



Amendments to the American Foulbrood National Pest Management Plan

Regulatory Impact Statement

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Regulatory Impact Statement

Amendments to the American Foulbrood National Pest Management Plan

Agency Disclosure Statement

This Regulatory Impact Statement (RIS) has been prepared by the Ministry for Primary Industries (MPI). It provides an analysis of options to control American foulbrood (AFB), a disease of honey bees, within New Zealand.

MPI has undertaken the regulatory impact analysis presented in this paper. The process has included two rounds of consultation with the beekeeping industry, and informal and formal consultation with the Management Agency for the AFB National Pest Management Plan (NPMP). The analysis concludes that the preferred option would be to continue seeking measured reductions in disease rates from status quo levels, through amending the existing AFB NPMP.

Implementing the preferred option would involve the continued exercise of powers under the Biosecurity Act 1993. This will mean a continuation of some:

- costs on the beekeeping industry; and
- impaired private property rights because of control of infected beehives.

The preferred option would not override fundamental common law principles, and it will be implemented in a way that will balance the need for private property rights with the need for disease inspection and destruction of infected property.

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Table 1: Outline of options

Option	Objective 1: To ensure that the Plan remains current and fit for purpose.	Objective 2: To manage AFB to reduce the reported national incidence of AFB by an average of 5% each year.	Benefits	Costs	Risks
Option 1: Continuation of the NPMP without modification	√	?	Continuation of a nationally co-ordinated scheme that will decrease the incidence (and associated losses) of AFB	\$380,000 per year for the bee industry. May not achieve the objectives of reducing the incidence of AFB	The plan may not succeed in its objective to reduce the incidence of AFB, as the current plan has been shown to have operational shortcomings
Option 2: Continuation of the NPMP with modifications to address issues identified to date	√	√	Improved operational measures will result in lower incidence of AFB	No additional costs over current NPMS (\$380,000).	
Option 3: No national Plan and ad hoc control	X	X	No nationally imposed levies or directly imposed costs for beekeepers	Hive and honey production losses due to AFB. On farm costs for AFB control. Decreased bee numbers could result in decreased crop pollination.	Not an effective means to control disease at a national level, and will most likely result in an increase in AFB incidence with resultant hive and production losses.

Status quo

Background

1. American Foulbrood (AFB) is a serious disease of honey bee colonies caused by the bacterium *Paenibacillus larvae larvae*, and normally causes the death of infected hives. AFB has been present in New Zealand since the nineteenth century, and has been subject to national legislative controls since 1907.
2. AFB is capable of causing serious economic losses to the New Zealand bee industry, with flow-on effects on the horticultural, arable and pastoral sectors that rely on bee pollination. Major crops which would be affected include clover, kiwifruit, apples, pears, avocados, squash, and vegetable seeds.
3. AFB is present in beehives in all regions of New Zealand. Beekeepers contribute to the continuance or exacerbation of AFB by inadvertently spreading infection in their beekeeping operations. The transport of hives between regions for pollination and honey collection could rapidly spread disease.
4. Effective disease management practices make it possible to reduce the incidence of AFB in hives to below economically significant levels.

Legislation

5. The Biosecurity Act 1993 provides the opportunity for industry groups to gain the legal powers necessary to manage their own disease control programmes through pest management plans and programmes.
6. The Biosecurity Law Reform Bill 2012 has amended some of the requirements for National Pest Management Plans (previously referred to as National Pest Management Strategies).

AFB Management under National Pest Management Plan

7. Since 1998, AFB has been managed by the beekeeping industry via a National Pest Management Plan (NPMP). The AFB NPMP is an industry-led programme developed to reduce the incidence of AFB in managed colonies (i.e. beehives) in New Zealand. The Plan provides the regulatory powers required for its effective implementation, such as mandatory annual hive inspections.
8. The management agency for the NPMP is the National Beekeepers' Association of New Zealand Incorporated (NBA). The NBA is responsible for implementing the activities set out in the Order in Council that makes the Plan, and the related Biosecurity Levy Order in Council. The AFB NPMP imposes requirements on beekeepers to register apiaries, carry out annual disease inspections and destroy AFB-infected hives. The management agency must maintain a database of hives and apiaries, carry out hive audits, educate beekeepers in AFB management, collect levies and carry out a range of other management and operational activities.
9. When the NPMP commenced in 1998, the NBA was the single national body representing beekeepers interests, and the uncontested choice as management agency. In 2002, the NBA underwent a split and a group of beekeepers formed a rival

bee industry group as a sector group within Federated Farmers. There is no longer a single industry representative group, although there are periodic discussions on the two groups merging.

10. MPI notes that a representative from the Federated Farmers Bee Industry Group has been a member of the governing committee for the NPMP since 2008. This addresses concerns raised by several submitters regarding industry-wide representation on the management agency.

Current objective of the Plan

11. The primary objective of the NPMP was to reduce the reported incidence of AFB by an initial 10% each year to a target of a 0.1% national incidence in 2007.

Current funding of the Plan

12. The NPMP is funded entirely by beekeepers via an existing Biosecurity Act levy, the Biosecurity (American foulbrood – Apiary and Beekeeper Levy) Order 2003. The levy is administered and collected by the NBA as management agency for the NPMP. The NPMP does not receive any Crown funding.

Problem definition

13. AFB has been managed by the beekeeping industry via a NPMP since 1998. The NPMP is a programme developed to reduce the incidence of American foulbrood in managed colonies (i.e. beehives) in New Zealand. The NPMP provides regulatory powers required for its effective implementation. The primary objective of the NPMP is to manage AFB to reduce the reported incidence of American foulbrood by an average of 10% each year. Since the inception of the NPMP, in 1998 reported disease levels have been reduced to a current 0.18% from 0.3%.
14. The current AFB NPMP had a duration of 10 years, and was scheduled to expire in 2008. However, as the review was notified prior to that date, section 88(4) of the Biosecurity Act specifies that the NPMP remains in force until completion of the review.
15. A number of issues had been noted with the existing NPMP over the 10 years of its implementation, and the mandatory review presents an opportunity to amend the NPMP to address these issues, to ensure that it remains fit for purpose. Most of these changes are incremental improvements rather than major modifications, and the overall approach to managing the disease remains unchanged.

Objectives

16. The primary objective of the proposed amendments to the existing NPMP is to ensure that the Plan remains current and fit for purpose.
17. The objective of the Plan is to manage AFB on a national basis so as to reduce the reported incidence of AFB by an average of 5% each year.

Regulatory Impact Analysis

18. The three options that have been considered are:
 - Option 1: Continuation of the NPMP with no changes to the Order in Council.
 - Option 2: Continuation of the NPMP with amendments to the Order in Council. This will include modification of the objective to a more realistic reduction in incidence, and with modifications to address the operational issues identified during the life of the current NPMP.
 - Option 3: No NPMP, and instead a reliance on ad hoc control by individual beekeepers.

Option 1: Continuation of the NPMP without modification

19. This option would continue the existing NPMP in its current form and with no changes to the Order in Council.
20. Although this option fits with the objective around reducing disease levels, experienced gained since 1998 with the current NPMP indicates that this option is not optimal.
21. Feedback from the Management Agency and beekeepers has highlighted a number of issues with the existing NPMP. This has led MPI to propose a number of changes to the scheme. Proposed amendments to the NPMP were finalised after two rounds of consultation.

Option 2: Continuation of the NPMP with modification of the objective to a more realistic reduction in incidence, and with modifications to address the operational issues identified to date (Preferred Option)

22. This option continues with a national approach to managing AFB and was supported by stakeholders through the consultation process.
23. Over the years of its operation some issues have become apparent with the existing NPMP. MPI proposes to amend, by Order in Council, the American Foulbrood National Pest Management Strategy (AFB NPMS) in order to ensure that it remains fit for purpose, and to address a number of issues that have been identified since its initiation in 1998. Most of the amendments are to address operational issues that have arisen with the original NPMP.
24. MPI prefers this option, as it ensures a nationally co-ordinated approach to the control of AFB, but with more realistic objectives and operational issues addressed.

Proposed amendment to the objective of the Plan

25. The primary objective of the NPMP was to reduce the incidence of AFB so that a maximum of 0.1 percent of New Zealand beehives were infected by 2007.
26. As of June 2012, the most recent information indicates a national incidence of AFB of 0.18 percent, a decline from the infection rate of approximately 0.3 percent when the NPMP began. However, the NPMP has not achieved its primary objective of reducing the incidence of AFB to 0.1%.
27. There are some mitigating factors, including better disease reporting by beekeepers, changing industry practices increasing the risk of disease spread, and the arrival of varroa. Managing varroa has been the major focus for the beekeeping industry since 2000, and has consequently diverted attention away from AFB control.
28. Despite the failure to achieve the NPMP's primary objective, submitters overwhelmingly considered that there are benefits in having a national pest management plan to control AFB in New Zealand.
29. All submitters provided a range of suggestions regarding the operational aspects of the NPMP. MPI has considered these accordingly and recommends that the NPMP is continued with the amendments as set out in the proposed Order in Council.

Impacts

30. The proposed amendments to the NPMP do not have additional significant budgetary impacts on beekeepers, as they do not provide for increases in funding beyond what is currently in place. Instead, they are relatively minor adjustments to how the NPMP is managed. Beekeepers have been fully funding the NPMP through levies since its initiation in 1998.

31. The Plan will have limited impact on soil resources or water quality. The only direct impacts will be where affected hives are burnt as a disease control measure and this impact is negligible.
32. The Plan has no impact on human health or recreational values.
33. MPI is not aware that the AFB Plan has any impacts on Māori, other than in their capacity as beekeepers and participants in primary industries. Impacts on Māori in these sectors are assessed as being the same as impacts on non-Māori in the same sectors.
34. The implementation of the Plan would not be contrary to New Zealand's international obligations.
35. A standard cost-benefit analysis has been conducted for the NPMP and it is estimated that the net benefits to the beekeeping sector are \$7.5 million over ten years, in net present value terms at the time.
36. The key cost of AFB is hive mortality, with consequent reduction in honey production and pollination.
37. The key benefit of the NPMP is that it allows the nationally co-ordinated promotion and enforcement of practices designed to reduce AFB incidence, with a consequent reduction in hive mortality, and thus reduced losses of honey production.
38. The NPMP, through reduced hive mortality, has unquantifiable benefits for:
 - the horticultural, pastoral and arable sectors, which rely on beekeepers to provide pollination for their crops; and
 - the wider public, who receive beneficial pollination for household gardens and commercial enterprises from the bees.

Option 3: No national Plan and ad hoc control

39. This option would disband the nationally co-ordinated pest management Plan for the management of AFB. Control of the disease would be managed by individual beekeepers on an *ad hoc* basis.
40. This option would empower beekeepers to decide if and how they want to manage AFB.
41. There would be no centrally co-ordinated programme that would:
- arrange for inspections of hives;
 - ensure controlled destruction of infected hives;
 - act on abandoned hives;
 - educate beekeepers material on best-practice disease management; and
 - maintain a database of apiaries.
42. In the absence of a coordinated and legally-enforceable disease control programme, it is highly likely that AFB levels would rise substantially. Because of the way in which the disease can spread from hive to hive, beekeepers that carried out effective disease management could be adversely affected by beekeepers in the same geographic area that did not effectively control AFB.
43. MPI does not support this option, nor does this option have any significant support in the bee industry. It would not provide an effective basis for controlling AFB and would result in higher AFB levels causing significant economic losses to the bee industry, as well as flow-on affects to other primary industries.
44. Table1 attached at the end of this document summarises the options.

The review and consultation process

45. As the first step in the review process, MPI (then MAF) released a discussion document in September 2008, entitled *A Report on the American Foulbrood National Pest Management Strategy* [Discussion paper no: 2008/07] and invited submissions on the proposed changes to the NPMP.
46. This document assessed the AFB NPMP Order in Council that underpins the NPMP, and suggested a number of changes. Most of these changes were incremental improvements rather than major modifications.
47. As part of the consultation process, MPI asked for feedback on various aspects of the NPMP including:
- governance;
 - funding;
 - effectiveness; and
 - proposed changes to the NPMP.
48. Twenty six submissions were received from organisations representing all stakeholder and funder groups in the NPMP. These submissions are summarised in a *Summary of Submissions: Report on the American Foulbrood National Pest Management Strategy* [MAF Biosecurity New Zealand Information Paper No.

2010/03]. This document was provided to all submitters, the major industry organisations, and was placed on the MPI public website and industry websites.

49. MPI invited further submissions from individuals and organisations with an interest in AFB control, and the beekeeping industry on two additional issues that were not discussed in the original consultation document but which were raised in a number of submissions. These have been summarised in a *Summary of Additional Submissions: Report on the American Foulbrood National Pest Management Strategy*. This document has been circulated to industry and is publically available on MPI's website.
50. Many of the submissions were concerned with detailed operational matters, rather than the proposed changes at the strategic level contained in the Order in Council. The operational plans which must be prepared for a pest management Plan under section 85 of the Act in general outline relatively routine processes, implementing the broader Plan. In the normal course of events, operational plans are not advertised for public comment.
51. There was no consensus among submitters as to what body should act as the management agency, although more submitters supported the NBA than any other single option. No other industry organisation has expressed interest in becoming the management agency for the Plan.
52. MPI therefore recommends that the NBA remain as the management agency for the Plan.
53. There was no consensus in submissions about funding the Plan. MPI therefore does not recommend any changes to the existing levy system.
54. A large majority of submitters considered there are benefits in having a pest management plan to manage AFB in New Zealand. Submitters provided a range of suggestions regarding the operational aspects of the NPMP. MPI has considered these submissions and recommends that the Plan is continued with the amendments as set out in the proposed Order in Council.
55. MPI considers that there is consensus about the need to continue a pest management plan for AFB. The majority of submitters are concerned about activities at the more detailed operational plan level, rather than the rules for the Plan which are contained in the Order in Council.
56. Given that the current proposal is a review of an existing approved NPMP, and that public submissions support the benefits of maintaining a plan for AFB in some form, MPI officials consider that there are reasonable grounds to be satisfied that the amendment proposal meets the conditions specified in section 57(1) of the Biosecurity Act 1993.
57. The proposed amendments to the Order in Council therefore follow the mandatory review and stakeholder consultation on the proposed amendments to the existing NPMP.

Conclusions and recommendations

58. The preferred option is continuation of a National Pest Management Plan for AFB, but with amendments made to the Order in Council to ensure that operational issues are addressed, and that the scheme remains fit for purpose.
59. MPI supports the preferred option for the reasons given in this paper.

Implementation

Administration

60. The management agency for the Plan already exists, and the proposed amendment recommends that the NBA continues as management agency.
61. A number of the changes (e.g. Clauses 21, 25, 26, 39, and 40) are directly aimed at removing unnecessary requirements or providing the management agency with more flexibility. Several other changes (e.g. clauses 17 and 27) are to permit the use of updated technology, which should reduce costs for both beekeepers and the management agency.
62. MPI does not consider these changes will impose significant additional compliance costs or regulatory impacts onto the management agency.

Information

63. MPI will inform the management agency in writing once the amendments to the Biosecurity (National American Foulbrood Pest Management Plan) Order 1998 have been passed. The management agency will replace the current 1998 Order on their public website with the amended Order, and will notify beekeepers through the public website of the changes.

Timing and transitional arrangements

64. There are no issues around timing or phasing in, as the amendments do not result in significant changes to the existing Plan.
65. MPI will continue to support the National Beekeepers' Association to implement the Plan as necessary. This support includes the provision of technical advice, statutory appointments, and the exercise of necessary statutory functions by MPI's chief technical officers.

Monitoring, Evaluation and Review

Monitoring and evaluation

66. The management agency is required to maintain a database of apiaries and recorded disease outbreaks. This database serves as the primary source of data to monitor Plan effectiveness. Key measures include:
- AFB incidence (i.e. the percentage of hives infected with AFB each year);
 - the number of beekeepers reporting AFB infection;
 - regional distribution of AFB outbreaks;
 - the percentage of beekeepers who enter into a Disease Elimination Conformity Agreement with the management agency; and
 - the percentage of beekeepers who submit their Annual Disease Return on time.
67. Other easily quantifiable activities of the management agency include:
- the number of AFB recognition courses conducted; and
 - the number of AFB management field days held

Review

68. Amendments to the Biosecurity Act through the Biosecurity Act Law Reform Bill 2012 increased the maximum time between reviews from five to 10 years. If the Plan takes effect in 2013 as planned, a mandatory review must be held no later than 2023.
69. The Minister for Primary Industries has wide discretion to undertake Plan reviews as he or she sees fit. Possible triggers for a review are if the Minister believes the Plan is failing to achieve its objectives, or if there has been a material change in circumstances.