



**AUSTRALIAN HONEY BEE INDUSTRY
COUNCIL**

SUBMISSION

to

**PARLIAMENT OF AUSTRALIA
HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON AGRICULTURE,
FISHERIES AND FORESTRY**

**INQUIRY INTO RURAL SKILLS TRAINING AND
RESEARCH**

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1.0 OVERVIEW

The Australian Honey Bee Industry Council (AHBIC) is the peak body representing the apiary industry in Australia. Its members include:

Federal Council of Australian Apiarists' Associations
 Honey Packers' and Marketers' Association of Australia
 Australian Queen Bee Breeders' Association
 National Council of Pollination Associations

Industry welcomes this opportunity for input into the Committee's deliberations and would raise the following issues.

- Research and Development Expenditure

Currently, like many industries, drought reduces statutory levies resulting in the management of the R&D programmes being placed under pressure.

- FarmBis Training

Inconsistencies in administration result in less than optimum outcomes for industry and government

- Agri-Food Industry Skills Council

Following the amalgamation of vocational training councils, smaller industries do not have adequate representation.

2.0 CURRENT SITUATION

2.1 Industry Profile

Australia has around 9,600 registered beekeepers, but the majority of honey is produced by a relatively small number of honey bee businesses. Sixty-two percent of total honey production is estimated to have been produced by businesses operating more than 500 hives, around 250 businesses. Only 16% of Australian honey production is produced by businesses with 250 hives or less.

Most honeybee operations are small family owned and operated businesses operating fewer than 500 hives and depending on a range of income sources in addition to those related to beekeeping. Typically, smaller operations, particularly those with less than 250 hives, derive the majority of the income for the operator's family from other enterprises, other businesses, investment or government sourced income. Larger operations, those with more than 500 hives, are mainly dependent on the honeybee business as the source of family income.

Each year the Australian honey bee industry produces about 30,000 tonnes of honey, with an estimated gross value of production around \$50 million. Approximately 25 to 30 per cent of production is exported. Australia is currently the world's tenth largest exporter of honey.

In recent years, honey production has been reduced due to the combination of drought and bushfires in 2002-3 and the continuation of the drought. Despite reductions in output, the value of the industry has remained relatively stable due to increases in the price of honey. Currently prices are under pressure from low world prices and a high Australian dollar.

In addition to honey, the honey bee industry generates value from the production of beeswax, queen and package bees, pollen, royal jelly, propolis and bee venom, and from the provision of paid pollination services. The gross value of production, accounting for all these products, is in the order of \$65 million. In addition, the value of unpaid pollination services has been estimated to be between \$100 million and \$1.6 billion per year (RIRDC, 2004).

2.2 Research and Development

Industry R&D is funded primarily by a statutory levy on honey sales at 0.8 cents per kg. The statutory levy decreases as production falls. Like most rural industries, the industry levy is matched by Commonwealth funding on a dollar-for-dollar basis up to 0.5% of industry GVP.

These R&D program reserves have been severely depleted by the recent drought and bush fires. This makes it difficult for industry to support the priority industry research issues which have been identified in the current Five Year R&D Plan. These issues include:

- improving hive husbandry and management practices, disease and pest management with minimal use of chemicals and minimal residues, bee nutrition and honey quality. For example, more effective methods for control of: the major diseases European Foulbrood, American Foulbrood and nosema; control of pests such as the small hive beetle and effective options for management of varroa mite if it enters Australia; and improved bee nutrition management.
- continued honeybee access and research into melliferous resources on both public and freehold land.
- encourage agricultural and horticultural crop pollination using honeybees.
- improve methods of extracting, storing and transporting honey.
- increase the use of honey in the food industry and for medical and therapeutic purposes.
- improve communications between the R&D sector, the honey industry and associated industries as a conduit to research adoption.

These priority issues for R&D were identified through collaborative discussions with all industry groups. A workshop was held with AHBIC to develop a draft plan which was then presented and discussed at each of the State Apiary Association's annual conferences.

The proposed R&D has been discussed and is fully supported by all sectors of the honey industry and RIRDC. The R&D program reserves after the major impact of the drought and bushfires on levy revenues makes it difficult for the R&D program to maintain the increased demand for research outcomes which have developed over the last few years.

The effect of lower production means that R&D programs are reduced due to the adverse conditions being experienced by industry. The matching funding is not available nor is it able to be recouped if future seasons result in production rebounding. This increased demand has come from a range of sources.

One such source of increased demand has been an increase in threats of incursions of pests from overseas. Examples are incursion of the small hive beetle, which the R&D program has responded to with a major research effort which has identified the scope of the threat to the industry via overseas research and then development of a set of strategies for effective management of the new pest. A second example is the continued threat of introduction of varroa mite and other pests. The incursion of this major bee pest into New Zealand a few years ago means that Australia is the only country in the world without this pest and has meant an increased demand for research activities to ensure that Australia is well placed to understand and manage this situation with expert resources.

Another source of increased demand for research is the increased requirement by consumers and food regulators for traceability and improved food security. This requires a range of improved management strategies, many of which require research to develop. Areas requiring focus include better understanding of the health dimensions of products such as honey and reduced or no residues from disease and pest control management strategies.

In addition to an increased demand for new areas of research significant changes have been occurring in most research organizations which have undertaken honey related research. Many of these organizations have faced continued budget pressures and are increasingly requiring larger shares of project budgets to come from industry funding. Analysis of project funding indicates that the share of the total research project cost provided by RIRDC has increased from around 40% seven years ago to around 55% now, this is about a 40% relative increase. Recent restructuring of some of the major research organization we work with are likely to continue this trend.

In recent years the program has been able to maintain the research effort even facing the above conditions only via drawing down program reserves. This is not sustainable, especially in light of the impact of the drought and bushfires on levy returns. The industry has recognized the implications of this trend for its innovativeness and therefore international competitiveness. The issue of averaging or maintaining government funding in adverse seasonal conditions is one that we believe should be addressed by the government.

2.3 Agri-Food Industry Skills Council

The Agri-Food Industry Skills Council engages with the industry sectors it represents, and with government and other stakeholders to analyse and address current and

emerging skills and workforce needs through the development and implementation of high quality, nationally recognised training products and services.

Recently the Federal Government amalgamated a number of skills councils. Industry believes, however, that the amalgamation of several skills councils has not been explained or clarified on how stakeholders are to have input into the new system.

The current Agri-Food Skills Council has some fourteen board members which is clearly too large to function appropriately to ensure maximum outcomes for both industry and government. Clearly the board needs to be reduced in size and an alternate mechanism developed to allow stakeholders to have input to the decision making process.

2.4 FarmBis

FarmBis is a jointly funded State-Commonwealth initiative. Access to education is often more difficult in rural areas. Farm and fishing enterprises can be disadvantaged by barriers of distance, timing and cost in access to training and education services.

A project recently undertaken has drawn to the attention of industry, a number of problems that industry believes should be addressed by policy makers in respect of the FarmBis funding. These can be summarised as follows:-

(a) Recognition of an apiary as a primary production activity.

Many of the existing State FarmBis forms ask respondents to indicate whether they operate a commercial farm or fishing venture. Apiarists are primary producers without actually owning or managing a farm property. This has led to some confusion with FarmBis personnel refusing funding to beekeepers who can not indicate that they operate a commercial farm.

(b) Greater coordination between the states.

The apiary industry is one characterised by movement of apiarists across state borders. Major packing plants are also located often in different states from the beekeepers who supply them with product. There are different requirements and different forms for FarmBis funding and, as a national industry, this causes considerable confusion explaining to apiarists the different jurisdictions and requirements.

(c) Satisfying genuine national industry training needs

FarmBis training should recognise a national training framework and prioritise courses according to industry requirements. A fragmented approach leaves scope for scarce resources to be dissipated.

(d) Recognition of the importance of part time apiarists

The apiary industry is perhaps unique in that there are 9,600 apiarists but only approximately 1,500 full time commercial apiarists. Some states clearly recognise and allow participation by these beekeepers, however, there appears to be mixed policy in this regard.

3.0 INDUSTRY COMMENT

➤ Research and Development

Industry would raise the issue of maintaining or allowing averaging of Commonwealth funding to agricultural industries under pressure of drought.

➤ Agri-Food Industry Skills Council

It is our belief that annually the Industry Skills Council should be elected by all stakeholders and an annual general meeting held to ensure accountability to industry. The board of the council should be reduced in size and an appropriate mechanism developed for stakeholder input.

➤ FarmBis

Industry supports a review of existing FarmBis arrangements to ensure the program fulfils its potential to agricultural industries.

4.0 CONCLUSION

Industry also notes the submission by Dr Max Whitten and is supportive of the suggestions raised. The honey bee industry welcomes the opportunity to review a number of issues affecting the delivery and availability of rural skills training and research outcomes to Australian primary producers. We welcome the opportunity to further expand on any issues raised. Industry has recently participated in the Australia Federal Government's Industry Partnership Programme and a report "Future directions for the Australian honey bee industry" has been produced. Appendix 1 attached contains the chapter on education for the industry.

APPENDIX 1

EXTRACT FROM "Future directions for the Australian honeybee industry".

Education Issues and Options

Education was identified in a number of workshops as an issue to be addressed. It was noted that an increase in education has the capacity to substantially reduce risks within the industry, especially in terms of disease and pest control, limiting the skills shortage, and stopping the continued decline in the access to public land.

In general, there were three primary areas where education was considered essential to achieve a profitable and sustainable industry. This included:

- attracting young people into the industry and educating them and industry incumbents in efficient methods of beekeeping, quality assurance, disease control, and business management; and
- educating the general public and various state governments and federal government on the importance of honey bees in the Australian economy and society, focusing on the contribution of pollination to the horticulture and crop sectors.

The chapter outlines the current education situation within the honeybee industry, identifies some areas where the industry believes there should be greater investment in education, offers suggestions to addressing the future, and evaluates the issues that need to be addressed when approaching the public and government. Key conclusions are provided at the end.

Educating the Industry

Education in the Australian honey bee industry is currently provided by a combination of organisations, including Universities, TAFE colleges, New South Wales DPI and private providers. Universities provide the necessary skills for high-end research into the honey bee industry (for example genetics), and TAFE colleges offer generic courses on farm management and occupational health and safety, and short courses aimed at hobby beekeepers. New South Wales DPI provides some general training in beekeeping along the same lines as TAFEs, and a specialist course on queen rearing. There are also some private training consultancy firms. However there are no nationally accepted courses that are specifically tailored to beekeepers or potential entrants into the industry. Private firms do fill some gaps in the industry, especially in technical skills development and quality assurance, but information on these courses and the broad reach required to build a known quality reputation is not evident. Furthermore there are only a very small number of these private firms offering such courses so they are not readily accessible across Australia.

Training is usually undertaken in an informal manner through experience gathered on the job. As most apiaries are small family teams with skills either passed on down to children and relatives or lost through retirement, the opportunities for individuals to enter the market without any experience is limited as the resources for education are not readily available. This is shown by the extremely low traineeship applicants within the industry in the last decade. Furthermore, those few who do acquire new beekeeping skills, or others who have experience within the industry, cannot readily demonstrate their practical and theoretical knowledge to other beekeepers, thereby reducing the ability of skills transfer within the industry. This is particularly the case where conceptual skills are required and evidence based on past experience may not be transferable, for example in areas of decision making and management.

The combination of these restrictions on formal education and skills development and transfer are placing a severe limitation on filling the expected skills shortage that may result from the aging beekeeper population and the expected small number of new entrants into the market.

Four broad categories were identified within the workshops that required further education within the industry, including:

- business management, including financial management, promotion, and diversification into other beekeeping activities such as pollination services;
- quality assurance, including food safety requirements and hygiene;
- technical skills training, including breeding and rearing queen bees; and
- disease and pest mitigation, including the development of pest management action plans.

Due to the diversity of the industry, business management practices differ across the industry and the level of skill is highly variable. However, workshop participants noted there were some particular core competencies lacking in the industry, especially the ability to properly cost the business operations in order to determine a fair value of services (for example pollination). Furthermore, it was noted that the ability of honey producers to market their business and generate a price premium was also lacking.

Addressing the education needs of industry

Recently there has been a set of competency standards created specifically for the Australian beekeeping industry. These have been developed through consultation with industry experts to ensure all tasks and activities that a person would do in that particular aspect of the job is covered within the competency. The competency standards range across the entire beekeeping spectrum. These include provisions on technical skills, business management and promotion skills, human resources, occupational health and safety issues, environmental management, pest and disease management, and production of bee products. They represent the first move towards the development of an Australia wide recognised training program for the beekeeping industry.

The competencies will provide the foundation to developing vocational training qualifications for certificates II to V. Approval of these competencies from the

Australian National Training Authority (ANTA) are now approved. It is planned that these will be used by public and private organisations to provide a framework for developing courses on beekeeping, educate apprentices and experienced individuals, and assess the competency of a student. Furthermore, it will allow the recognition of skills accumulated over years of experience within the industry, known within current national training frameworks as Recognition of Current Competencies.

Any public or private organisation that is a Registered Training Organisation (RTO) and has beekeeping included in their scope of registration will be able to develop programs for students to reach these competencies. If an organisation does not have beekeeping in its scope, then it can apply under the Australian Quality Training Framework. This is a nationally agreed quality framework for the vocational education and training (VET) system approved by the ANTA ministerial council. However, to achieve this qualification the organisation must demonstrate that it has the necessary equipment and skilled trainers and assessors to undertake education in this area, and must be open to audit. Industry consultations suggest this will be very costly to achieve in terms of setting up the necessary procedures and systems to ensure quality assurance, and attracting personnel with the necessary skills and teaching ability.

Registering as an RTO with beekeeping in the scope will allow the training organisation to issue Australian Qualifications Framework (AQF) qualifications that are nationally recognised and accepted by other RTOs, and provide individuals with national portability of their qualifications and statements of attainment they undertake.

To ensure training packages are delivered efficiently and used effectively, the honeybee industry needs to ensure either RTOs have the skills to dismantle the package of competency standards and configure training packages to suit individual business needs, or develop training programs that are nationally endorsed and used by the industry. RTOs should offer short-courses that contain only a few units of training and can be tailored to special interest groups, and longer courses that lead to a full qualification and can be used by individuals on a new apprenticeship.

Challenges to increasing training

There are three main challenges to increasing the education within the industry. These include:

- shift the culture of the industry to encourage the adoption of apprentices and accept nationally recognised qualifications;
- standardise training to ensure the skills set for courses is consistent across Australia; and
- increase the supply of RTOs who have beekeeping within their scope of registration.

Changing the culture of the industry to accept and trust qualifications obtained from training courses may be a long process. This is because the diversity of beekeepers across Australia means there will be a diverse range of skills, and changing habits is

hard. Some beekeepers might do things differently and not agree with the industry standards. Therefore the introduction of training programs needs to be accompanied with national promotional activities that explain the courses offered and the expectations beekeepers should have when employing someone who has undertaken formal training. The industry needs to develop an educational brand that is easily recognised and represents quality and consistency.

Any education program must be standardised across the industry to generate confidence and facilitate the transfer of qualifications and skills. Recognised qualifications will bring into the industry a sense of professionalism and allow the industry to develop standards of service (for example recognition of being a professional pollinator), which can be used to instil confidence within the industry and enable those outside the industry to differentiate between the various skills of a beekeeper.

Currently there are very few organisations across Australia that can readily acquire the necessary accreditation as an RTO with beekeeping in their scope of registration. This means that even though competency standards have been developed, the ability of the industry to source qualified trainers is very limited. The inability of individuals to access training facilities may limit any attempts to promote training within the industry.

The primary challenge to increased training in the honey bee industry is developing the necessary infrastructure to deliver programs to increase the supply of individuals and organisations who have the capacity to offer AQF qualifications. This includes developing an education program to train potential educators, which could be done through public training organisations (such as TAFE colleges and DPIs) or private organisations. To leverage off the existing infrastructure, courses currently offered by New South Wales DPI and TAFE colleges should be extended to cover the full gamut of the honeybee industry skills and ensure access to training is available across Australia.

To address any access issues, the industry should determine whether a program could be developed that combines distance education with practical courses. The New South Wales DPI is currently offering short courses (through the TOCAL College) on farm business management with a beekeeping elective through a combination of distance learning and a practical weekend course at the end. Furthermore, New South Wales TAFE currently offers a number of distance education courses through its Open Training and Education Network that provides graduates with nationally recognised qualifications through the AQF. The industry should determine whether it is viable to extend these programs to deliver training programs that can be specialised, or larger courses that can be used to form the basis of an apprenticeship.

Funding

To address the expected education requirements of the industry, the industry has two general funding options available:

- Private funding, where individual organisations invest their own capital to develop training packages; and

- Public funding, where the Commonwealth and state governments subsidise the development of education programs

Private funding will only occur if the return from developing an education program is sufficient to cover any risk that may be involved. This means that expected demand for the education program on a user pays basis must be sufficient to cover fixed and variable costs of the trainer, including the initial costs of receiving the necessary qualifications to become a RTO with a beekeeping scope.

Government subsidies mitigate some of this risk by reducing the amount of money required to be invested by the individual, and therefore improves the risk reward relationship.

Through ANTA, the Commonwealth provides grants to the states and Territories of the provision and support of VET. Funding decisions are consistent with a national strategic plan for VET, based on agreed national objectives and priorities.

Commonwealth funds make up approximately one third of public expenditure on the VET system in Australia.

In addition, the Farmbis program offers an avenue for the industry to source additional funding. It is jointly funded by the state and federal governments, managed by the Department of Natural Resources and Environment (DNRE) and administered by Rural Finance Corporation. To gain funding, organisations need to register with Farmbis and be approved as an eligible training provider.

The Farmbis program was developed to reduce the cost of training to improve the self-reliance and the ability to adapt to a changing environment, subsidising 50 per cent of the course costs. Topics available for funding include people management, financial management, marketing, general business management, production management, and natural resource management.

However, AHBIC has recently noted some problems with access to the FarmBis program. These include:

- some FarmBis personnel do not recognise an apiary as a primary production activity and therefore refuse funding;
- different state requirements for funding can cause confusion amongst the industry; and
- FarmBis funding is not prioritised according to industry requirements, which reduces the ability of the industry to focus education on those areas with greatest need.

The industry needs to address these problems by working with the government on the classification of beekeeping as a primary production activity, providing industry participants with a booklet that outlines the various approaches that should be taken for each state to gain FarmBis funding, and demonstrating to FarmBis that funding in a specified area will generate more benefits to the industry and the Australian public.

Educating the public and government

Throughout the workshops a number of participants noted that the public and government needed to be educated on the benefits the honeybee industry provides to the economy from pollination services both paid and incidental. However, this story is not enough as it does not include the perceived and actual cost imposed on the environment or society. These costs or perceived costs can be broadly defined into two categories, including the

- perceived risk of commercial beekeeping practices on Australian flora and fauna; and
- costs imposed on other users of native forests, including the reduction in value from a perceived reduction of a pristine environment.

The first category has been investigated through a number of studies. Moncur (2004) concluded that despite these enquires, there is no conclusive evidence that commercial beekeeping negatively impacts the native flora and fauna and therefore commercial beekeeping should not be removed from managed forests.

Whether beekeeping impacts on native flora and fauna is obviously a concern for the Commonwealth and state governments. However finding inconclusive evidence will not provide the industry with a strong argument against the Precautionary Principle because that is why it was introduced in the first place, to minimise the risk to forests when there is no evidence otherwise.

Developing environmental management strategies that are independently developed and audited will go some way to convincing the government and public the industry is minimising the risk honeybees may impose on native flora and fauna. This should be a priority for the industry before it launches any educational campaign with the governments or the public. Demonstrating that the industry is concerned for the environment, and by promoting its efforts to reduce any environmental impact honeybees may impose, the industry will have solid evidence that it is reducing risk.

The second category relates to the value the public receives from the forest through other uses, such as tourism and recreation. Every time a beekeeper drives a truck down an access road it imposes a cost on other users of the forest who are there to enjoy the environment only. Placing large numbers of bee hives in public access areas also reduces the value of the forest to other users as they are not only confronted with a man made structure, but become cautious of bees stinging them. This increases the risk of a further reduction in the value of their forest experience, and in some cases could impose a massive health cost if the person discovers they are allergic to bee stings.

Furthermore, there is also a cost imposed on those who do not actively use the forest. Knowing a forest does not have large trucks driving through it, or access roads interrupting the landscape provides the individual with the option of using the forest in the future, intrinsic value, and value knowing the forest is being used by others, or will be used by future generations. This value, derived from just knowing a forest exists in its pristine state, is known as existence value.

Therefore any educational program must also address these issues to provide confidence to the governments and public that the industry is minimising the costs imposed on society. It must make sure that beekeeping practices are operated in such a way as to reduce these costs by developing a code of practice and industry standards

that are independently audited. Then the industry will be able to demonstrate on paper that it is taking steps to preserve the value provided to other users of the park.

Key conclusions

- Although a number of issues relating to education were identified in the workshop, any formal education program developed to address the needs of the honey bee industry must be based on a detailed analysis of the expected future industry training and education requirements. This requires an understanding of both the current numbers and age structure of participants within the industry and how they might change in the future. Developing an education outlook for the industry should be a priority in order to remove any impediments to planning for ongoing industry growth.
- Any formal education within the honey bee industry should be undertaken by registered educational organisations that are accredited by the industry and have the backing of AHBIC. This means the organisation must be able to demonstrate it employs qualified personnel, has the necessary beekeeping equipment and class resources, and that the course is accessible to the industry. This will place greater confidence in educational standards within the beekeeping industry and help promote the standardisation of courses and the transfer of skills.
- Educational training needs to be accompanied with promotional activities to develop an educational brand that is recognised and represents quality and consistency.
- Educational programs should be standardised to ensure confidence and consistency, which will facilitate the transfer of qualifications and skills.
- The industry needs to invest in developing its training capacity to ensure the necessary educational infrastructure is available. This includes investigating current training programs and the possibility of augmenting them to encapsulate the full skills set of the honeybee industry.
- AHBIC should work with the government for more educational funding, and provide advise to current and potential trainers on how to approach various state requirements for funding.
- Educating the government and public should address not only the impacts beekeepers are perceived to have on native flora and fauna but also the cost imposed on society by beekeepers using national forests and conservation areas. This will only be effective if the industry has a nationally recognised code of conduct relating to the use of national forests.

