

Bee Industry Futures Report

July 2019



Photo supplied by Chloe Carr

Beekeepers not only produce leatherwood honey, a premium and exclusively Tasmanian product, they also provide bees to pollinate many of our highest value fruit, cereal and vegetable crops. These pollination services make a critical contribution and have higher economic value than honey production.

There are headwinds facing the beekeeping industries in Tasmania. The key point emerging from the consultation during development of this Report was a potential shortage of pollination resource in the State. This is a serious issue for agriculture as many crops depend largely on honey bees for their pollination (including apples, cherries, and some seed crops). This has immediate implications for farm productivity, and potentially impacts the AgriVision target of an agricultural sector worth \$10 billion per annum at the farm gate by 2050.

Access to the most important natural nectar source (leatherwood) is unlikely to grow materially in the foreseeable future. Traditionally it has been the basis for about 70% of the value of the State's honey production.

While Tasmania is leading the way

in reducing emissions and growing renewable energy, it appears the trend towards a warmer, drier climate, with increasing dry lightning strikes, is well established. Hot dry summers reduce the nectar flow and burnt leatherwood stands take many decades to recover, if ever. All of this makes the leatherwood resource likely to continue decreasing over time. Access to the resource is also an increasing challenge.

Increased pollination services cannot therefore rely on the traditional source – as a sideline of beekeepers whose main focus has been on leatherwood honey production, which under normal conditions produces stronger financial returns. This traditional arrangement also has limitations due to the overlap of key periods for both leatherwood flowering and crop pollination.

The Government remains committed to ensuring the best possible access to leatherwood, within the constraints of the relevant statutory management plans. However, it is likely that as demand for pollination services in Tasmania grows it will exceed the availability of leatherwood resources. As such, pollination providers will need to be viable with less or even no access to leatherwood.

Sustainable growth in pollination services will therefore have to rely on a combination of (a) greater use of other sustenance for the bees, and (b) optimised efficiency and better returns for the delivery of pollination services.

These considerations underlie the actions outlined in the Report. There are three main themes: access to natural floral resources (including leatherwood); strengthening the State's pollination capacity; and continued progress toward best practice biosecurity measures.



This Report

The Government committed \$750 000 over three years in its 2018-19 Budget to "Implement the Bee Industry Futures Report", including \$500 000 for selected infrastructure upgrades to improve resource access. The process for allocating infrastructure funding is to be developed separately, in consultation with industry.

Stakeholder Involvement

A wide range of stakeholders have been consulted during the development of this strategy. They included representatives from honey producers, pollination service providers, pollination users, researchers, and agricultural industry groups.

Industry Snapshot

In 2018-19 there were 257 registered beekeepers in Tasmania with 22 092 hives. Of those, approximately 40 were commercial scale businesses with more than 50 hives.

The beekeeping industries are represented by two peak bodies: the Tasmanian Beekeepers Association (TBA) and the Tasmanian Crop Pollinators Association.

The estimated value of honey at the farm gate was \$8 million in 2017-18, with exports worth around \$2.4 million.

It is notoriously difficult to assess the value of pollination services, but based on economic and scientific assumptions it is possible to state that approximately 85% of around \$164 million in pollination dependent crops produced in Tasmania would be at risk without pollination services.

Establishing the scale and trends of the industry

The honey bee industry is not well understood in economic or statistical terms. Effective action by both government and industry will be greatly assisted by up to date information on current values for Tasmanian honey and wax products, and for pollination services.

Realistic estimates of potential growth and the necessary pollination expansion to support the AgriGrowth 2050 target are also needed.

Clarifying extent of natural floral resources

Leatherwood (*Eucryphia lucida*) provides both a unique honey product and an important food source for honey bee hives, enabling them to undertake pollination services and to survive well over winter. Its habitat in temperate rainforest in the western parts of the State means that access is mainly controlled by public land managers, either as production forest or in some form of reserve, including the Tasmanian Wilderness World Heritage Area (TWWHA).

Leatherwood has been essential to the growth of the industry to date as it provides an annually flowering, uniquely high-volume and reliable nectar flow, allowing beekeepers to plan their activities around it. Other native botanical resources of value to the honey-bee industry include Manuka (*Leptospermum* spp) and Tasmanian Blue Gum (*Eucalyptus globulus* ssp *globulus*).

Greater knowledge of the location, extent and commercial viability of these floral resources will assist in industry capacity planning. Government is committed to continued improvement in the mapping of floral resources through existing programs.

Leatherwood research

While much research has gone into promoting the benefits of Manuka honey (which Tasmania also produces), not enough is yet understood about the medicinal and other beneficial properties of leatherwood honey, Tasmania's own unique honey variety. A research project has been initiated by the TBA with research being undertaken by the University of Tasmania and the Collaborative Research Centre for Honey Bee Products.

Arrangements for access to public land

Tasmanian beekeepers are heavily dependent on access to floral resources on public lands (reserves and public forest). It will assist the beekeeping industries if the associated processes and systems are as efficient and effective as possible.

Developing a viable pollination industry

Pollination services have traditionally been provided by beekeepers as a supplementary activity to honey production. This has meant that pollination-dependent industries have not always been able to secure the hives they need when the relevant pollination window clashes with more lucrative honey flows.

The predicted growth rates of key crops needing pollination services indicate that the shortfall in hives available for pollination could become serious.

There are already a small number of apiarists who are focused primarily on pollination services, and at least one apiary operation that is run "in house" by a large horticultural / seed-growing enterprise. With demand for pollination services steadily growing, more apiary businesses with this speciality are expected to emerge.

However, such businesses are a relatively new development, and face a range of challenges in achieving ongoing viability.

There are also a number of barriers that may prevent beekeepers focused mainly on honey production from offering their hives for pollination, such as a perception that the risks this activity poses to hive health may outweigh the associated financial remuneration.

It is therefore imperative that Tasmania ensures that pollination services are as safe as possible, and that the services are understood and properly valued by clients. This will offer incentives to pollinators to provide highly professional services, and help ensure sustainable growth of the sector.

Supporting industry resilience

The leatherwood resource that the industry has historically depended on has been under pressure for many years. The 2018-19 season further highlighted that the industry is vulnerable, particularly as climate trends produce warmer, drier summers and more dry lightning. The industry's dependence on a now-precarious resource poses a fundamental challenge to the State's beekeepers. It requires a response including research into alternative business models and sources of bee sustenance.

These challenges will require consideration of opportunities for business diversification, identifying new markets, updating of current skills, and the training of a new workforce.

Research, development and innovation will also be needed as business models evolve and change.

Update biosecurity arrangements in the context of new Tasmanian legislation

The Tasmanian apiary industry has expressed a strong desire to implement a compulsory beekeeper registration system, which will improve emergency response capacity in the event of a pest incursion.

The *Biosecurity Bill* currently before Parliament will (if passed) enable this change, and a proposal for a compulsory system is under development in consultation with public land managers.

There will also be a concerted effort to educate all beekeepers about the National Bee Biosecurity Code of Practice, and to ensure it is being implemented.

Support for the beekeeping industries

Successful implementation of the actions in this report will require significant effort by the two peak bodies in Tasmanian beekeeping, as well as individual apiarists. Recognising that much of this work is undertaken in an entirely voluntary capacity, the Government will provide support for a part-time Project Officer for a 12 month period to assist industry on the pathway to achieving the objectives of this report.

Photo supplied by Blue Hills Honey



Bee Industry Futures Report 2019 Actions and Timelines

Actions and dates	What will be done, through industry / government collaboration
<p>Quantify the size, structure and future demands of the industry</p> <p>by December 2019</p>	<p>Establish industry structure and value estimates for Tasmanian honey and wax products, and for pollination services, including realistic estimates of potential growth in demand for pollination services.</p>
<p>Confirm plan for, and commence upgrades of, infrastructure for access to resource, subject to funding.</p> <p>by June 2020</p>	<p>Government will work with industry to include the consideration of access to resources in the prioritisation of funding for infrastructure on public land (e.g. roads, bridges and culverts, gates etc) to maximise potential benefit to the industry, and DPIPWE will oversee the works on applicable tenures, subject to funding for these works.</p>
<p>Support leatherwood honey research</p> <p>by June 2022</p>	<p>Funding will be made available to support the research initiated by the Tasmanian Beekeepers Association with the Honey Bee Products CRC and the University of Tasmania.</p>
<p>Strategic industry support</p> <p>by September 2019</p>	<p>Provide funding for a part-time Project Officer to work for 12 months with the two peak beekeeping bodies and other stakeholders to help deliver the actions of this report.</p>
<p>Review processes and systems relating to apiary access to public land</p> <p>by June 2020</p>	<p>The Project Officer will work closely with industry, Government and other land managers to ensure that procedures for honey bee producers accessing public land are efficient and effective.</p>
<p>Offer grants to encourage research and innovation, particularly in pollination services</p> <p>in 2020-21</p>	<p>Small grants will be made available to assist with research and innovation projects that aim to deliver sustainable industry growth.</p> <p>The program will specifically prioritise applications that can assist growth of the pollination services market. This may include a Best Practice Guide for pollination clients, the development of Tasmania-specific hive strength standards, and an app that can put clients and pollination providers in direct contact.</p>
<p>Support pollination workshops</p> <p>in 2019 and 2020</p>	<p>This will extend the successful initiative of the Tasmanian Crop Pollination Association of annual workshops focussed on delivering high quality pollination services to the agricultural sector.</p>
<p>Support industry resilience and transition</p> <p>by June 2020</p>	<p>Organise an industry-wide event to strategically assess the options for industry in a leatherwood-constrained future.</p> <p>Inform beekeeping businesses of the support available through the Enterprise Centres network.</p> <p>The Project Officer will work with industry to evaluate its workforce development needs, and assess whether existing Government programs might be available to assist.</p>
<p>Compulsory registration</p> <p>By first anniversary of new Biosecurity Act</p>	<p>Ensure a smooth and comprehensive introduction of compulsory registration under the new biosecurity legislation.</p>
<p>Biosecurity Code of Practice</p> <p>by December 2019</p>	<p>Ensure all beekeepers are familiar with and abiding by the National Bee Biosecurity Code of Practice.</p>

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