SUBMISSION

to

Productivity Commission Draft Report

"Impacts of Native Vegetation and Bio Diversity Regulations"

Prepared by the Australian Honey Bee Industry Council

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INTRODUCTION

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

- Honey Packers and Marketers Association of Australia (HPMAA)
- Australian Queen Bee Breeders Association (AQBBA)
- Federal Council of Australian Apiarists Associations (FCAAA)
- National Council of Pollination Associations (NCPA)

The apiary industry is pleased have the opportunity to comment on the Productivity Commission Draft Report on the "Impacts of Native Vegetation and Bio Diversity Regulations".

BACKGROUND

The Australian apiary industry is worth approximately $100 million per annum.

Honey production in Australia, and thus the apiculture (beekeeping) industry, is largely reliant on access to native flora by honey bees *(Apis mellifera).* Honey bees were first successfully introduced into Australia in 1822 – to create a food source, food sweetener and also to pollinate introduced crops.

The apiculture industry is growing – since the early 1960s production of honey has gone from 2,200 tonnes to 4,000 tonnes per year, the number of bee hives has grown from 62,000 to 109,000 and the number of beekeepers risen from 1,280 to 1,778. This increase is a result of improved skills and knowledge. The industry provides a vital and increasingly acknowledged role in pollinating a variety of commercial crops. It provides an important supplementary income to many rural communities and has developed successful overseas markets.

The industry is present in all states of Australia, with at least 20,000 tonnes of honey produced per year. Export markets are important, with some 25 to 30 per cent of honey production exported or $25 to $30 million annually.

Other products of the industry include beeswax (545 tonnes per year, with farm-gate value of $3.3 million) and sale of queen bees and 'package bees' ($3.75 million).

The apiculture industry also provides pollination services to agriculturalists. While traditionally viewed as a (freely provided) by-product of honey production, such services are increasingly being provided on a contractual basis; 12,000 hives are contracted to service the almond industry. The importance of spring and summer pollination services include:-

Crops for which honey bee pollination is essential are apples and pears, cherries, berries, nashi, kiwi fruit and vegetables; and broadacre crops of buckwheat and lucerne. Crops whose yield quality is improved by the presence of managed honey

bees are clovers, sunflowers, canola, faba beans, stone fruits, vegetable seed production and chick peas.

The 'value to society' of pollination services outstrips that of honey – the estimated annual value of domestic pollination is around $1 billion.

Bees need access to nectar and pollen to survive and thrive. Though the honey bee is an exotic species, apiarists depend on native trees and shrubs for a continuity of supply of nectar and pollen. A key study by the Honey Research Council in 1989 showed that the required floral resource was provided by:-

(a) Eucalypt forests and woodlands – 77 per cent;
(b) Banksia scrubland and coastal heathland – 7 per cent;
(c) Weed species – 10 per cent;
(d) Crops (for example oilseeds and clovers) – 5 per cent; and
(e) Roadside vegetation – 1 per cent.

Particular species are sought by apiarists, as they produce honey with desirable characteristics. Box-ironbark forests are especially valued, as many of their native tree species consistently produce large quantities of premium quality honey. Yellow box *(Eucalyptus melliodora)* is considered the premium species. Mallee communities are also important during certain periods of the year, when nectar and pollen are otherwise limiting – notably late autumn and winter. Access to native vegetation at these times is most important for sustained production. In addition to eucalypt species, over 90 species of plants found in Australia (not all of which are native) produce honey accessible to honey bees.

Beekeepers' hives may be distributed over large areas according to the season and site availability. A commercial apiarist may use over 20 sites per year around Australia, although not necessarily the same sites each year. A large part of this network of sites will be on, or abutting, public lands.

A large number of different species of native bee also use the nectar and pollen of the native plants of public lands. None are used for commercial production of honey.

INDUSTRY ISSUES

Beekeeping is a unique industry. Generally neither the base resources it depends on (that is nectar and pollen) nor the land from which it operates are owned by the beekeeper.

The honey bee uses a very wide range of plant species – up to 50 per cent of all plants in some habitats may be visited. Such native plants are normally pollinated by wind, birds, insects or mammals, with their nectar and pollen used by many insects and vertebrates. It would be surprising if an introduced species did not have some impact on the natural flora it uses, as well as on other native species dependent on this resource – for instance on native bees and birds, due to food and nesting-site competition and changes to pollination. Nonetheless, results of research have been inconclusive. Some impacts have been observed when floral resources are limiting.

However, feral populations are numerous and widespread (they have been recorded since the 1860s). Honey bees may provide a substitute pollinator in degraded remnant bushland where natural pollinators are in low numbers.

Resource security is another key challenge facing the industry. Apiculture is dependent on the native forests, mostly now found only on public lands, and there can be conflicts with other users and activities on these public lands, particularly in areas such as national parks.

FINDINGS

Industry does not disagree with the Commission's finding. We would however make comment on the recommendations that have been drawn from these findings.

COMMENTS ON RECOMMENDATIONS

DRAFT RECOMMENDATION 1

Before implementing native vegetation and biodiversity policy, a regulation impact statement should be prepared that includes an assessment of the problem being targeted, expected costs and benefits of the proposed policy, and an assessment of alternative instruments. This assessment should be made public.

The cause of sustainable agriculture is embodied in the larger cause of sustainable development. This phrase is embraced by a diverse group of people and had many and sometimes contradictory interpretations. Everyone would like to see a greener future, better quality of life, and a healthy environment, but disagreements are common about how to get there and what exactly such a future would look like. Industry therefore welcomes the suggested draft recommendation regulation impact statement as we believe it would provide the apiary industry with the opportunity to advise local communities on vegetation suitable for the production of pollen and therefore industry's ability to provide pollination services to the agricultural sector.

DRAFT RECOMMENDATION 2

All policies should be subject to ongoing monitoring and regular reviews of all costs and benefits in the light of articulated objectives. Reviews of performance should be published.

Sustainable agriculture is prescribed as a policy approach that maximises economic benefits while maintaining environmental quality. It is argued that this approach is human capital-intensive and encourages new scientific developments. To attain sustainability, economic incentives for the development and adoption of precision technologies (with minimal residues that cause environmental damage) have to be developed. Industry agrees with the comments that it is difficult to evaluate the effectiveness of the various regimes due to the lack of transparency of costs.

However, we believe that ongoing monitoring and regular reviews will assist in a more structured approach to dealing with biosecurity issues. The honey industry is continually denied access to some public areas as a result of the so-called precautionary principle which is not based on science but an insurance policy that says 'if we don't know then don't do anything'. Hence review of performance if published will allow a more open and transparent scientific debate.

DRAFT RECOMMENDATION 3

Ongoing efforts to improve the quality of data and science on which policy decisions are based are required, particularly 'on-the-ground' assessments to test the accuracy of vegetation mapping based on satellite imagery.

Industry supports greater efforts being made to obtain information on the performance, costs and benefits. Uncertainties regarding the future benefits may lead to delayed investment as decision-makers wait until more information is available. The uncertainty associated with environmental consequences and the irreversibility effect of interventions in some natural systems should induce decision-makers to take extra caution and develop more strict environmental regulations in situations where uncertainty is more significant. Therefore, more effort should be given to both the quantification of estimates of environmental uncertainties and the modelling of policies that take into account these uncertainties. The honey bee industry is not widely acknowledged as a contributor to agricultural production but industry pollination benefits are in excess of $1 billion annually.

DRAFT RECOMMENDATION 4

Current regulatory approaches should be amended to comply with good regulatory practice, including:

- ***clear specification of objectives of the legislation so that guidelines and decisions link back to these objectives, and performance of the regimes can be monitored and assessed;***
- ***minimising duplication and inconsistency by amalgamating and simplifying regulations and permit requirements, for example, by rationalising legislation and regulation within each State and Territory and/or by coordination between agencies;***
- ***assisting landholders to meet their responsibilities by providing accessible information about those responsibilities, and about sustainable land-management practices and environmental problems;***
- ***inclusion of statutory time-frames for assessing permit applications;***
- ***consideration of economic and social factors where applications to clear otherwise would be rejected on environmental grounds (a 'triple bottom line' approach), with reasons for decisions to be given and reported; and***

- ***provision of accessible and impartial appeals and dispute-resolution mechanisms.***

The honey bee industry is in total agreement with recommendation 4 which we believe is a common sense approach to regulatory best practice.

Technological change and adoption are activities which are done under significant uncertainty. The ability to develop mechanisms to reduce risk, and shift it away from farmers, who are risk-averse, towards government agencies and private organisations, which are less risk-averse, will be critical in order to accelerate processes of technological change and adoption. The Commission's recommendation would introduce greater transparency and accountability which industry suggests is a worthwhile objective and outcome. The administrative success of the recommendation, however, will depend on how it is implemented.

DRAFT RECOMMENDATION 5

Greater use should be made of the extensive knowledge of landholders and local communities. Greater flexibility should be introduced in regulatory regimes to allow variation in requirements at a regional level. Regional committees and bodies should be given greater autonomy (and support) to develop appropriate requirements. Subject to regional priorities, some across-the-board rules, particularly those currently applying to native vegetation regrowth, should be relaxed.

One reason why scientists dismiss the knowledge and practices developed by farmers is a difference in perspective between researchers and economic agents (farmers). The scientist is aiming to discover the absolute truth and provides his or her seal of approval only to solutions that can be proven superior with a very high degree of statistical significance. The degree of statistical significance that will make an economic agent consider a practice superior may be much lower, as they are maximising expected utility or profit. Furthermore, scientists are usually not as familiar with the physical, social and economic constraints faced by farmers, and underestimate the practical difficulties associated with scientifically prescribed solutions. This leads to alienation between scientists and farmers and many missed opportunities.

In respect of the beekeeping industry, very few agricultural participants are fully aware of the pollination benefits which are derived from the ability of the apiary industry to provide bees at appropriate seasons. We agree with the principle that there should be flexibility to use local knowledge but we also believe there should be in place mechanisms to educate local communities of the benefits of planting particular species which maximise the ability of beekeepers to maintain bees for pollination.

DRAFT RECOMMENDATION 6

Governments should seek to remove impediments to, and facilitate, increased private provision of environmental services. Actions could include:

- ***removal of tax distortions or lease conditions that discourage conservation activity relative to other activities;***
- ***removal of impediments to efficient farm rationalisation and/or operation;***
- ***research into and facilitation of sustainable commercial uses of native vegetation and biodiversity; and***
- ***provision of education and extension services to demonstrate to landholders the private benefits of sustainable practices.***

Industry fully supports recommendation 6 and we would hope that the research into sustainable commercial uses of native vegetation and biodiversity and hops that this research would recognise the commercial and financial benefits gained by the development of a sustainable apiary industry.

The pursuit of sustainability is motivated by dissatisfaction with the existing state of affairs. While many economists are concerned at the degradation of environmental quality associated with modern agriculture, others are concerned with the destructive impact that science-based technologies and modernisation have had on lifestyle and culture (Batie 1989). There is a sharp division in the assessment of the role of modern technologies in the pursuit of sustainable agriculture. Some may take the extreme position that science-based agriculture and the technologies it has engendered – such as chemical fertilisers, pesticides and monoculture cropping systems – are inherently detrimental to the environment. They may argue that the only path to sustainable development requires discarding these modern technologies and building new agricultural systems on native practices and traditional knowledge (National Research Council 1989).

Industry does not believe that science and technology are inherently anti-environment. The work of scholars such as Hayami and Ruttan (1985) and Griliches (1957) have shown that technologies have evolved and been adopted in response to incentives. Industry therefore supports any additional educational and extension services that assist landholders develop sustainable practices.

DRAFT RECOMMENDATION 7

Landholders should bear the costs of actions that largely benefit them individually or as a group. Landholders and local communities should be given greater autonomy to devise and possibly implement innovative solutions to regional environmental issues, the benefits of which will accrue principally to landholders in the region. Local 'solutions' could include

development of market mechanisms, voluntary efforts (individual and/or joint), local codes of practice, local regulations or simply education.

Policies must be designed so as to ensure they will be politically acceptable, easy to implement and economically sound. Good policy design is an art which requires experience and imagination.

The honey bee industry supports local solutions, however, the nexus between pollination and agriculture is not widely understood and it is important that local communities should develop solutions which also recognise the costs of their actions on groups such as beekeepers whose livelihood is also dependent on the ability of the industry to have vegetation that can regularly supply pollen to support the production of honey and provide pollination services.

Sometimes taxation and the working of the market system may not be the optimal means of achieving sustainability and regulations may work better. For example, in addressing problems of the human side effects associated with pesticide use or other agricultural chemicals, the best solutions may include the introduction of worker safety regulations, including protective clothing, re-entry regulation etc. A trick in making these policies work is flexibility. In many cases it may be beneficial to use monitoring technologies to determine the most appropriate local conditions and safety devices but with a clear understanding that misbehaviour on their part will result in penalties.

DRAFT RECOMMENDATION 8

Over and above agreed regional responsibilities, conservation demanded by the wider community (for example, to achieve biodiversity, threatened species and greenhouse objectives), should be 'bought' from landholders where intervention is deemed necessary and cost-effective. Mechanisms may include voluntary agreements, auctions or even compensated regulation, targeted to the particular problem.

Governments need to recognise the extra burden that the introduction of green policies places on the farm sector. In particular, the burden of taxation imposed on individual participants in agriculture. By promoting environmentally friendly production practices, sustainability-promotion policies will enhance the long-term productivity of agricultural systems and hence, industry fully supports the Commission's recommendation. We would, however, comment that the success of this recommendation is very much dependent upon the detail of the proposed changes.

CONCLUSION

Industry thanks the Commission for this opportunity to make comment on its draft recommendations and report. Should the Commission so wish, we would be happy to clarify any comments made.