Australian Government

Australian Government Response

Environment and Communications References Committee Inquiry Report:

Risks and opportunities associated with the use of the bumblebee population in Tasmania for commercial pollination purposes

April 2019

Introduction

On 2 February 2016, the Senate referred the following matter to the Environment and Communications References Committee for inquiry and report by 22 June 2016:

> *The risks and opportunities associated with the use of the bumblebee population in Tasmania for commercial pollination purposes, including:*
>
> *(a) the existing distribution and population density of exotic bumblebees;*
>
> *(b) productivity and economic benefits of the commercial use of bumblebees for agricultural producers;*
>
> *(c) the potential environmental impacts associated with the commercial use of bumblebees, including whether their use is likely to:*
>
> 1. *impact the conservation status of a species or ecological community,*
> 2. *impact biodiversity,*
> 3. *cause unintended ecological impacts, and*
> 4. *contribute to a wider distribution of bumblebees;*
>
> *(d) the implications for Australia's biosecurity regime of any approval to use bumblebees in Tasmania for commercial purposes;*
>
> *(e) the potential economic outcomes;*
>
> *(f) the effectiveness of alternative pollination options; and*
>
> *(g) any other related matters.*

On 9 May 2016, the Senate and the House of Representatives were dissolved for a general election on 2 July 2016. As a result of the dissolution of the Senate for the election, the committee ceased to exist and the inquiry lapsed.

The 45th Parliament commenced on 30 August 2016 and members of this committee were appointed on 1 September 2016. On 13 September 2016, the Senate agreed to the committee's recommendation that this inquiry be re-adopted with a reporting date of the second last sitting day in February 2017. The Senate also agreed to the recommendation that the committee have the power to consider and use the records of the Environment and Communications References Committee appointed in the previous parliament that related to this inquiry. The reporting date for the inquiry was subsequently extended and the Senate Committee tabled its report on 13 June 2017.

The Australian Government has considered the Senate Committee's recommendations and provides the following response.

Background

There are no native species of bumblebees in Australia. *Bombus terrestris* is native to Europe and was introduced, accidentally or illegally, into Hobart in the early 1990s. While it has been accepted that bumblebees have become established in Tasmania there is no evidence to suggest that they have become established in the mainland states.

Section 303EB of *Environment Protection and Biodiversity Conservation Act 1999* (the Act) establishes a List of Specimens Taken to be Suitable for Live Import (the Live Import List). The Live Import List consists of two parts: Part 1 contains specimens that can be brought into Australia without a permit; and Part 2 contains specimens that require a permit to be imported. It is an offence to import a specimen that is not on the Live Import List (s303GN (8)). It is also an offence to possess an unlisted specimen that was unlawfully imported or its progeny (s303GN (2)). Bumblebees are not included on either Part of the Live Import List.

There is significant interest from some sectors of the horticulture industry in using bumblebees for pollination of certain crops - mostly greenhouse tomato crops. Tomatoes require what is termed 'buzz pollination' to achieve maximum crop yields. Currently tomatoes grown in glasshouses in Australia are hand pollinated with a vibrating wand, but this does not achieve the yields reported from bumblebee pollination and is more expensive due to the manual labour involved (AHGA 2008). Some common species of Australian native bees, such as blue banded bees and green carpenter bees, are also buzz pollinators and may provide similar tomato pollination and fruiting rates to bumblebees. The Government has funded research into the viability of native bees as crop pollinators (see Recommendation 3), however this has not included glasshouse tomatoes. The blue banded bee and green carpenter bee are not found in Tasmania.

The Act would need to be amended to facilitate the commercial use of feral bumblebees in Tasmania.

During the 44th Parliament, the Government introduced the *Environment Protection and Biodiversity Conservation Amendment (Bilateral Agreement Implementation) Bill 2014*. The Bill proposed amendments to Part 13A of the Act to establish a new Part 3 to the Live Import List. The amendments would have created an exemption to the offence provision (s303GN (2)) allowing companies or individuals to possess live specimens that are:

- part of an existing feral population in a state or territory, and
- listed under the new Part 3.

The proposed criteria for adding a specimen to Part 3 of the Live Import List for a state or territory included:

- the specimen is part of a feral population in that state or territory; and
- possession of the specimen in the state or territory would not be:
  - likely to threaten the conservation status of a species or ecological community in Australia; or
  - likely to threaten biodiversity; or
  - likely to contribute to a wider distribution of the species.

It was proposed that any amendments to the proposed Part 3 of the Live Import List would use the existing process in the Act for amending the Live Import List. That is, amendments to the List could be initiated by the Minister or by application from the public. Before amending the

List, there would be an environmental assessment, including consultation with the public and state and territory ministers. The decision to add a species to the Live Import List would made by the Minister for the Environment and Energy. Amendments would be made by disallowable instrument.

The Department of the Environment made a submission to the Senate Committee Inquiry into the risks and opportunities associated with the use of the bumblebee population in Tasmania for commercial pollination purposes. It is available at: http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Bumblebees/Submissions.

The Department noted that the most beneficial and likely commercial use of bumblebees in Tasmania is in glasshouse tomato production. Australian Bureau of Statistics data shows that the total undercover (presumed glasshouse) tomato production in Tasmania is 1.1 per cent of the total volume of Australian glasshouse tomato production. Tasmania has 3.8 hectares of glasshouses in tomato production out of approximately 189 hectares Australia-wide.

The Department also noted that evidence from around the world demonstrates that bumblebees are highly invasive, causing impacts to native pollinators, ecosystems and biodiversity through altering pollination and seeding rates of native and introduced plants; and through competition with native pollinators. Studies in Poland (Kraus et al. 2011) and Canada (Whittington et al. 2014) provide evidence that commercial bumblebees escape glasshouses used for tomato growing. In Tasmania, it has been found that native bees were excluded from foraging by the presence of *B. terrestris* (Hingston and McQuillan 1999).

The Department received applications from the Australian Hydroponic and Greenhouse Association in 2005 and the Costa Group in 2013 to allow the importation from overseas, and use of, bumblebees in the horticultural industry.

The application from the Australian Hydroponic and Greenhouse Association was rejected in 2008 by the then Minister for the Environment, Heritage and the Arts on the grounds that the species posed an unacceptable risk to the Australian environment. At that time, no state or territory government supported the proposed inclusion of *B. terrestris* on the Live Import List.

The Costa Group, one of Australia's largest horticulture companies, applied to amend the List, and for a testing permit to trial the use of bumblebees in glasshouses in Australia. A testing permit allows specimens to be held in high security facilities for environmental risk assessment purposes only. The application was incomplete as it did not contain a required draft risk assessment report addressing the terms of reference and did not meet the legal requirements of a testing permit under the Act. The Department did not issue a testing permit.

In May 2015, the Hon Jeremy Rockcliff MP, Tasmanian Minister for Primary Industries and Water, wrote to the Department requesting a trial be conducted to determine the viability of Tasmanian bumblebees as pollinators in greenhouse trials.

The Department worked with the Tasmanian Government to finalise the terms of reference for the proposed trial into the use of bumblebees for crop pollination. The outcomes of this trial could provide important information that would inform any future application to add bumblebees to the Live Import List. However, a trial could only commence after the making of the proposed amendments to the Act.

All mainland states are concerned about the potential for bumblebees to establish feral populations in their jurisdiction. For example, the South Australian Government noted in its submission to the Senate Committee that:

"The South Australian Government believes that a change to the legal status of bumblebees under the *Environment and Biodiversity Conservation Act 1999* (the EPBC Act) poses too great a risk to the environmental, social and primary production needs of our State.

On that basis, we do not support the proposed amendments to the EPBC Act to allow the possession and use of illegally or accidentally-imported bumblebee species.

Bumblebees are not currently found in South Australia, and the use of bumblebees in Tasmania would increase the risk of bumblebees being introduced to the mainland (legally, illegally and/or accidentally)."

In Victoria, the "introduction and spread of the large earth bumblebee *Bombus terrestris* into Victorian terrestrial environments" has been listed as a potentially threatening process under the *Victorian Flora and Fauna Guarantee Act 1988*. The Victorian Department of Economic Development, Jobs, Transport and Resources is preparing an Action Statement that describes the threat, and states what will be done to manage the threat. Some actions, such as the preparation and implementation of prevention and early detection measures are already underway.

New South Wales listed the introduction of the large earth bumblebee *Bombus terrestris (L.)* as a key threatening process on Schedule 3 of the *Threatened Species Conservation Act 1995* on 13 February 2004.

The proposed amendment to the Act to create a Part 3 of the Live Import List would allow the Minister to approve the ongoing use of bumblebees in Tasmania provided that an assessment of the environmental risk demonstrates that the commercial use of bumblebees would not pose an unacceptable impact on native species.

The proposed amendment to the Act addressed the concerns of the States and Territories by requiring the Minister, following the inclusion of a specimen in Part 3 of the Live Import List, to seek the agreement of each State and Territory to permit the use of the specimen in their jurisdiction.

Response

Recommendation 1:

The committee recommends that the Commonwealth introduce amendments to the *Environment Protection and Biodiversity Conservation Act 1999* to amend the Live Import List to allow for the use of existing feral populations and that the proposed amendments be referred to the Environment and Communications Legislation Committee for inquiry and report.

Response:

Agreed in part.

The Government intends to introduce amendments to the *Environment Protection and Biodiversity Conservation Act 1999 to* amend the Live Import List to allow for the use of existing feral populations.

The referral of the proposed amendments to the Environment and Communications Legislation Committee for inquiry and report is a matter for the Senate to consider when the amendments are introduced to that chamber.

Recommendation 2:

The committee recommends that any proposed amendment of the Live Import List to allow the use of existing feral populations provide for a review mechanism after two years of operation. The committee further recommends that, should any adverse environmental impacts be identified in the review, the *Environment Protection and Biodiversity Conservation Act 1999* be amended to omit Part 3 of the Live Import List.

Response:

Agreed.

This is consistent with the amendments proposed by the Government in 2015 to create a mechanism for the Minister for the Environment and Energy to issue a permit to trial the use of bumblebees for up to two years.

Recommendation 3:

The committee recommends that the Commonwealth Government work with state governments to fund further research into the use of native bees as pollinators.

Response:

Agreed.

The Government supports research that assesses the viability of native bees as pollinators. The Government has recently funded two projects in collaboration with industry, state government departments and a number of Australian universities to understand the role of alternative pollinators in delivering more profitable and productive crops for Australian farmers.

Horticulture Innovation Australia (Hort Innovation) is working with Western Sydney University on a Commonwealth-funded project entitled *Stingless bees as effective managed pollinators for Australian horticulture*. The project will examine the effectiveness of native stingless bees

in pollinating field and glasshouse crops. This project is expected to be completed in August 2022.

AgriFutures Australia, formerly Rural Industries Research and Development Corporation (RIRDC), is working with Hort Innovation; the Department of Environment, Water and Natural Resources South Australia; Primary Industry and Resources South Australia; University of Sydney; University of Adelaide; University of New England; and a number of horticulture industry bodies on a project entitled *Securing pollination for more productive agriculture*. The project, funded by a $5.25 million Rural R&D for Profit Program grant, will assess the contribution of alternative pollinators, including native bees, to the pollination of dependent crops across different regions of Australia. This project is expected to be completed in June 2021.

These initiatives will complement data from completed projects including *Native bees as potential pollinators of lucerne,* which was completed in 2012 with RIRDC funds provided by the Australian Government.

References

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