The Government should stop wasting money and immediately cease all "containment and management" planning activities and revert urgently to assisting get the eradication program on track.

Bibliography:

- Personal communication with Australian Government and State based bee scientists who have declined to be named (2011)
- Wheen Foundation – personal communication (2010 – 2011)
- RIRDC and other publications as referenced throughout the document


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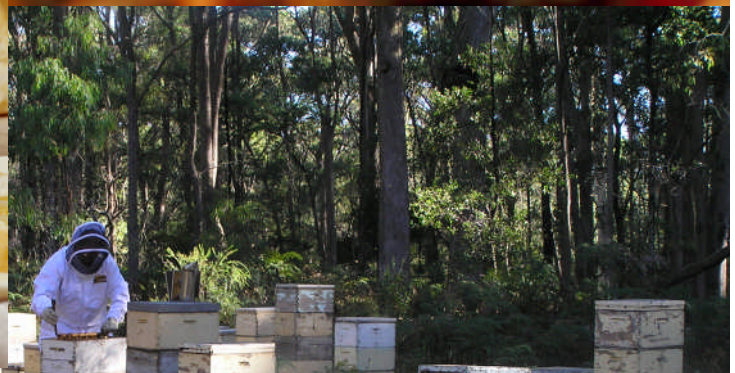

A tourism festival likely to be impacted by the Asian bee in the future?