



Submission No:	55
Date Received:	18/6/07
Secretary:	<i>[Signature]</i>

*Submission to the Standing Committee on Agriculture, Fisheries & Forestry,
Parliament of Australia, House of Representatives on:*

The Future Development of the Australian Honey Bee Industry

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Introduction

Capilano Honey is the market leader of honey in Australia, packing premium quality honey produced by Australian beekeepers into retail and bulk products. Our company heritage spans over 50 years and generations of Australians have grown up with our trusted brand and quality honey. With global operations in Europe, Canada and Argentina, Capilano is now one of the largest honey packers in the world with a capacity to process and pack over 40,000 tonnes of honey per year. Capilano presently markets Australian honey to over 40 countries worldwide, with large markets in Asia, Nth America, Middle East and Europe.

Capilano Honey was founded by apiarist J.C. (Tim) Smith MBE and his brother H.A. (Bert) Smith in 1953, which began the business by packing and selling their Capilano brand of honey to grocery stores around Brisbane. In 1956 the business was known as Capilano Apiaries Pty Ltd. Interstate expansion and development of export followed as the company prospered, leading to the establishment of a packing plant

and distribution centre near Sydney in 1968, followed by another in Maryborough, Victoria in 1974. In 1970 the company became an unlisted public company and in 1974 changed its name to the Honey Corporation of Australia Limited. In 1995 it adopted the name Capilano Honey Limited in recognition of the wide appreciation of the Capilano trademark and brand throughout Australia and overseas. Capilano is presently a public listed company on the Bendigo Stock Exchange. Capilano has issued a Foundation Share (75% voting) to Capilano Beekeepers Limited, which consists solely of beekeepers who have a honey supply agreement with the company. This ensures that the company's beekeeper suppliers have a controlling interest.

Capilano's Australian honey is collected from the beehives of over 500 Australian beekeepers, who manage commercial beekeeping operations in New South Wales, Queensland, Victoria, South Australia and Tasmania. Between them they can produce more than 18,000 tonnes of honey and 250 tonnes of beeswax each year. To produce this honey, our beekeepers can travel more than 100,000 kms per year moving hives between various sites that are obtained from farmers, leased state forestry and rural lands protection boards.

It should be noted that Capilano is a financial contributor to Australian Honey Bee Industry Council (AHBIC) and that the Submission prepared by AHBIC to this enquiry is fully supported. In addition, Capilano also contributed to the Rural Industries Research and Development Corporation (RIRDC) *Honey Bee Industry Linkages Workshop, April 2007*, and that the key outcomes and recommendations of this workshop are supported.

Role in Agriculture and Forestry

Australia produces a surplus honey crop to domestic requirements in an average year; therefore excess honey production is exported adding value to Australia's agricultural exports. Beekeepers operate primary production businesses throughout rural and regional Australia, which provide employment and business succession/training opportunities for regional communities.

The honey bee industry supports a range of processing and packing companies, such as Capilano, whose existence depends on the production of bee products. The honey bee industry's gross value of production is between \$75 and \$80 million per annum, with \$60 million of this value attributed purely to honey production. The industry supports other horticultural and agricultural industries in the form of pollination. This service was conservatively valued at \$1.7 billion per annum in 1999-2000.

Current and Future Prospects

1. **Honey Exports:** Australian honey is renowned worldwide as a 'clean and green' product and it is exported widely. Opportunities remain for wider expansion of exports into Asia, Nth America and Europe. This is best accomplished in the form of vertically integrated products direct to overseas industrial users and retail supermarkets.
2. **Natural & Healthy:** Honey, being a natural product, can be further promoted on the basis of health and wellbeing qualities such as 0% fat, antimicrobial, no additives, etc.
3. **Organic:** Increasing the supply of this honey while ensuring the integrity of the 'organic' labelling and Certification requirements is an opportunity for the production sector to increase the value of produce.
4. **Innovation:** Continued innovation in the form of packaging and product delivery systems will assist industry reach target markets and overcome intrinsic difficulties and buyer apprehensions associated with honey, such as stickiness and mess.
5. **Medical Honey:** Capilano has conducted extensive research and development into the medicinal and therapeutic qualities of honey, which have been clinically proven, as part of its subsidiary company Medihoney Pty Ltd. A range of cosmetic and medical device products for use on conditions such as eczema, nappy rash, wounds, burns and ulcers have been developed and marketed. The medical applications of specialised and tested antibacterial medical honeys provide a large opportunity for the honey bee industry.
6. **Pollination:** The diversification of honey production enterprises into the provision of paid pollination services to the horticultural industry has delivered a greater income to beekeepers, often at times of little or no honey production. Support to the pollination industry is a significant current and future prospect for the honey industry to pursue.
7. **Live Bee Exports:** Australia's natural production environments and available floral resources permit the build up of honey bee colonies whereby excess bees can be sold in packages to overseas beekeepers, such as for pollination in California, USA. The production of package bees offers another diversification opportunity for beekeepers. In addition to package bees, the sale of genetically bred queen bees to domestic and international customers is a further opportunity for industry to capitalise on.

8. **Global Integration:** Capilano has pursued operational expansion into Nth America, Europe and Argentina as means of ensuring consistent honey supply and quality. The further integration of this global supply network will benefit both retail and industrial customers worldwide. It is a key strategy to further the sale of honey into higher priced market segments, aimed to benefit the shareholders of Capilano, many of which are beekeeper suppliers to the company.

Biosecurity Issues

Varroa Mite

Australia remains the only country in the world yet to be incurred by Varroa mite (*Varroa destructor*). This a serious disease of the honey bee colony that will spread rapidly across Australia with significant impacts, such as:

- *destruction of feral and native bee colonies leading to potential environment eco-system impacts;*
- *no natural pollination service currently supplied to the horticultural industry by feral and native bees leading to the requirement for paid pollination services, which are likely to be in high demand due to the impact of Varroa on managed honey bees;*
- *widespread managed honey bee colony deaths, with all untreated hives dying;*
- *decreased honey production;*
- *increased and on-going chemical control usage within the industry, including chemical misuse;*
- *increased production costs due to Varroa control measures and more intense husbandry;*
- *increased pollination costs to the horticultural industry, including the threat of an unavailable pollination service impacting on food supply and quality;*
- *loss of business viability for many beekeeping enterprises, resulting in a decreased number of beekeepers and enterprises.*

The National Sentinel Hive Program (NSHP) was established as a means of monitoring appropriate locations, such as ports, for the presence of exotic pests, in particular Varroa mite. This program of surveillance is considered essential.

The CSIRO have estimated the cost of Varroa to the Australian economy would be \$36.7 million pa, this figure identifies a benchmark that Australia could spend on programs ensuring it remains Varroa free.

Wax Moth

Wax moth larvae (*Galleria mellonella*) are very destructive as they tunnel and chew their way through stored beeswax combs, ultimately resulting in their destruction if left untreated. Beekeepers require a control for wax moth to conserve their frames during periods of storage. In the past, para-dichlorobenzene (PDB) has been used for the fumigant insecticide control of wax moth. PDB has not been registered for use as a wax moth control for some time.

It became apparent in late 2006 that PDB residues were persisting in a small proportion of honey production, stemming from historical use of PDB for wax moth control. It also became clear that certain beekeeper suppliers continued to sell PDB illegally until recent action by Australian Pesticides & Veterinary Medicines Authority at the request of AHBIC. In addition, there had been no official deregistration of PDB in QLD.

Residues following comb fumigation are the result of PDB's tendency to accumulate in wax, which then leaches to honey following the filling of comb cells by the bees. In addition, testing of beeswax comb foundation has showed the on-going contamination of wax as a result of the industry practice of recycling wax comb for new frame foundation.

AHBIC decided the best option, considering the confirmed presence of PDB in honey and its historical use pattern, was to legitimise its presence as industry works to overcome the issue. Following research and advice from Government Authorities it was resolved to pursue an Extraneous Residue Limit (ERL) under the Food Standards Code. An application has been presented to Food Standards Australia and New Zealand (FSANZ) that seeks to amend Schedule 2 of *Standard 1.4.2* so that PDB in honey is given an ERL of 0.1 mg/kg for a maximum period of 5 years.

At present, the only chemical control measure registered for wax moth in Australia is the fumigation of combs with phosphine gas, of which there is an associated MRL present for honey.

American Foulbrood

American foulbrood (AFB) (*Paenibacillus larvae*) is a bacterial pathogen that can exist in a vegetative spore form, making the disease highly infectious and treatable only by repeated and ongoing antibiotic applications, with resistance likely over time. The bacterium infects larvae and leads to colony death over time.

Control of AFB is regulated in all States and Territories to ensure the monitoring of spread, record of incidence and disease colony and material destruction. Use of the antibiotic oxytetracycline as a control is permitted in Tasmania only. The State and Territory Government control of AFB is a key to ensuring the disease is managed and that the temptation for widespread antibiotic use in the industry is not required. This is a key competitive advantage for Australian honey.

A national approach to the management and control of AFB, as has been proposed by Animal Health Australia (AHA), is considered appropriate and likely to better AFB control.

Small Hive Beetle

Small Hive Beetle (SHB) (*Aethina tumida*) was introduced to Australia in 2001. The impact on industry to its spread so far has not been as significant as first thought. The primary threat SHB poses is associated with its chemical control and the need to ensure the legality of chemical applications and that residues are not present in honey. This is a key responsibility for bodies such as State Departments of Agriculture, DAFF and RIRDC.

Importation of Bee Genetics

The AQIS managed quarantine station at Eastern Creek facilitates the import of bees, in particular queens, necessary to ensure the ongoing genetic capabilities of Australian bee breeding stocks. The quarantine station is fundamental in protecting Australia against the further incursion of exotic pests and diseases relevant to the honey bee industry.

Trade Issues

Capilano is the largest exporter of honey out of Australia, with major markets in Asia, Nth America, Europe and the Middle East. Capilano has focused on expanding retail export markets as a means of vertical integration to improve returns, rather than selling surplus honey at a lower priced bulk commodity. The Export trade issues faced include:

- *continued prohibition of imports to New Zealand as a result of a court injunction from appeal;*
- *unnecessary biosecurity based prohibitions such as those imposed by New Caledonia;*
- *the presence of ad valorem tariffs.*

Maintenance of the directive requirements of exporting countries, such as those imposed by the EU, require the assistance of Government authorities to ensure that exporters are aware of and can meet the requirements. Assistance from Government Departments, such as the National Residue Survey, AusTrade and DAFF, are valuable in facilitating export and overcoming regulatory issues that may arise. It is important that industry remains aware of developments and changes to export requirements.

The Australian retail honey market has undergone structural change with the proliferation of strategic supermarket private label brands such as *Woolworth's Select* and *You'll Love Coles*. The auction and tender process associated with the supply of these products has resulted in diminished returns to the industry in the form of beekeeper honey pricing and the profitability of packers.

There has been a considerable increase in the quantity and sales of organic honey products being marketed in Australia. Capilano does not market organic products domestically, purely due to the limitation of available honey supply that meets all requirements of the Australian Organic Honey Standard, March 2006. Apparently, there are more Organic Certified honey packers/processors than there are producers. Capilano is concerned with the integrity of organic products being marketed in Australia that are attracting consumer support as a consequence of the 'organic' labelling and Certification claims being made. AHBIC has made representation in writing to the ACCC about these concerns.

Impact of Land Management and Bushfires

Bushfires over recent times have led to a recognisable loss in commercial apiaries. A large impact has been the loss of native flora of particular interest, such as *Leptospermum* sp. burnt in the Grampians National Park

fires in Victoria. The loss of this native vegetation has led to a national shortage of *Leptospermum* honey, loss of market opportunities, increased demand and higher prices.

Access to private and public lands is essential for the management and survival of honey bee colonies. Commercial apiarists migrate their colonies to ensure they can access the best pollen and nectar resources available for hive health, breeding and honey production. Public and private land access is also crucial to enable the industry to deliver adequate colony numbers and hive populations to provide pollination services. Viable beekeeping is dependent on access to native flora located in private lands, State forests, national parks, crown lands, stock routes, Pasture Protection Board lands, etc. The irregular flowering patterns of honey sources such as eucalypts, which may only occur every 1 – 3 years or more, mean the beekeeper must have a range of apiary site locations available, that may only be used once every few years.

Native flora on public lands accounts for the majority of honey production nationally, with these lands presently under the control of State and Territory Governments. The honey industry lacks access assurances from Government and a nationalistic approach to land management in respect to apiculture is not apparent. Access assurances continue to be a persistent problem for honey industry associations to battle and it is clear that access to resources is declining. This situation is not sustainable for industry to prosper as limited resources are directed to resource access disputes rather than research, development and education of the industry. Access to public lands is particularly critical in Queensland and Northern Territory, where policies will ban beekeeper access to National Parks. The native eucalypt production environments in Australia and the floral honeys produced from these regions are a key competitive advantage for the Australian honey industry that is recognised worldwide.

The basis of access reductions to public resources is not scientific, rather political, as scientific evidence as to the impact of beekeeping in native environments and eco-systems is inconclusive, deficient in replication and lacking in independence. Thus, not credible as an argument to support the ongoing erosion of access to public lands.

The AHBIC Submission identifies particularly well the critical public and private land management issues threatening the honey bee industry.

Research and Development Needs of the Industry

RIRDC provides the primary funding direction and management of honey bee research and development. Funding originates from beekeeper levies matched dollar for dollar by the Australian Government. Recent increases to the levies have been agreed. Nevertheless, the annual research dollars available will only be in the vicinity of \$6 - 700,000 as part of the 2007 – 2012 RIRDC five year plan, with funding solely dependent on the production year.

The present structure of research funding for the industry is limited due to:

- *its dependency on a given production year,*
- *no provision for industry voluntary contributions to enhance the budget,*
- *no mechanism to include or attract funding contributions from the horticultural beneficiaries of pollination, many of which are dependent on the honey bee industry,*
- *no funding mechanism and research plan specific to protecting Australia from Varroa mite and preparing industry once an incursion has occurred.*

The honey bee industry requires the support of pollination dependent industries to assist in funding research to ensure a viable industry and the protection of Australia from Varroa. It is important industry continues to develop and work within the RIRDC five-year plan and its associated specific objectives. This research program is being managed effectively by RIRDC. Capilano contributed to the RIRDC sponsored *Honey Bee Industry Linkages Workshop* in April 2007 and the key outcomes and recommendations are fully supported.

Capilano considers there are two key areas of research that need to be pursued as a priority since they are of foremost importance to the honey bee and pollination industry:

1. *Varroa mite protection and preparedness for Australia.*
2. *Justification for the presence of beekeeping on public lands and within native eco-systems. The present practice of precautionary principles by regulators and policy administrators needs to be invalidated on the basis of scientific evidence to ensure sustained access to public lands.*

The honey bee industry lacks a formal standardised education platform to assist new participants. A national approach to education is considered appropriate, such as a designated registered training organisation that trainees could attend.

The expansion of Genetically modified (GM) crops pose significant marketability and labelling issues for the honey industry to overcome. The widespread release of agricultural crop GM cultivars, such as Canola,

would result in detectable GM products in much of Australia's honey produce, as plant GM products and DNA are carried by the pollen and nectar by foraging bees to the hive. The potential loss of consumer confidence if analytical results were publicised is a serious concern for industry if and when GM crops become more widespread. Industry needs to develop localised testing capabilities for GM products and pollen DNA in honey, to further research and to implement identification and control testing procedures. An Application for research funding is to be presented to RIRDC to assist industry develop testing capabilities.

Existing Industry and Government Work

The AHBIC Submission identifies particularly well the existing industry and Government work undertaken for the honey bee industry. Capilano considers the development of the Export Orders by DAFF in association with industry in addition to the work identified by AHBIC.

Conclusions

- Beekeepers operate primary production enterprises that provide employment and opportunities to rural and regional communities. The value of production is in the vicinity of \$60 million pa, however the industry's contribution to pollination within horticultural industries is conservatively estimated at around \$2 billion dollars.
- Current and future prospects include increasing export opportunities, further marketing as a natural and healthy food alternative, organic markets, packaging innovation, medical honeys, pollination, live bee exports and further global integration of Australian honey to worldwide consumers.
- Varroa mite's incursion and spread into Australia is the single most devastating threat the industry faces. The threat this mite poses to native and introduced bees and managed colonies will directly impact the pollination of horticultural crops significantly. Current spend on the prevention of an incursion is not proportional to the costs associated with the proliferation of the mite in Australia.
- Historical use of PDB in Australia has resulted in residues that need to be legitimised by the establishment of an ERL under Food Standard Code 1.4.2.
- Ongoing regulated control of AFB is essential to ensure that antibiotic use does not become widespread.
- Unregistered and off label-use of chemical control measures for small hive beetle presents a potential residue risk for Australian honey if it is not closely regulated.
- The continued prohibition of treated Australian honey into the New Zealand market remains an impediment to further sales opportunities for the industry.
- The lack of integrity, Standard and control of organic honey products sold domestically is risking the reputation and marketability of honey products in general. Capilano considers that consumers are being misled in some cases.
- Access to public lands is essential for the management and survival of honey bee colonies and the viability of the honey industry and its associated pollination activities. The honey industry lacks assurances from Government on future access to public lands and the approach of Governments varies from State to State.
- A mechanism for national training of beekeepers is at present not in place,
- The present structure of research funding for the industry has limitations and does not attract support from dependent horticultural industries.
- Two key areas of research that need priority include Varroa mite and scientific justification for the presence of beekeeping within public lands.
- The release of GM crops and detection of GM products in honey pose a marketability and consumer confidence risk for the honey industry to overcome.

Recommendations

Industry and the Australian Government should work to deliver the following recommendations:

1. A newly structured approach to research funding management within RIRDC is pursued so as to remove the limitations of the current model and incorporate contributions from pollination dependent industries. The proposals of the *Honey Bee Linkages Workshop 2007* are considered appropriate.
2. A newly structured approach within RIRDC to research funding management be pursued that removes the limitations of the current model and incorporates contributions from pollination dependent industries. The proposals of the *Honey Bee Linkages Workshop 2007* are considered appropriate.
3. Research funding should be directed in particular priority to immediately addressing Varroa and resource access issues.
4. Further public funding is allocated to biosecurity programs as a means of limiting the likelihood of a Varroa incursion, with funding representative of the likely cost to the Australian economy of Varroa becoming an endemic pest.
5. Commitment is made by Government to operate the National Sentinel Hive Program as an effective quarantine surveillance program on a more permanent basis.
6. That the lodged application with FSANZ for an ERL for PDB in honey under Food Standard 1.4.2 (Schedule 2) be expedited with priority.
7. That State and Territory Governments continue strict regulation and control of AFB, with the national coordinated approach as proposed by AHA implemented.
8. That State and Territory Agricultural Departments ensure that off-label chemical use, likely to result in honey residues, are not illegally applied to honey bee colonies for the control of small hive beetle.
9. Funding assurances for the ongoing operation of the AQIS managed bee quarantine station at Eastern Creek is made beyond that currently proposed.
10. Continued lobbying and evidence be provided to assist in removing the prohibition of treated Australian honey into New Zealand.
11. A nationalistic approach to resolving beekeeper access assurances to public lands in States and Territories is instigated by the Australian Government. Such assurances are needed to ensure the ongoing viability of the honey industry, including its pollination operations.
12. That priority is made to the implementation of an enforceable domestic Organic Standard and that concerns over the integrity of some current organic products, as presented to Government by industry, be investigated and appropriate action taken.
13. A formal standardised and national education program be implemented to assist new participants to the industry and to ensure a mechanism exists for the update of skills for existing members.
14. That Government support the RIRDC funding Application for the development of GM testing capabilities in honey, as to be presented in the next call for funding proposals.