



# Draft National American Foulbrood Pest Management Plan Proposal

Proposal to meet requirements of Section 61 of the Biosecurity Act 1993

## Draft for Consultation, August 2022



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DRAFT

## 1. Introduction

This document is a proposal to amend the Biosecurity (National American Foulbrood Pest Management Plan) Order 1998 (the AFB Plan) under the Biosecurity Act 1993, to meet the requirements under Sections 61 and 100D of that Act. This proposal is made by the Board of 'The Management Agency National American Foulbrood Pest Management Plan'.

Since American foulbrood (AFB) was first identified in 1877, AFB has had a significant impact on honey bees and the beekeeping industry. Within 10 years AFB had spread to all parts of New Zealand and was blamed for a 70% reduction in national honey production<sup>1</sup>.

New Zealand has had legislation to control AFB since 1906. The Apiaries Act was revoked and replaced by the Biosecurity (National American Foulbrood Pest Management Plan) Order 1998 on 18 September 1998.

This proposal supports the continuance of the AFB Plan beyond its current expiry on 1 April 2023 and proposes amendments to:

- strengthen beekeeper education, training, and support, to ensure that all beekeepers know how to eliminate AFB
- strengthen surveillance to verify that all beekeepers are meeting their AFB elimination obligations, and
- increase enforcement and penalties to deter beekeepers from non-compliance and to mitigate the impacts of non-compliance.

## 2. Name of the person making the proposal [s.61(2)(a)]

This proposal is made by the Board of 'The Management Agency National American Foulbrood Pest Management Plan'. 'The Management Agency National American Foulbrood Pest Management Plan' is an independent entity set up within Apiculture New Zealand Inc (ApiNZ) to implement the AFB Plan and is referred to as the 'AFB Agency' for the purpose of this document. The AFB Agency is overseen by its own Board and referred to as the AFB Agency Board for this document.

Current members of the AFB Agency Board are:

- Mark Dingle (Chair)
- Val Graham (Deputy Chair)
- Gabriel Torres

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<sup>1</sup> Goodwin, M. (2006). American Foulbrood in the New Zealand context. In *Elimination of American Foulbrood Disease without the use of Drugs* (Revised ed.), pp. 9–13. National Beekeepers' Association of New Zealand, (Inc.).

- Jason Ward
- Murray Lewis
- Dennis Crowley, and
- Jane Rollin

The previous chair, Russell Marsh presided over the development of this proposal until 30 June 2022.

Contact details for the present Chair, who is submitting this proposal on behalf of the AFB Agency Board are:

Mark Dingle  
The National American Foulbrood Pest Management Plan  
PO Box 88  
Rolleston 7643.

### 3. The subject of the proposal [s.61(2)(b)]

The subject of the proposal is *Paenibacillus larvae*, a bacterium that causes American foulbrood (AFB)<sup>2</sup>.

AFB is a lethal and contagious bacterial disease that kills the larvae of the honey bee (*Apis mellifera*). The disease is contracted through spores produced by *Paenibacillus larvae* that fatally infect honey bee larvae (honey bee larvae are the 'brood'). The adult worker bees are unaffected by the spores, but are carriers, and spread the disease by feeding the brood with spore contaminated food.<sup>3 4</sup> The spores germinate in the larval gut and kill their host.

The dying larvae produce billions of spores<sup>5</sup> and degrade into a 'brownish semi-fluid glue-like mass emitting a characteristic foul odour'.<sup>6</sup> This presentation is the primary clinical symptom for

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<sup>2</sup> There are two bacterial diseases that affect honey bees, American foulbrood and European foulbrood. These diseases are named as such as they affect bee larvae or brood and cause a foul odour. See Milbrath (2018), [https://pollinators.msu.edu/sites/\\_pollinators/assets/File/AmericanFoulbrood\\_Milbrath\\_2018.pdf](https://pollinators.msu.edu/sites/_pollinators/assets/File/AmericanFoulbrood_Milbrath_2018.pdf)

<sup>3</sup> Stephan, J. G., de Miranda, J. R., & Forsgren, E. (2020). American foulbrood in a honeybee colony: spore-symptom relationship and feedbacks between disease and colony development, *BMC Ecology*, 20(15). <https://bmcecol.biomedcentral.com/articles/10.1186/s12898-020-00283-w>

<sup>4</sup> Human, H., et al. (2011). The honeybee disease American foulbrood —An African perspective. *African Entomology*, 19(3), 552.

<sup>5</sup> Stephan, J. G., de Miranda, J. R., & Forsgren, E. (2020). American foulbrood in a honeybee colony: spore-symptom relationship and feedbacks between disease and colony development, *BMC Ecology*, 20(15). <https://bmcecol.biomedcentral.com/articles/10.1186/s12898-020-00283-w>

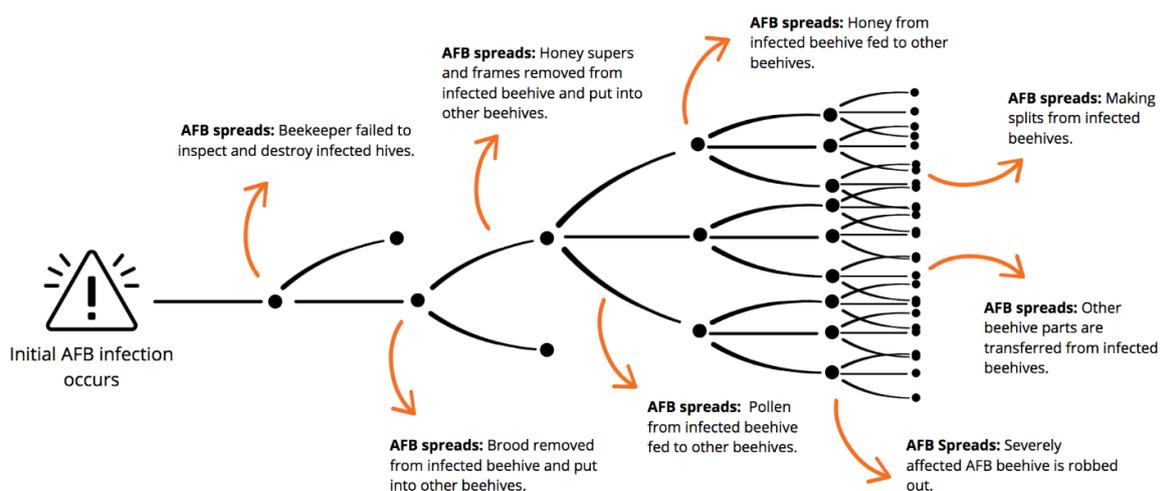
<sup>6</sup> Locke, B., et al. (2019). An integrated management strategy to prevent outbreaks and eliminate infection pressure of American foulbrood disease in a commercial beekeeping operation. *Preventive Veterinary Medicine*, 167, 48–52 (p.48).

diagnosing AFB<sup>7</sup> and at this stage, the colony is unable to remove the infected larvae and the epidemic is advanced.<sup>8</sup>

AFB is easily spread by beekeepers moving contaminated material between colonies and through the sale and/or purchase of contaminated bees and equipment. If infected hives aren't destroyed by beekeepers, infected bees spread the disease to other colonies within flight range through robbing, and sometimes swarming. The major sources of risk for spreading AFB are shown in Figure 1 below and include:

- transferring honey supers and frames
- transferring brood frames
- making splits, tops or nucs
- feeding honey or pollen
- robbing out of honey from severely infected beehives.

Figure 1: Major sources of AFB spread risk



Source: AFB Agency 2021.

The main response to AFB infections is to burn infected hives and contaminated materials, although the response can vary among countries. In EU countries, including New Zealand, antibiotic use is

<sup>7</sup> Locke, B., et al. (2019). An integrated management strategy to prevent outbreaks and eliminate infection pressure of American foulbrood disease in a commercial beekeeping operation. *Preventive Veterinary Medicine*, 167, 48–52 (p.48).

<sup>8</sup> Corbett, G. (2021, April/May). Testing for AFB. *The New Zealand BeeKeeper*, 29, 35.

banned as it does not eliminate spores<sup>9</sup> or prevent spread, but only masks the symptoms.<sup>10</sup> In England and Wales, a government-funded AFB monitoring and control agency has operated since 1942 (in some form), and diseased hives are burnt.<sup>11</sup>

This disease is reported throughout the world,<sup>12</sup> is listed as a disease of socioeconomic importance by the World Organisation for Animal Health,<sup>13</sup> and is a notifiable disease in many countries.<sup>14 15</sup> In New Zealand, AFB is a reportable disease that has been subject to legislative control since 1906 and a Pest Management Plan since 1998.

#### 4. Description of the adverse effects of AFB [s.61(2)(c)(i)]

AFB is a contagious and lethal disease that is a major threat to honey bee health and the viability of beekeeping in New Zealand and across the world.<sup>16</sup> The adverse effects of AFB are significant with potential impacts on:

- hive losses and beekeeper financial viability
- honey sales and export markets
- pollination.

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<sup>9</sup> Locke, B., et al. (2019). An integrated management strategy to prevent outbreaks and eliminate infection pressure of American foulbrood disease in a commercial beekeeping operation. *Preventive Veterinary Medicine*, 167, 48–52.

<sup>10</sup> *ibid.* p.49.

<sup>11</sup> Mill, A. C., et al. (2013). Clustering, persistence and control of a pollinator brood disease: epidemiology of American foulbrood. *Environmental Microbiology*, 16(12), 2.  
[https://www.researchgate.net/publication/257751012\\_Clustering\\_persistence\\_and\\_control\\_of\\_a\\_pollinator\\_brood\\_disease\\_Epidemiology\\_of\\_American\\_Foulbrood/download](https://www.researchgate.net/publication/257751012_Clustering_persistence_and_control_of_a_pollinator_brood_disease_Epidemiology_of_American_Foulbrood/download)

<sup>12</sup> [https://www.woah.org/fileadmin/Home/fr/Health\\_standards/tahm/3.02.02\\_AMERICAN\\_FOULBROOD.pdf](https://www.woah.org/fileadmin/Home/fr/Health_standards/tahm/3.02.02_AMERICAN_FOULBROOD.pdf)

<sup>13</sup> The World Organisation for Animal Health was founded in 1924 as the Office International des Epizooties (OIE) and is an intergovernmental organisation that provides information on animal diseases and animal health. It lists AFB as a transmissible disease of socio-economic importance on List B. See <https://www.woah.org/en/what-we-do/animal-health-and-welfare/animal-diseases/old-classification-of-diseases-notifiable-to-the-oie-list-b/> and <https://www.woah.org/en/who-we-are/>

<sup>14</sup> Human, H., et al. (2011). The honeybee disease American foulbrood —An African perspective. *African Entomology*, 19(3), 552.

<sup>15</sup> Genersch, E. (2009). American Foulbrood in honeybees and its causative agent, *Paenibacillus larvae*. *Journal of Invertebrate pathology*, Vol 103, Supplement, January 2010, S10–S19.  
<https://www.sciencedirect.com/science/article/abs/pii/S0022201109001864>

<sup>16</sup> Stephan, J. G., de Miranda, J. R., & Forsgren, E. (2020). American foulbrood in a honeybee colony: spore-symptom relationship and feedbacks between disease and colony development, *BMC Ecology*, 20(15).  
<https://bmcecol.biomedcentral.com/articles/10.1186/s12898-020-00283-w>

*Economic costs—hive loss and income loss*

AFB causes significant economic costs for beekeepers across the globe.<sup>17</sup> When disease levels get out of control, hive losses are high, and honey income reduces. Nimmo-Bell and Associates<sup>18</sup> analysed the costs of AFB and estimated that the presence of clinical AFB can reduce hive income for a year. This was based on the impact of the infection prior to discovery, and the recovery time after hive replacement before full production resumes.<sup>19</sup>

The economic cost of AFB comprises hive losses and control costs. For 2022/23, Nimmo-Bell estimated the economic cost of AFB at \$23.2 million (\$3.6m hive losses and \$19.6m control costs). Of the \$19.6m control costs, the total levy cost comprised only \$1.7 million, or 8% of total control costs.<sup>20</sup>

Most of the control costs are borne by beekeepers (92%) for detecting and controlling AFB. With no AFB Plan, the annual economic cost of AFB was estimated to rise to \$29.5 million by 2032/33 (\$9.4m hive losses and \$20.1m in control costs).<sup>21</sup>

A fuller description of the costs and benefits of the proposed the AFB Plan, including the economic impact of AFB is provided in section 10 of this report. A copy of the Nimmo-Bell and Associates Report (2022) is also provided as a separate document.

*Risk of losing export markets and honey income*

The proposed AFB Plan delivers significant benefits in preserving market access, reputational value, and premium pricing for key export markets. New Zealand honey is a valuable export commodity, especially mānuka honey, which generated 90% of all honey export revenue in 2021.<sup>22</sup> Our top export markets by volume are the United States (20%), China (18%), Australia (14%), United Kingdom (13%) and Japan (9%). For mānuka honey (monofloral and multifloral), China, the United States, and the United Kingdom are our largest markets.<sup>23</sup>

The presence of AFB spores in honey reduces the quantity of honey eligible for export to China. The Chinese authorities have threatened to ban honey bee product imports from New Zealand if they

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<sup>17</sup> Mill, A. C., et al. (2013). Clustering, persistence and control of a pollinator brood disease: epidemiology of American foulbrood. *Environmental Microbiology*, 16(12), 1. [https://www.researchgate.net/publication/257751012\\_Clustering\\_persistence\\_and\\_control\\_of\\_a\\_pollinator\\_brood\\_disease\\_Epidemiology\\_of\\_American\\_Foulbrood/download](https://www.researchgate.net/publication/257751012_Clustering_persistence_and_control_of_a_pollinator_brood_disease_Epidemiology_of_American_Foulbrood/download)

<sup>18</sup> Nimmo-Bell and Associates were commissioned by the AFB Management Agency to undertake an analysis of the costs and benefits of AFB and the proposed Plan.

<sup>19</sup> Nimmo-Bell & Associates, Cost Benefit Analysis of the National American Foulbrood Pest Management Plan, 3 August 2022 p.4

<sup>20</sup> Ibid. p.5.

<sup>21</sup> Ibid.p.5.

<sup>22</sup> Apiculture New Zealand, New Zealand Honey Market Update, March 2022.

<sup>23</sup> Ministry of Primary Industries, New Zealand honey exports, June 2022 <https://www.mpi.govt.nz/dmsdocument/42360-New-Zealand-honey-exports>

detect AFB in any shipments of honey. The EU and UK markets are put at risk if New Zealand fails to meet the 'Overseas Market Access Requirement (OMAR)' that specifies apiaries are to be registered by a competent authority. Currently the AFB Agency manages and administers the only authorised apiary register in New Zealand, as this is a requirement under the existing AFB Plan.<sup>24</sup>

*Pollination is economically important*

The honeybee has been recognised 'as the most important commercial pollinator in the world, responsible for at least 90% of commercial pollination'.<sup>25</sup> It has been estimated that honeybee pollination is worth hundreds of billions of dollars to the global economy.<sup>26</sup> In New Zealand, it has been estimated that pollination is worth \$5 billion a year to the economy.<sup>27</sup>

## 5. Reasons for proposing a plan [s.61(2)(c)(ii)]

The reasons for proposing the AFB Plan, are that:

- effective control of AFB is needed to reduce the economic risks and adverse effects associated with this disease, and that
- effective control of AFB is achievable if nationally consistent control measures are implemented by all beekeepers, and that
- to ensure nationally consistent control measures are implemented, an AFB Plan established under the Biosecurity Act is needed
- in the absence of an AFB Plan, dependence on voluntary beekeeper compliance to implement control measures is not sufficient, and AFB incidence would increase.

Effective control of AFB is dependent on beekeepers collectively implementing nationally consistent and effective disease control actions. While individual beekeepers can take action to control the disease within their beekeeping operation, there is a high risk of re-infection from beehives owned by those not implementing adequate disease controls.

A national AFB Plan sets out the necessary actions required to control and eliminate AFB, based on best practice and evidence. Stipulation of rules provides a clear and commonly understood set of control measures. The Biosecurity Act provides the authority and powers to a management agency to monitor and enforce compliance with the rules.

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<sup>24</sup> Nimmo-Bell & Associates, Cost Benefit Analysis of the National American Foulbrood Pest Management Plan, 3 August 2022 pp.23-24

<sup>25</sup> Mill, A. C., et al. (2013). Clustering, persistence and control of a pollinator brood disease: epidemiology of American foulbrood. *Environmental Microbiology*, 16(12), 1. [https://www.researchgate.net/publication/257751012\\_Clustering\\_persistence\\_and\\_control\\_of\\_a\\_pollinator\\_brood\\_disease\\_Epidemiology\\_of\\_American\\_Foulbrood/download](https://www.researchgate.net/publication/257751012_Clustering_persistence_and_control_of_a_pollinator_brood_disease_Epidemiology_of_American_Foulbrood/download)

<sup>26</sup> Datta, S., et al. (2013). Modelling the spread of American foulbrood in honeybees. *Journal of the Royal Society*, <https://royalsocietypublishing.org/doi/10.1098/rsif.2013.0650>

<sup>27</sup> Beehive.govt.nz, 5 August 2018, [Health check for bees to begin | Beehive.govt.nz](https://www.beehive.govt.nz/news/health-check-for-bees-to-begin)

The establishment of a management agency also provides a national locus of expertise in detecting and controlling AFB. Capability and capacity to respond to AFB outbreaks would be severely reduced in the absence of an AFB Plan which requires a capable workforce. The agency also has a key role in training beekeepers in AFB recognition and developing strategies and tools to support beekeepers to tackle AFB.

Reliance on voluntary compliance is not sufficient: Nimmo-Bell estimated the incidence of AFB would increase up to 1.2% over the next ten years if there was no AFB Plan. This estimate was based on the incidence rate recorded in the 1990s, which led the beekeeping industry to take a more active role in managing AFB. This compares with an incidence rate of 0.46% for 2022 under the existing Plan (Nimmo-Bell, 2022, p.11-12).

Even under the existing Plan there is a level of non-compliance and non-reporting. Nimmo-Bell considered the actual incidence rate is higher than the reported incidence rate. This is based on a 2016–2019 longitudinal study of apicultural practice and disease prevalence (Hall et al., 2021), where AFB was found in 0.47% of the hives (11 hives out of 2,356) inspected over the three years. This is 52% higher or 1.52 times more than the 0.31% recorded incidence average over 2016–2019 (Nimmo-Bell, 2022, p.11-12).

There is a high level of agreement within the beekeeping industry that legislation is required to set of minimum standards for AFB control. With no AFB Plan, the presence of infected beehives, and inaction to destroy infected hives, would be an ongoing source of AFB re-infection and spread.

## 6. Objectives of the plan [s.61(2)(c)(iii)]

The objectives of the proposed AFB Plan remain the same as those published in the Biosecurity (National American Foulbrood Pest Management Plan) Order 1998 as amended on 18 September 2012.

The primary objective of the Plan is to:

manage American foulbrood to reduce the reported incidence of American foulbrood by an average of 5% each year<sup>28</sup>.

The secondary objectives of the Plan are:

- a. to locate all places where beehives are situated and ensure that each honey bee colony is inspected at least once each year for American foulbrood

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<sup>28</sup> Reported incidence means, for each period of the 12 months beginning on 1 July in any year, the number of American foulbrood cases expressed as a percentage of the total number of honey bee colonies notified to the AFB Agency.

*Explanation:* To eliminate AFB, the locations of honey bee colonies must be known, and all honey bee colonies must be inspected at least one time per year to ensure that colonies affected by AFB are detected.

- b. to identify American foulbrood cases in beehives

*Explanation:* Cases of AFB must be identified so that AFB spores associated with the case can be destroyed to prevent onwards transmission of disease.

- c. to eliminate American foulbrood in beehives by destroying any American foulbrood cases and associated bee products and destroying or sterilising associated appliances.

*Explanation:* Destruction of AFB spores to prevent the transmission of disease requires that the beehives and bee products associated with a case of AFB are destroyed by burning. The AFB spores contaminating appliances may be destroyed either by burning or the use of effective sterilisation methods.

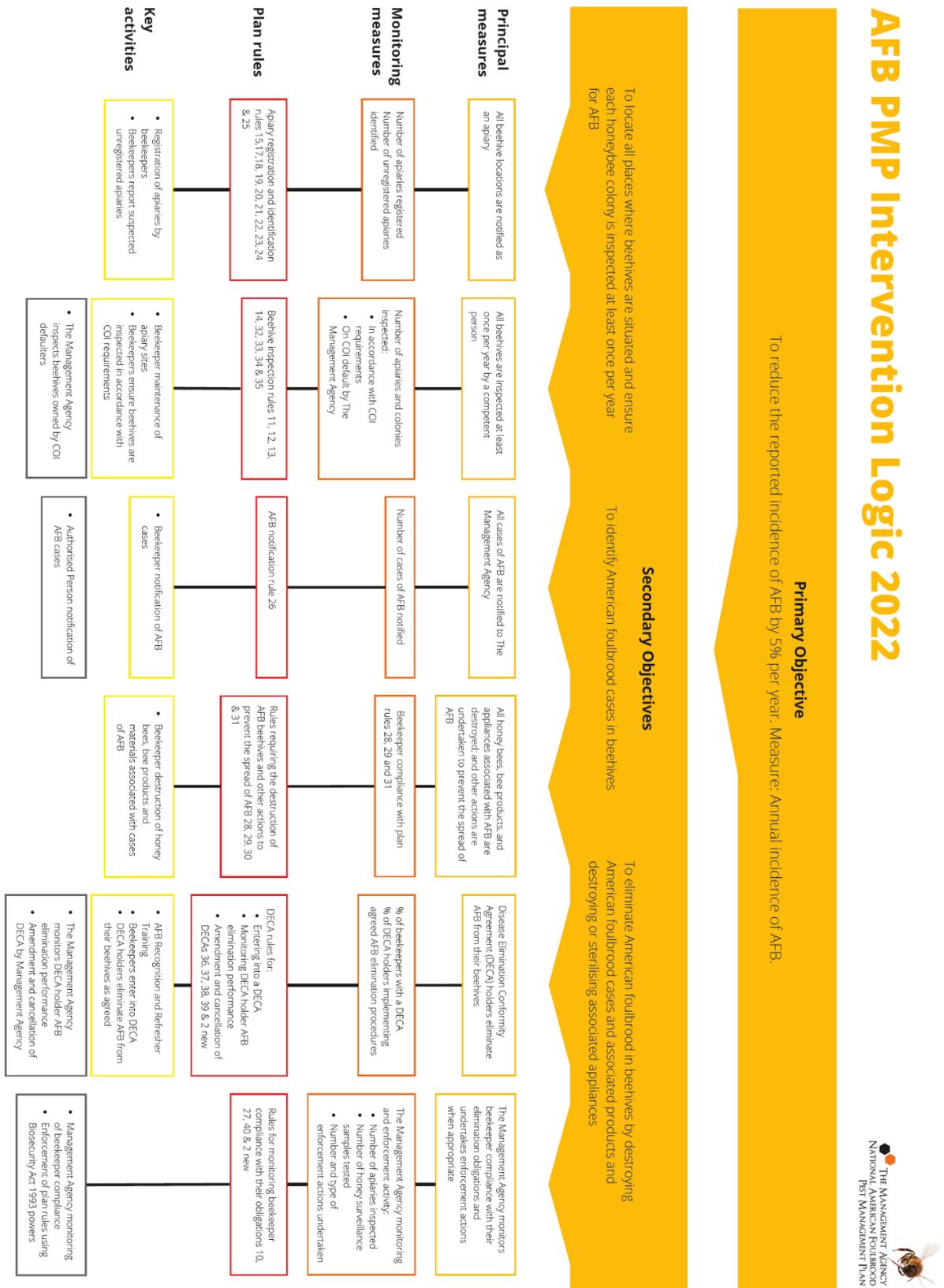
## 7. Principal measures in the plan to achieve the objectives [s.61(2)(c)(iv)]

The principal measures to achieve Plan objectives are:

- a. all beehives are situated in a place notified to the management agency as an apiary
- b. all beehives are inspected at least once per year by a person competent to recognise AFB
- c. all cases of AFB are reported to the management agency
- d. all honey bees, bee products, and appliances associated with detected cases of AFB are destroyed; and other actions are undertaken to prevent the spread of AFB
- e. Disease Elimination Conformity Agreement (DECA) holders eliminate AFB from their beehives
- f. the management agency monitors beekeepers' compliance with their AFB elimination obligations and undertakes enforcement actions when appropriate.

The relationship of these principal measures to the Plan objectives are shown in the logic map in Figure 2 below.

Figure 2: Logic map, showing relationship between objectives and measures



# AFB PMP Intervention Logic 2022



8. Other measures that would be reasonable to take to achieve the objectives, and if there are such measures, why the proposed measures are preferable as a means of achieving the objectives [s.61(2)(c)(v)]

The principal measures proposed are designed to address the major AFB risks to managed colonies. The measures require that colonies are inspected, and that honey bees, bee products and materials associated with cases of AFB, are destroyed to prevent the spread of AFB from one beehive to another. Lower-risk activities are managed through the provision of best practice advice and providing beekeepers with the ability to customise Disease Elimination Conformity Agreements (DECAs) so they can choose an effective combination of AFB elimination practices best suited to their situation.

Other potential measures considered were imposing limits on hive apiary density, hive movement control, and regulating the sale of bees, hives and equipment. These potential measures emerged through the consultation process undertaken to help build the proposed AFB Plan (see section 33).

Imposing limits on hive density was considered but not progressed as part of this proposed Plan. The incidence of many diseases increases with increasing host density. However, there is an absence of scientific evidence demonstrating a reduction in the incidence of AFB as a result of reducing hive density.

Similarly, imposing movement controls was considered but not progressed. Although this is a potential measure for any disease control programme, the imposition of movement controls will not reduce the incidence of AFB, as it is already widely spread throughout New Zealand.

Measures to regulate the sale of bees, hives and equipment were considered but not progressed as there is no scientific evidence to suggest that this would result in a significant AFB elimination benefit. In addition, implementation would result in significant administrative costs to equipment suppliers, beekeepers, and the AFB Agency. However, consideration of submissions requesting regulation of the sale of bees, hives and equipment has resulted in the AFB Agency proposing to change the Plan rules to strengthen beehive traceability.

9. Reasons why a national plan is more appropriate than a regional plan [s.61(2)(c)(vi)]

A national AFB Plan is appropriate as AFB affects managed colonies of honey bees in every region and effective elimination of AFB requires implementation of a consistent approach across New Zealand. A national Plan is necessary for the following reasons.

- Beekeeping practices to provide pollination services and produce honey result in beehives being transported across regional boundaries.
- To control and eliminate AFB, disease control measures must be applied and enforced nationally and evenly, irrespective of regional boundaries. A nationally co-ordinated and

consistent approach to disease control is expected to be more effective and efficient than 16 regional plans.

- Beekeepers are 'landless farmers' and hence it may not be appropriate to use rates to fund 16 regional plans. Compliance costs may be higher for commercial beekeepers with colonies in different regions, with some paying up to seven different levy invoices and potentially being levied at different rates by different regional councils.
- A national AFB Plan enables national systems for recording colony numbers and AFB incidence and provides for building a national database to inform and monitor disease control interventions.
- A national management agency (currently the AFB Agency) is identifiable, accountable, and accessible to levy payers and other stakeholders. It also provides for central administration of levy funding.

#### 10. [Analysis of the benefits and costs of the plan \[s.61\(2\)\(c\)\(vii\)\]](#)

The AFB Agency Board commissioned Nimmo-Bell and Associates to analyse the costs of AFB and the benefits of continuing to implement an AFB Plan.

A full analysis of the benefits and costs of the AFB Plan is provided in the accompanying report:

- Nimmo-Bell and Associates 2022. Cost Benefit Analysis of the National American Foulbrood Pest Management Plan.

The overall cost benefit analysis is summarised in the remainder of this section.

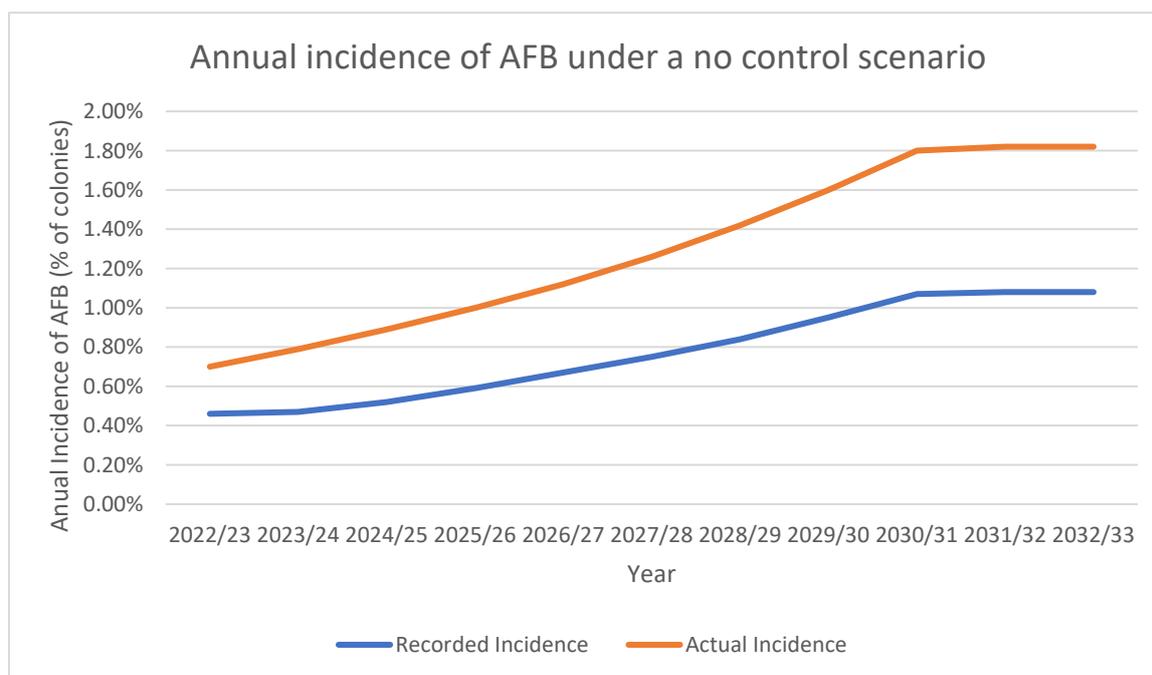
Three distinct scenarios have been considered for the future management of American foulbrood:

- no control option.** Under this option the National American Foulbrood Pest Management Plan would be revoked and control of AFB by beekeepers would be voluntary. There would be no central agency responsible for implementing disease control interventions such as training, monitoring, or enforcement
- continuation of the current national pest management plan.** Under this option the current plan order would be extended for a further 10 years without significant amendment
- implementation of the proposed national pest management plan.** Under this option the Plan is extended for a further 10 years with amendments designed to improve the effectiveness of the pest management plan.

The 'no control' option was used as a baseline to quantify the additional cost and benefits of extending the Plan (with or without amendment) for a further 10 years.

Under the ‘no control’ option, the number of infected colonies is estimated to increase by 12.58% per year as was observed between 1984 and 1991.<sup>29 30</sup> The recorded incidence of AFB is estimated to plateau at a peak of 1.08% of colonies per annum (with actual incidence<sup>31</sup> of AFB at 1.82% of colonies per annum), as beekeepers and the beekeeping industry are expected to invest in additional AFB controls when AFB reaches these high levels.

**Figure 3: Annual incidence of AFB under a ‘no control’ scenario**



Under the ‘no control’ scenario, 99,909 colonies are forecasted to become infected with AFB over a ten-year period, starting at 5,810 colonies in 2023/24 and rising to 13,462 colonies in 2032/33.

Income loss due to AFB is costed in the cost benefit analysis as equivalent to one year’s production. Annual income is estimated to range from \$170 to \$1,000 per hive depending on the crop. The most likely estimate for income per hive was set at \$700. Hence, under the ‘no control’ option, the beekeeping industry is forecasted to lose \$70 million of income due to AFB over a ten-year period. This is \$4.1 million in annual losses in 2023/24, rising to \$9.4 million in 2032/33.

<sup>29</sup> Goodwin, M. (2006). *Elimination of American Foulbrood Disease without the use of Drugs* (Revised ed.). National Beekeepers’ Association of New Zealand, (Inc.).

<sup>30</sup> The 12.58% annual increase in AFB observed between 1984 and 1991 is a conservative estimate of what is likely to occur under a ‘no control’ option. Between 1984 and 1991, the Apiaries Act 1969 imposed legal obligations on beekeepers to control AFB, and Ministry of Agriculture and Forestry Inspectors were inspecting beehives for AFB and had legal powers to undertake enforcement actions.

<sup>31</sup> As the incidence rate is considered to be under-reported, the actual incidence rate is higher by 1.52x than the recorded incidence, as shown in the 2016–2019 longitudinal study of apicultural practice and disease prevalence (Hall et al., 2021).

Implementation of the proposed amendments to the Plan is estimated to reduce the annual incidence of AFB by 5% per year. This will result in a 60,140 reduction in the number of beehives infected with AFB over a ten-year period when compared to the 'no control' scenario. That represents \$42 million avoided income losses over ten years (Present Value = \$28.6 million).

Extending the Plan also protects significant export market access, supporting the export of \$235 million<sup>32</sup> per annum of honey bee products to the United Kingdom, European Union, and China. These benefits have not been quantified in the cost benefit analysis.

The costs of extending the proposed and current national pest management plans for a further 10 years, when compared to a baseline of no control, include:

- increased beekeeper cost of inspecting beehives (as more beehives will be inspected for AFB each year on a more frequent basis than under the 'no control' option)
- increased beekeeper cost of registering apiaries and submitting Annual Disease Returns
- increased beekeeper cost of attending AFB training courses
- the levy required to fund the implementation of the plan by the management agency
- reduced costs of disposing of infected beehives from lower annual incidence
- reduced costs of replacing infected beehives from lower annual incidence.

The most likely estimates for these costs are described in Table 1 below.

**Table 1: Surveillance and control costs**

Control cost	Most likely estimate (GST exclusive)
Beehive inspection	<ul style="list-style-type: none"> <li>• Certificate of Inspection: \$42 for the first two beehives and \$10 per hive thereafter per year</li> <li>• Default Certificate Inspections by management agency: \$73 for the first two beehives and \$19 per hive thereafter per year</li> <li>• DECA holder (or their employees) inspecting own hives: \$20 per hive per year</li> </ul>
Apiary Registration and ADRs	<ul style="list-style-type: none"> <li>• \$1.05 per apiary per year, with a minimum of \$18 per beekeeper</li> </ul>
Training	<ul style="list-style-type: none"> <li>• AFB Recognition course: \$87</li> <li>• AFB Refresher courses: \$26<sup>33</sup></li> </ul>

<sup>32</sup> Nearly half of total exports (i.e., 49%).

<sup>33</sup> Note that the Management Agency Board has decided the online AFB refresher course should be free of charges.

Levy	<ul style="list-style-type: none"> <li>• \$40 per beekeeper and \$1.70 per colony</li> </ul>
Beehive costs	<ul style="list-style-type: none"> <li>• Destruction of AFB hive: \$350 per hive</li> <li>• Replacement hive of AFB hive: \$650 per hive</li> </ul>

The incremental surveillance and control costs for the implementation of the proposed amendments to the Plan are \$5.8 million over ten years, reducing from \$3.1 million in 2023/24 to -\$1.4 million in 2032/33 (Present Value = \$5.9 million). The incremental surveillance and control cost from 2029/30 onwards is less than zero as the savings from reduced<sup>34</sup> AFB hive destruction and replacement costs are greater than the incremental surveillance and levy costs.

The Net Present Value (NPV) for the proposed Plan is \$22.7 million, slightly higher than the NPV of \$22.4 million of the current plan. Comparison of the NPV for the proposed and current Plan is likely to underestimate the net benefit significantly in favour of the proposed Plan, as the regulatory risk mitigations included in the proposed Plan could not all be quantified in the cost benefit analysis.

The primary risks to the realisation of plan objectives and benefits are regulatory in nature. That is, not enough beekeepers may comply with their AFB elimination obligations. The proposed changes to the Plan are designed to mitigate these regulatory risks by:

- ensuring that DECA holders and their employees know how to recognise and eliminate AFB
  - new requirement for DECA holders to complete AFB refresher training every five years
  - new requirement for employee beekeepers to complete AFB recognition training and refresher training every five years.
- improved monitoring of AFB elimination by beekeepers through requiring diagnostic laboratories to supply all AFB laboratory test results to the management agency
- deterring<sup>35</sup> beekeepers from non-compliance with plan rules through the imposition of infringement fines
- mitigating the impacts of non-compliance by conferring an additional power enabling the management agency to take expedient<sup>36</sup> actions to destroy AFB beehives and prevent the spread of disease.

The sensitivity analysis demonstrates that the NPV is robust for lower income loss per hive, annual reduction in AFB incidence, industry size, or higher discount rate. Even if the annual reduction in AFB incidence is close to zero, NPV is still positive at about \$16 million.

<sup>34</sup> Resulting from the reduced incidence of AFB compared to the 'no control' option.

<sup>35</sup> In lieu of impractical/costly court-imposed fine for breaching.

<sup>36</sup> When power to give directions is impractical.

The proposed Plan is the preferred option for the elimination of AFB based upon consideration of the quantitative, qualitative and risk analysis of costs and benefits.

#### 11. Extent to which any person, or persons of a class or description, are likely to benefit from the plan [s.61(2)(c)(viii)]

The main beneficiaries of the Plan are beekeepers. Beekeepers benefit in several ways.

- Reduced loss of beehives.
- Reduced loss of income. AFB infections lead to reduced honey bee product production, and reduced ability to fulfil pollination contracts.
- Higher honey bee product prices and/or increased sales of honey bee products through eligibility to export to the European Union, United Kingdom, and China. Support is provided by the provisions of the Plan in two key ways:
  - Registration of apiaries is required to meet the Overseas Market Access Requirements for export of honey bee products to the European Union and United Kingdom.
  - The Overseas Market Access Requirements for exporting honey bee products to China specifies that the products must have no detectable levels of AFB.

Other parties also benefit from the Plan.

- Exporters, marketers, and honey product extractors, whose business rely on the production of honey bee products. The extent of the impact on these organisations is variable.
  - Exporters, marketers, and extractors may be affected by reduced honey product supply. The extent of this impact is likely to be negligible as honey product production currently exceeds domestic and export sales.
  - Exporters with high levels of exposure to the European Union, United Kingdom, and Chinese markets will be highly impacted.
- Associated industries who supply goods or services to the honey bee industry; e.g., hiveware suppliers. The extent of the impact to these persons is likely to be negligible as the Plan is not forecast to make a significant difference to the number of beehives in New Zealand.
- Horticultural and arable producers who procure pollination services. The impact to these producers is likely to be limited to increased charges for pollination services as beekeepers seek to recover increased operating costs associated with a higher incidence of AFB.
- Agricultural and Horticultural Industries and the wider New Zealand public benefit from 'free' pollination. The impact to these persons is likely to be negligible as the Plan is not forecast to make a significant difference to the number of beehives in New Zealand. It is therefore unlikely to have a significant impact on the extent of 'free' pollination available.

12. Extent to which any persons, or persons of a class or description, contribute to the creation, continuance, or exacerbation of the problems proposed to be resolved by the plan [s.61(2)(c)(ix)].

The main category of persons who contribute to the creation, continuance, and exacerbation of the problems to be resolved by the proposed AFB Plan are:

- beekeepers who create high levels of AFB through failure to apply effective measures to eliminate AFB from their beehives. These beekeepers present a serious AFB spread risk to other beekeepers who own beehives located within the same vicinity, and through the sale of beehives, bee products or appliances.

Other categories of persons who contribute to the creation, continuance, and exacerbation of the problems to be resolved by this Plan are:

- honey extractors whose extraction processes may make it difficult for a beekeeper to keep honey supers and frames from quarantine apiaries separate or may result in cross-contamination from one beekeeper honey supers and frames to another
- researchers, AFB recognition course trainers, and detector dog trainers. These persons apply for permits to retain infected beehive components. These permits are issued subject to conditions designed to reduce the AFB spread risk to negligible levels.

13. Rationale for the proposed allocation of costs [s.61(2)(c)(x)]

All significant exacerbators and beneficiaries with respect to AFB are identified in sections 11 and 12 above.

The group of persons most likely to benefit from the implementation of the Plan, and whose activities or inaction are most likely to contribute to the creation, continuance, or exacerbation of the problems to be resolved by the Plan, are beekeepers.

To eliminate AFB and minimise its impacts on honey bees and honey bee product production, beekeepers need to take primary responsibility and, as such, the Plan is primarily funded by a beekeeper levy with beekeepers picking up their direct costs.

Beekeepers can change their behaviour and are best placed to:

- integrate AFB inspection and elimination actions into their routine bee husbandry practices
- determine the most cost-effective approach to eliminating AFB from their beehives.

The beekeeper levy established under the Biosecurity (American Foulbrood – Beekeeper Levy) Order 2003 has a base levy per beekeeper and a colony levy. The beekeeper levy takes account of the additional fixed Plan implementation costs associated with each beekeeper, and the colony levy

takes account of the benefits of AFB elimination that accrue in proportion to the number of colonies owned.

Other persons or groups of persons that either benefit from this Plan or incur a cost as a result of this Plan, or both, and that have been considered when proposing the allocation of costs include:

- exporters, marketers, and honey product extractors. Exporters and marketers benefit from this Plan, and honey product extractors are both beneficiaries and exacerbators. Any costs these organisations incur would be passed on to beekeepers, and it is more efficient to collect the levy once and directly from beekeepers. This is in line with established industry practices
- associated industries who supply goods or services to the honey bee industry. These industries benefit from the sale of goods and services to the beekeepers (such as hiveware suppliers); however, they are unlikely to benefit from the implementation of the Plan per se. Any costs that these organisations incur would be passed on to beekeepers, and it is more efficient to collect the levy once and directly from beekeepers. This is in line with established industry practices
- horticultural and arable producers who procure pollination services. Horticultural and arable producers who procure pollination services benefit from this Plan. However, they pay beekeepers for the pollination services provided, and this payment reflects both the costs of supplying the service and a profit margin. Beekeepers are likely to pass increasing costs associated with increasing costs of AFB onto producers procuring pollination services, and it is more efficient to collect the levy once and directly from beekeepers. This is in line with established industry practices
- other persons that benefit from 'free' pollination. A wide variety of primary producers and the wider public benefit from 'free' pollination services provided by honey bees. However, the benefits of the Plan to these persons are likely to be negligible as the Plan is not expected to make a significant difference to the number of honey bee colonies in New Zealand. Therefore, it is not appropriate for these persons to fund the Plan
- researchers, AFB Trainers, and Detector Dog Trainers. Researchers, AFB Trainers, and Detector Dog Trainers are potential exacerbators of AFB. However, these persons are required to fund the costs of complying with permit conditions designed to prevent the spread of AFB, and their research/training activities are greatly valued by the beekeeping industry. On balance it is deemed inappropriate to collect a levy from these persons in addition to the costs of complying with permit conditions
- diagnostic laboratories that perform AFB diagnostic tests. These laboratories will bear indirect costs of the proposed new rule requiring diagnostic laboratories to provide all AFB diagnostic test results to the management agency. This is likely to require diagnostic laboratories to modify their existing Laboratory Information Systems to automate the provision of AFB test results to the management agency. Most of the additional costs are

likely to be incurred during the setup phase, with minimal ongoing operating costs expected. The diagnostic laboratories may seek to recover this cost through their AFB test fees.

- Government/Crown. While the New Zealand economy has been estimated to receive an annual \$5 billion benefit<sup>37</sup> from pollination services provided by honey bees, the size of this benefit is unlikely to change as the Plan is not expected to make a significant difference to the number of honey colonies in New Zealand. The government has no obligation to contribute to the costs of this Plan.

The AFB Agency Board considers that the costs are allocated in a fair, practical, and efficient manner that encourages behaviour change to achieve the objectives of the Plan. The Biosecurity (American Foulbrood – Beekeeper Levy) Order 2003 provides the security of funding required to implement the Plan.

14. If it is proposed that the plan will be funded by a levy under section 100L, how the proposed levy satisfies section 100L(5)(d) and what matters will be specified under section 100N(1) [s.61(2)(c)(xi)]

Section 100L (5)(d) requires the Minister be satisfied that:

*The imposition of the levy is the most appropriate means of funding the plan or the part of the plan, having regard to the extent to which the levy would target—*

- (i) persons likely to benefit from the implementation of the plan or the part of the plan; and*
- (ii) persons who by their activities or inaction contribute to the creation, continuance, or exacerbation of the problems proposed to be resolved by the plan or the part of the plan.*

The rationale for the levy and allocation of costs is provided in Section 13 of this report. This includes a consideration of those who benefit from implementation of the AFB Plan and those who contribute to the creation, continuance, or exacerbation of AFB risk.

The AFB Agency Board is not proposing to amend the existing levy order either now or in the foreseeable future. As such, the matters to be specified under section 100N(1) are already specified by the Biosecurity (American Foulbrood – Beekeeper Levy ) Order 2003.

15. Any unusual administrative problems or costs expected in recovering the costs allocated to any of the persons whom the plan would require to pay the costs [s.61(2)(c)(xii)]

No unusual administrative problems or costs are expected in recovering the costs.

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<sup>37</sup> See figure cited in Beehive.govt.nz, 5 August 2018, [Health check for bees to begin | Beehive.govt.nz](https://www.beehive.govt.nz/news/health-check-for-bees-to-begin)

## 16. Any other organism intended to be controlled [s.61(2)(d)]

No other organisms are intended to be controlled.

17. The effects that, in the opinion of the person making the proposal, implementation of the plan would have on economic wellbeing, the environment, human health, enjoyment of the natural environment, and the relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu, and taonga [s.61(2)(e)(i)]

### 17.1 Effects on economic wellbeing

There are significant positive effects on economic wellbeing as a result of implementing the proposed Plan. Conversely, there are also negative effects in the absence of a Plan, including income loss. The positive economic effects are summarised in the points below.

- Reduced honey production, income loss, and financial stress can result from the presence of AFB in hives. The proposed Plan reduces the risk of AFB infections and hive losses and hence has positive economic effects for beekeepers. Nimmo-Bell and Associates<sup>38</sup> analysed the costs of AFB and estimated AFB-related income loss due as equivalent to one year's production.

If there were no Plan, significant negative economic effects are likely, with the beekeeping industry predicted to lose \$70 million income due to AFB over a ten-year period. Conversely, Nimmo-Bell predicts that the proposed Plan will result in a \$42 million income benefit over ten years.

As such, the proposed Plan is expected to have positive effects on the economic wellbeing of beekeepers through the control of AFB to reduce hive losses and income.

- An increased incidence of AFB spores in New Zealand honey puts high-value export markets at risk in two ways. It potentially reduces the quantity of honey eligible for export, and it also increases the risk that AFB is detected in exported honey. China has indicated it will apply an export ban if AFB is detected in New Zealand honey at the border. The China market is worth \$101 million in annual sales, accounts for 21% of total honey exports, and 12% higher average export prices.<sup>39</sup>

The proposed Plan works to protect these markets and has a positive effect on the economic wellbeing of the honey export industry and the wider New Zealand economy.

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<sup>38</sup> Nimmo-Bell and Associates were commissioned by the AFB Agency to undertake an analysis of the costs and benefits of AFB and the proposed Plan.

<sup>39</sup> Nimmo-Bell & Associates, Cost Benefit Analysis of the National American Foulbrood Pest Management Plan, 3 August 2022 pp.23-24

- A provision of the proposed Plan also supports access to valuable European Union and United Kingdom markets. This provision requires all apiaries to be registered with the management agency, and in so doing, meets a requirement of the European Union and United Kingdom export markets. That is, the Overseas Market Access Requirement (OMAR) for exported honey to be produced by apiaries registered by a 'competent authority'. These are premium honey export markets with valued at \$63 million and \$71 million per annum respectively (Statistics NZ, cited in Nimmo-Bell, 2022, p.23).
- Significantly, pollination provided by honey bees is estimated to be worth \$5 billion to the New Zealand economy.<sup>40</sup>

A full analysis of the benefits and costs of the proposed Plan is provided in the cost benefit analysis provided as a separate document accompanying this report.

## 17.2 Effects on the environment

The proposed AFB Plan offers positive effects on the environment by providing some support to the work of the Department of Conservation. The Department may find value in the apiary register required by the proposed AFB Plan and administered by the management agency. Research undertaken by the Department found risks associated with honeybees that include competing with some native species for food, increasing pollination of some weeds, and spreading pests or diseases (notably myrtle rust).<sup>41</sup> In addition, the Department faces high and growing demand from beekeepers to place beehives on conservation land. The apiary register can assist the Department to identify beekeepers who have placed hives on conservation land without approval.

The proposed Plan requires infected hives are destroyed by burning and this has positive and negative effects on the environment. Negative effects are the emissions caused by burning. Positive effects are the comparatively lower number of AFB-infected hives due to the interventions proposed in the Plan, and hence fewer hives would be burnt.

## 17.3 Effects on human health

The World Organisation for Animal Health states that none of the bee diseases listed on its website, (and the list includes AFB) is infectious to humans.<sup>42</sup> However, it should be noted that many beekeepers report mental stress when hives are diseased with AFB.

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<sup>40</sup> Beehive.govt.nz, 5 August 2018, [Health check for bees to begin | Beehive.govt.nz](#)

<sup>41</sup> Beard, Catherine. (2015). Honeybees (*Apis mellifera*) on public conservation lands. A Risk Analysis. [Honeybees on conservation land: Our work \(doc.govt.nz\)](#)

<sup>42</sup> <https://www.woah.org/en/disease/diseases-of-bees/>

#### 17.4 Effects on enjoyment of the natural environment

Implementation of the AFB Plan is not expected to have adverse effects on the enjoyment of the natural environment.

#### 17.5 Effects on the relationship between Māori, their culture, and their traditions and their ancestral lands, waters, sites, wāhi tapu, and taonga

The effects of the AFB Plan on Māori are the economic effects on Māori beekeeping businesses and Māori landowners. Māori have a strong tradition in business and trading since early encounters with settlers and other nations.<sup>43</sup> However, there is a lack of data on Māori beekeeping businesses and Māori land use for placing beehives.<sup>44</sup> This reflects a nationwide lack of Māori business data, and the lack of a consensus definition for Māori business. Addressing the need for a definition is the subject of current work led by Stats NZ (due to report in 2022).<sup>45</sup>

For this document, Māori beekeeping businesses are defined as those that self-identify as Māori. Most Māori businesses are SMEs (small and medium enterprises) amounting to approximately 21,000 businesses<sup>46</sup>, mostly in the primary sector, and comprising 4.7 percent of all SMEs.<sup>47</sup> Exemplars and case studies of Māori beekeeping businesses have been highlighted in various media, and these businesses include: Whenua Honey (East Coast), a 2021 participant in an e-commerce training programme offered to Māori business owners<sup>48</sup>; Mana Kai (Northland) supported by New Zealand Trade and Enterprise (NZTE)<sup>49</sup>; Manawa Honey (Ruatāhuna) showcased by Westpac<sup>50</sup>; Tai

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<sup>43</sup> NZTE, June 2017, Māori Economy Investor Guide, p.4.

<sup>44</sup> Lack of Māori beekeeping data is noted in the introduction to the 'Māori Beekeeping Survey' (May 2022) in Te Kawa a Māui / School of Māori Studies at Te Herenga Waka / Victoria University of Te Whanganui-a-Tara' <https://poutama.co.nz/the-maori-beekeeping-survey-he-uiuinga-mo-te-mahi-tiaki-pi/>

<sup>45</sup> In 2021, Stats NZ convened a working group to help develop a Māori business definition, due to report mid-2022. This initiative is based on the recognition that there is a need for reliable and accurate data on Māori business and economic activity. <https://www.stats.govt.nz/reports/working-group-terms-of-reference-maori-business-definition>

<sup>46</sup> According to Census 2013 there were 14,900 Māori businesses with no employees, and 6,800 with employees, including micro and small businesses. Cited in BERL (2019), EU-NZ FTA Māori economy, p.15 <https://www.mfat.govt.nz/assets/Trade-agreements/EU-NZ-FTA/BERL-report.pdf>

<sup>47</sup> BERL. (2019). EU-NZ FTA Māori economy, p.15 <https://www.mfat.govt.nz/assets/Trade-agreements/EU-NZ-FTA/BERL-report.pdf>

<sup>48</sup> Whenua Honey, a 2021 participant in The The Ka Hao i te Ao Programme—an e-commerce training programme offered to Māori business owners <https://poutama.co.nz/ka-hao-business-profile-whenua-honey/>

<sup>49</sup> Mana Kai Honey, Customer Testimonial NZTE, 19 June 2019, <https://www.youtube.com/watch?v=yLmtKlpSJKI>

<sup>50</sup> <https://www.westpac.co.nz/assets/About-us/sponsorship/The-Maori-economy-obstacles-and-opportunities-Westpac-NZ-Oct-2021.pdf>

Tokerau Honey (Northland) featured in a 2020 Stuff article<sup>51</sup>; and Kai Ora Honey (Awanui) profiled on an international food supplier website (Hong Kong) specialising in New Zealand food<sup>52</sup>.

Common to all these Māori beekeeping businesses is expressed commitment to Māori values, including to sustainability and respect for honey bees as part of their role as kaitiaki (guardians) of the land. Such values are espoused on the websites of other Māori beekeeping businesses including Onuku Honey, Whakatāne (established by Onuku Māori Lands Trust) and Oha Honey, Masterton (Nga Tāhu owned). The contribution of Māori business in the primary sector as kaitiaki and leaders of sustainable growth is recognised in a recent MPI report,<sup>53</sup> and the intent of the proposed Plan to eliminate AFB and support sustainable beekeeping, aligns with these values.

Māori views on biosecurity (for all sectors) have been expressed in an MPI-led 'Biosecurity 2025' project.<sup>54</sup> The report on the Māori Focus Group emphasised that tāngata whenua have been practising biosecurity for centuries in their role as kaitiaki (cultural guardians). The vision statement developed by the Group included a clear commitment to a pest-free Aotearoa, as "a place where indigenous biodiversity thrives, and habitats are clean and free from harmful pests and diseases".<sup>55</sup> The Group also envisioned that "the border is effectively and efficiently managed, introduced organisms are either classified as being safe or are appropriately managed or eradicated".<sup>56</sup>

Māori landowners with beehives situated on their land also have a significant economic interest in beekeeping, and there is also a lack of data in this area. However, a large proportion of New Zealand's natural mānuka grows on Māori-owned land<sup>57</sup>, and an estimated 5–6 percent of New Zealand is in Māori ownership (as at June 2018).<sup>58 59</sup>

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<sup>51</sup> Parkes, M. (2020). <https://www.stuff.co.nz/entertainment/tv-radio/tv-guide/121770567/local-series-honey-wars-follows-family-business-in-northland>

<sup>52</sup> 178 degrees. (2019). <https://178degrees.com/blog/a-sustainable-approach-to-beekeeping/>

<sup>53</sup> MPI. (2021). *Situation and Outlook for Primary Industries*, p.22.

<sup>54</sup> MPI. (2016). Biosecurity 2025: Summary of Māori Focus Group engagement <https://www.mpi.govt.nz/dmsdocument/29126-Biosecurity-2025-Summary-of-feedback-from-the-Maori-Focus-Group>

<sup>55</sup> MPI. (2016). Biosecurity 2025: Summary of Māori Focus Group engagement, Appendix A.

<sup>56</sup> MPI. (2016). Biosecurity 2025: Summary of Māori Focus Group engagement, Appendix A.

<sup>57</sup> Landcare Research <https://www.landcareresearch.co.nz/discover-our-research/biodiversity/species-and-ecosystem-conservation/honey-landscape/>

<sup>58</sup> In 2017 NZTE estimated there were approximately 8,500 Māori owned small and medium enterprises, and 21,000 self-employed Māori. Collectively Māori owned approximately 10% of the total NZ agricultural, forestry and fishing asset base. There was an estimated 1.4 million hectares of registered Māori land, a significant proportion of which was yet to be developed to its potential. Cited in NZTE, 2017, Māori Economy Investor Guide, p.43.

<sup>59</sup> Stats NZ (2018) estimated that Māori freehold land was approximately 1.5 million ha constituting 5–6% of New Zealand. <https://www.stats.govt.nz/indicators/change-in-use-of-maori-land-for-primary-production>

Māori landowners' awareness of the economic value of their land for beekeeping has been growing, along with a concern for protecting mānuka as a sustainable resource.<sup>60</sup> <sup>61</sup>Although mānuka sustainability isn't the subject of the AFB Plan per se, it does serve to indicate Māori commitment to sustainable beekeeping (of which pest elimination and sufficient food sources are key components). The growth in mānuka honey production has led to Māori-driven collaborations and networks, including: a partnership between Māori agribusiness, Landcare Research, and the University of Waikato to support sustainability (The Honey Landscape project)<sup>62</sup>; New Zealand Mānuka Group to support Māori landowners<sup>63</sup>; The Mānuka Charitable Trust to protect mānuka and Māori honey interests<sup>64</sup>; and the Miere Coalition working to support Māori economic activity in the mānuka honey sector.<sup>65</sup>

This proposed AFB Plan provides a potential benefit to Māori businesses and Māori landowners in supporting sustainable beekeeping.

## 18. Effects of the plan on the marketing overseas of New Zealand products [s.61(2)(e)(ii)]

The effects of the AFB Plan on marketing New Zealand honey overseas are positive. New Zealand honey is a valuable export commodity, especially mānuka honey, which generated 90% of all export revenue in 2021.<sup>66</sup> In that year New Zealand exported just over 13,000 tonnes of honey worth NZD\$503 million.<sup>67</sup> In 2020 New Zealand was the top global exporter on a value per tonne basis (and comparatively ranks 14th on global export volume).<sup>68</sup> Since mid-2021 however, New Zealand export

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<sup>60</sup> Māori business interests in honey extend across the value chain from land use, honey products, and international trade. For instance, Te Taumata work with NZTE to market Māori products, including honey; e.g., see <https://www.tetaumata.com/news/2022/03/10/te-taumata-adds-maori-voice-to-trade-deals-in-2022/>

<sup>61</sup> It has been estimated that the mānuka honey business is worth \$1 billion and much of this value is held within the Māori economy, cited in Stowell, Hayden (2017) <https://poutama.co.nz/apitrak/>

<sup>62</sup> The Honey Landscape project aims to blend science and tikanga Māori to help landowners increase honey production while protecting the honey bees, native mānuka and plant species. <https://www.landcareresearch.co.nz/discover-our-research/biodiversity/species-and-ecosystem-conservation/honey-landscape/>

<sup>63</sup> The New Zealand Mānuka Group was formed in 2012 to help Māori landowners leverage their land to build mānuka plantations and receive a fair share of mānuka product profits. <https://www.nzmanukagroup.com/>

<sup>64</sup> In recent years initiative have been emerging to protect Māori interests in mānuka. For instance, The Mānuka Charitable Trust was established in 2020 to protect mānuka and related issues that affect Māori interests, including landowners and beekeepers. <https://www.tetaumata.com/news/2021/06/07/manuka-charitable-trust-update/>

<sup>65</sup> The Miere Coalition comprises Poutama Trust (lead agency and funder), Te Tumu Paeroa, and the Federation of Māori Authorities (FOMA). <https://www.ruraldelivery.net.nz/stories/Miere-Coalition> **Note:** Poutama Trust works with Māori businesses supporting sustainable growth and Te Tumu Paeroa supports Māori landowners to protect and enhance their assets (NZTE, 2017, Māori Economy Investor Guide, p.97).

<sup>66</sup> Apiculture New Zealand, New Zealand Honey Market Update, March 2022.

<sup>67</sup> <https://www.mpi.govt.nz/dmsdocument/42360-New-Zealand-honey-exports>

<sup>68</sup> NZTE, Manuka Honey in Europe (undated)

volumes have dropped, attributed to complex COVID-19-related global factors.<sup>69</sup> In this global and competitive context, it is more important than ever to protect and promote the positive reputation of New Zealand honey.

The absence of AFB spores, and protection of bee health, align with New Zealand's international marketing strategy for premium-quality honey.<sup>70</sup> Promoting the global reputation of New Zealand honey is a focus of the 'The New Zealand Honey Story'. This marketing resource was created by representatives of the honey industry and promotes the unique attributes of New Zealand honey to global and domestic consumers. These attributes underscore the reputation of our honey and include exceptional flavours and wellness attributes; protection of the quality, integrity, and purity of honey; and guardians of the health and wellness of bees and the environment.<sup>71</sup> The AFB Plan objectives and activities support the positive reputation of New Zealand honey.

A target market for New Zealand honey is the growing segment of health- and food-conscious consumers, who care about where and how products are produced.<sup>72</sup> In a 2021 New Zealand Honey Update, it was noted that New Zealand pasture/bush honey benefited from an increased global interest in natural foods during 2020.<sup>73</sup> It also appears that despite the recent downturn in the volume of New Zealand honey exports, the value of monofloral mānuka is holding, and this has been attributed to the health and wellness attributes associated with mānuka.<sup>74</sup> Given the growing global interest in honey's health benefits, AFB spore-free honey may be an attractive factor to health-conscious consumers, even though AFB spores pose no known threat to human health. There is a potential reputational risk if AFB spores are detected and publicised, creating negative consumer perceptions of New Zealand honey.

Two of our top export markets for honey (by export volume), are China (18%) and the United Kingdom (13%).<sup>75</sup> For China, the absence of AFB spores in our honey is a requirement. If AFB is detected in exported honey, the Chinese authorities have threatened to ban honeybee product imports from New Zealand if AFB is detected.

The UK and EU markets are put at risk if New Zealand fails to meet the 'Overseas Market Access Requirement (OMAR)' that specifies apiaries are to be registered by a competent authority. Currently the AFB Agency manages and administers the only authorised apiary register in New Zealand, as this is a requirement under the existing AFB Plan.

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<sup>69</sup> *ibid.*

<sup>70</sup> <https://www.nzstory.govt.nz/about-us/news/a-storytelling-boost-for-our-beekeepers-and-honey-sector/>

<sup>71</sup> [https://apinz.org.nz/wp-content/uploads/2021/05/NZ-Honey-Story\\_HowToGuide.pdf](https://apinz.org.nz/wp-content/uploads/2021/05/NZ-Honey-Story_HowToGuide.pdf)

<sup>72</sup> *ibid.*

<sup>73</sup> <https://apinz.org.nz/wp-content/uploads/2021/06/Apiculture-New-Zealand-Market-Update-June-2021.pdf>

<sup>74</sup> Apiculture New Zealand, NZ Honey Market Update, June 2022.

<sup>75</sup> Ministry of Primary Industries, New Zealand honey exports, June 2022.

<https://www.mpi.govt.nz/dmsdocument/42360-New-Zealand-honey-exports>

For future new honey markets, New Zealand's management of AFB may become an important factor. For instance, in 2020 during preliminary negotiations for honey market access between MPI and Mexico's MPI equivalent, it was important to Mexico that any shipped honey was free of AFB spores.<sup>76</sup>

#### 19. Effects of the plan on another pest management plan or a pathway management plan, [s.61(2)(f)]

It is not expected that the AFB Plan will affect another pest management plan or a pathway management plan.

#### 20. Powers in Part 6 that it is proposed to use to implement the plan [s.61(2)(g)]

The existing AFB Plan (as amended on 18 September 2012) confers ten Part 6 powers on the management agency and authorised persons to implement the Plan. It is proposed that these powers are retained in the proposed Plan, and in addition, two new Part 6 powers are also conferred to the management agency and authorised persons. These powers are listed in Tables 2 and 3 below. Table 2 lists the proposed existing powers and Table 3 lists the proposed new powers.

**Table 2: Part 6 powers conferred to the management agency and authorised persons under the existing AFB Plan**

Section	Power	Reason why the power is needed
106	Power to require assistance	So an 'authorised person' can seek assistance when required.
109	Power of inspection	To enable an authorised person to carry out monitoring for the purpose of confirming presence, former presence, or absence of AFB, and for eradicating or managing AFB.
119	Power to seize abandoned goods	To enable an authorised persons to seize, treat or dispose of any risk goods (e.g., beehives) that appear to have been abandoned and that create a serious risk.
121	Power to examine organisms	To enable an authorised persons to examine, collect and test of beehives and other goods or materials for the purpose of establishing whether AFB is present or absent.
122	Power to give directions	To enable an authorised person to give directions to: <ul style="list-style-type: none"> <li>sterilise appliances that may be contaminated with AFB</li> </ul>

<sup>76</sup> Advice provided through email communication with ApiNZ.

		<ul style="list-style-type: none"> <li>destroy honey bees, bee products and appliances suspected of harbouring AFB</li> <li>take steps to prevent the spread of AFB</li> <li>comply with rules in this Plan.</li> </ul>
128	Power to act on default	To enable the management agency to act on default where a notice has been issued, and to recover the costs and expenses reasonably incurred.
130	Declaration of restricted place	To prevent the spread of AFB by restricting the movement of honey bees, bee products and appliances to or from an apiary site or other place.
131	Declaration of controlled area	To enable movement controls to be put in place, including the controls on various risk goods (honey bees, bee products and appliances etc).
135	Options for cost recovery	To enable cost recovery.
136	Failure to pay	To enable the application of financial penalties to unpaid debts.

The AFB Agency Board proposes that additional Part 6 powers be conferred on the management agency and authorised persons under the AFB Plan, as shown in Table 3.

**Table 3: Additional Part 6 powers proposed to be conferred to the management agency and authorised persons**

Section	Power	Reason why the power is needed
114	General powers	To enable authorised persons to take expedient actions to manage any serious risks that could lead to further spread of AFB.
115	Use of dogs and devices	To future proof the AFB Plan to enable authorised persons to use detector dogs to detect AFB should the scientific community confirm that detector dogs are effective.

## 21. Proposed rules and an explanation of purpose [s.61(2)(h)]

The existing AFB Plan (as amended 18 September 2012) contains 30 Plan Rules which give legal effect to the Plan's principal measures to achieve the elimination of AFB. The AFB Agency Board is proposing to strengthen the Plan by amending eight existing rules and introducing four new rules. A summary of proposed changes to plan rules grouped by the principal measure each rule supports, is shown in Table 4 below.

**Table 4: Proposed changes to Plan Rules grouped by the principal measure**

Clause		Proposed amendment
<b>All beehives are situated in a place notified to the management agency</b>		
15	Prohibition on keeping bees in a place other than an apiary	Change to infringement offence.
17	Place may be notified as apiary	No change.
18	Seasonal apiaries	No change.
19	Allocation of identification code	Amend to allow the management agency to issue beekeeper registration number prior to registration of first apiary.
20	Marking of apiaries	Remove redundant subclause 2(b).
21	Removal of identification code	No change.
22	Use of marks similar to identification code	No change.
23	Register of apiaries	No change.
24	Place ceasing to be apiary	No change.
25	Destruction of beehives posing risk	No change.
<b>All beehives are inspected at least once per year by a person competent to recognise AFB</b>		
11	Obligation to keep honey bee in moveable-frame hives	Change to infringement offence.
12	Exemption from obligations to keep honey bees in moveable-frame hives	No change.
13	Access to beehives	No change.
14	Restrictions on use of drugs	No change.
32	Certificate of inspection	Change to infringement offence.
33	Statement by person inspecting beehives	No change.

34	Obligation to notify beekeeper or American foulbrood case	No change.
35	Obligation to specify approved methods	No change.
<b>All cases of AFB are notified to the management agency</b>		
26	Notification of American foulbrood	No change.
<b>All honey bees, bee products, and appliances associated with detected cases of AFB are destroyed or sterilised; and other actions to prevent the spread of AFB</b>		
28	Obligation of beekeeper to destroy honey bees and materials	Change to make it an offence to breach this rule.
29	Prohibition on dealings with materials associated with American foulbrood	No change.
30	Exemptions for research education and training	No change.
31	Dealing with products from honey bee colony with American foulbrood	No change.
<b>DECA holders make a legal commitment to eliminate AFB from their beehives</b>		
36	Certificate of Inspection Exemption	No change.
37	Disease Elimination Conformity Agreement	No change.
New Rule	Training of employee beekeepers	Requires employee beekeepers (persons employed or contracted by a beekeeper who undertakes honey bee husbandry procedures) to: <ul style="list-style-type: none"> <li>• Pass a recognised course in AFB recognition prior to completing 6 months of employment</li> <li>• Complete refresher training every 5 years.</li> </ul>
38	Amendment of Disease Elimination Conformity	No change.

	Agreement by management agency	
39	Review of Certificate of Inspection Exemption	Change to allow Certificate of Inspection Exemption to be revoked if a DECA holder does not comply with: <ul style="list-style-type: none"> <li>• 5 yearly AFB refresher training requirement, or</li> <li>• Employee beekeeper training requirements.</li> </ul>
New Rule	Transitional provisions for Review of Certificate of Inspection Exemption	Provides a two-year transition period for DECA holders to comply with new training requirements.
<b>Management agency monitors beekeepers' compliance with their obligations, and undertakes enforcement actions when appropriate</b>		
10	Obligation to supply information	No change.
New Rule	Requirement for laboratories to provide AFB test results	New rule requiring diagnostic laboratories to provide all AFB test results.
New Rule	Notification of beehive transfer	New rule requiring beekeepers to notify the transfer of beehives within 14 days.
27	Annual Disease Return	Change to require provision of beekeeper registration numbers when beekeepers notify beehive transfers; and change to an infringement offence.
40	Inspections and audits	No change.

The full list of proposed Plan rules and their associated policy intent is shown in Table 5 below. Proposed new Plan rules and amendments to current plan rules are shown in blue and text to be removed is shown with blue strikethrough (~~strikethrough~~).

**Table 5: Proposed Plan Rules and associated explanation of policy intent.** Note all proposed new rules and amendments to the existing Plan Rules are shown in blue.

Proposed Plan Rules	Policy intent
<p><b>10 Obligation to supply information</b></p> <p>1. This clause applies to—</p> <ol style="list-style-type: none"> <li>a. beekeepers</li> <li>b. persons who own or occupy land or have owned or occupied land on which a honey bee colony, bee product, or appliance is or has been located</li> </ol>	<p>The intent of the rule is to provide authorised persons with the power to require information required to monitor the presence, absence or</p>

<p>c. persons who are or have been in charge of a honey bee colony, bee product, or appliance</p> <p>d. persons who are or have been in charge of the keeping of honey bees</p> <p>e. persons who are or have been in charge of a diagnostic laboratory.</p> <p>2. An authorised person may require a person to whom this clause applies to provide information held by that person that the authorised person believes, on reasonable grounds, is necessary for the purpose of monitoring the presence, former presence, absence, or distribution of <i>Paenibacillus larvae larvae</i> or the honey bee.</p> <p>3. A person required to provide information in accordance with this clause must provide that information within the time specified by the authorised person.</p> <p>4. A breach of this rule is an offence under section 154N(18) of the Act.</p>	<p>distribution of AFB or honey bees.</p>
<p><b>(New rule) Requirement for laboratories to provide AFB test results</b></p> <p>1. Persons who are in charge of a diagnostic laboratory must provide the management agency with the results of all samples tested for AFB and</p> <ol style="list-style-type: none"> <li>the name and address of the person that submitted the sample</li> <li>the name and address of the beekeeper whose honey bees, bee products or appliances were sampled.</li> </ol> <p>2. A breach of this rule is an offence under section 154N(18) of the Act.</p>	<p>The intent of the proposed new rule is to ensure that the management agency has access to all AFB laboratory test results in New Zealand to improve its ability to monitor the level of AFB in beehives owned by beekeepers.</p>
<p><b>11 Obligation to keep honey bees in moveable-frame hives</b></p> <p>1. A person who keeps honey bees must keep those honey bees in moveable-frame hives.</p> <p>2. A person who keeps honey bees and who has an exemption in accordance with clause 12 is exempt from the obligation in subclause (1) of this clause if those honey bees are kept in accordance with the exemption.</p> <p>3. A breach of this rule is an <b>infringement</b> offence pursuant to regulations made under section <del>154N(18)</del> 165 of the Act.</p>	<p>The intent of this rule is to require honey bees to be kept in moveable frame hives to facilitate inspection for AFB.</p> <p>The intent of the proposed amendment to this rule is to change the offence to an <b>infringement offence</b>.</p>
<p><b>12 Exemption from obligation to keep honey bees in moveable-frame hives</b></p> <p>1. An authorised person may exempt a person from the obligation in clause 11(1) if that person has applied in writing for an exemption and the exemption is required for 1 or more of the following purposes:</p> <ol style="list-style-type: none"> <li>scientific research</li> <li>rearing of queen honey bees</li> </ol>	<p>The intent to this rule is to enable authorised persons to provide exemptions from the requirement to keep bees in moveable frame hives for scientific, queen rearing, packaged bees, and public display purposes.</p>

<p>c. packages of honey bees for stocking beehives</p> <p>d. public display.</p> <p>2. The exemption must be given in writing and must specify the period of time for which the exemption applies and may specify conditions on which the exemption is granted.</p>	
<p><b>13 Access to beehives</b></p> <p>1. Every person in charge of the keeping of honey bees must ensure the normal access to honey bees, bee products, and appliances is kept free from vegetation that would impede or prevent inspection.</p> <p>2. A breach of this rule is an offence under section 154N(18) of the Act.</p>	<p>The intent of this rule is to provide access to beehives for inspection.</p>
<p><b>14 Restrictions on use of drugs</b></p> <p>1. No person may use any drug, substance, or mixture of substances in relation to apiaries, honey bees, appliances, or bee products that has the effect of masking, obscuring, or concealing symptoms of American foulbrood or increasing the difficulty of detecting the disease or <i>Paenibacillus larvae larvae</i>.</p> <p>2. The provisions of subclause (1) do not apply where a drug is used in accordance with an approval granted under section 25(2) of the Apiaries Act 1969, or with an animal product standard made under Part 4 of the Animal Products Act 1999 or a regulated control scheme made under Part 3 of that Act.</p> <p>3. A breach of this rule is an offence under section 154N(18) of the Act.</p>	<p>The intent of this rule is to ban the use of substances and drugs that may make it difficult to detect AFB when beehives are inspected.</p>
<p><b>15 Prohibition on keeping bees in place other than apiary</b></p> <p>1. No beekeeper may permit beehives owned by that beekeeper to be situated in a place for more than 30 consecutive days unless that place has been notified as an apiary, in accordance with clause 17, by that beekeeper.</p> <p>2. A breach of this rule is an <a href="#">infringement</a> offence pursuant to regulations made under section <del>154N(18)</del> 165 of the Act.</p>	<p>The intent of this rule is to require registration of apiaries within 30 consecutive days of beehives being situated in a place.</p> <p><a href="#">The intent of the proposed amendment to this rule is to change the offence to an infringement offence.</a></p>
<p><b>17 Place may be notified as apiary</b></p> <p>1. A place may be notified as an apiary by a beekeeper if—</p> <p>a. 1 beehive or a group of beehives owned by the beekeeper is situated in that place; and</p>	<p>The intent of this rule is to describe the information that must be provided when an apiary is registered.</p>

<p>b. in the case of a group of beehives, each beehive within that group is situated 200 metres or less from another beehive owned by the same beekeeper.</p> <p>2. Where the beehives in a place are owned by more than 1 beekeeper, that place must be notified as a separate apiary by each beekeeper.</p> <p>3. The notification of an apiary must be in writing and must include the full name and address of the beekeeper and the number of honey bee colonies in the apiary, the name and initial of the occupier of the place where the apiary is situated, the road name (if any) and address of the place where the apiary is situated, and a written description of the location of the apiary, including a Land Information New Zealand Topographic Map 260 Series grid reference, or a reference based on the Global Positioning System (GPS).</p> <p>4. The notification must state whether the beehives are situated in the apiary for all of the calendar year or for specified months of the calendar year.</p>	
<p><b>18 Seasonal apiaries</b></p> <p>1. A place notified to the management agency as an apiary where the beehives are situated for specified months of the calendar year is a seasonal apiary.</p> <p>2. Despite anything to the contrary in this order, a seasonal apiary continues to be an apiary as long as beehives owned by the beekeeper who notified the place to the management agency as an apiary are situated in that place for more than 30 consecutive days in any year beginning on 1 July.</p>	<p>The intent of this rule is to provide the legal definition of a seasonal apiary.</p>
<p><b>19 Allocation of identification code</b></p> <p>1. When a beekeeper first notifies a place to the management agency as an apiary, the management agency must give that beekeeper written notice of a code to be used as an identification code for that beekeeper.</p> <p>1a. When a person that does not have an identification code advises the management agency that they intend to notify an apiary, the management agency may give written notice of a code to be used as an identification code for that beekeeper.</p> <p>2. Where a code number was allocated to a beekeeper under section 5 of the Apiaries Act 1969, the beekeeper may continue to use that code.</p>	<p>The intent of this rule is to provide beekeepers with beekeeper registration numbers.</p> <p>The intent of the proposed amendment to this rule is to enable the management agency to supply beekeeper registration numbers to unregistered beekeepers prior to registration of their first apiary. This change will make it easier for the beehive transferer to comply with the proposed new rule requiring notification of transfer of beehives within 14 days.</p>

<p><b>20 Marking of apiaries</b></p> <ol style="list-style-type: none"> <li>1. Where the beekeeper does not have an identification code at the time that beekeeper notifies a place to the management agency as an apiary, the beekeeper must, within 30 days of the receipt of that identification code, mark the identification code on the outside of a beehive within that apiary or on a sign within that apiary.</li> <li>2. Unless subclause (1) applies, a beekeeper must mark the beekeeper’s identification code on the outside of a beehive within each apiary or on a sign within each apiary, where the beehives are owned by that beekeeper, —             <ol style="list-style-type: none"> <li>a. within 7 days of the date that apiary is notified to the management agency: or</li> <li><del>b. on or before 31 October 1998, if clause 16(1) applies.</del></li> </ol> </li> <li>3. The identification code must be marked on the beehive or the sign in such a manner that a person may, at any time, readily locate and read the identification code for that apiary.</li> <li>4. A breach of this rule is an offence under section 154N(18) of the Act.</li> </ol>	<p>The intent of this rule is to require apiaries to be marked with beekeeper registration numbers.</p> <p><a href="#">Note that clause 2(b) is redundant in the existing AFB Plan as clause 16 was revoked on 5 September 2013.</a></p>
<p><b>21 Removal of identification code</b></p> <ol style="list-style-type: none"> <li>1. Unless subclause (2) applies, no person other than the beekeeper may, without the written permission of the management agency, remove the beekeeper’s identification code marked on a beehive or in an apiary or alter it in such a way that the identification code no longer clearly applies to that beehive or apiary.</li> <li>2. Where a beekeeper transfers the ownership of a beehive marked with identification codes, the beekeeper must—             <ol style="list-style-type: none"> <li>a. remove all the identification codes or alter all the identification codes in such as way as to make it clear that identification codes no longer apply to that beehive; and</li> <li>b. notify the management agency of the name and address of the transferee.</li> </ol> </li> <li>3. A breach of this rule is an offence under section 154N(18) of the Act.</li> </ol>	<p>The intent of this rule is to make it an offence for anyone other than the beekeeper to remove the beekeeper identification code from a beehive/apiary and specifies the identification requirements when the ownership of a marked a marked beehive is transferred from one beekeeper to another.</p>
<p><b>22 Use of marks similar to identification codes</b></p> <ol style="list-style-type: none"> <li>1. No person may knowingly mark a beehive or an apiary or knowingly use a mark on a beehive or in an apiary where—             <ol style="list-style-type: none"> <li>a. that mark is likely to be mistaken for, or confused with, an identification code; or</li> </ol> </li> </ol>	<p>The intent of this rule is to make it an offence to knowingly mark an apiary with the incorrect beekeeper registration number or another number that may be confused with a beekeeper registration number.</p>

<p>b. that mark is an identification code, and that identification code was not allocated to the person marking or using the code.</p> <p>2. A breach of this rule is an offence under section 154N(18) of the Act.</p>	
<p><b>23 Register of apiaries</b></p> <p>1. The management agency must keep a register of all apiaries notified to the management agency or registered under the Apiaries Act 1969 and may from time to time amend or delete any entry in the register.</p> <p>2. The register must include all the information supplied to the management agency in accordance with clause 17 and all other relevant information supplied to the management agency or to an authorised person in accordance with the plan rules.</p>	<p>The intent of this rule is to require the management agency to keep a register of apiaries and to ensure that the registered apiaries include all the apiary information specified by clause 17.</p>
<p><b>24 Place ceasing to be apiary</b></p> <p>1. Unless that place is a seasonal apiary, a place notified to the management agency as an apiary ceases to be an apiary if no beehives owned by the beekeeper who notified that apiary are situated in that place.</p> <p>2. Where an apiary has been notified to the management agency as a seasonal apiary, that place ceases to be an apiary if no beehives owned by the beekeeper who notified that apiary have been situated in that place for more than 30 consecutive days in any year beginning on 1 July.</p> <p>3. When a place ceases to be an apiary, the beekeeper must notify the management agency in writing within 30 days.</p> <p>4. A breach of this rule is an offence under section 154N(18) of the Act.</p>	<p>The intent of this rule is to require beekeepers to:</p> <ul style="list-style-type: none"> <li>• deregister permanent apiary sites within 30 days of beehives of beehives being removed from the site</li> <li>• deregister seasonal apiary sites when they have not been used for 30 consecutive days in any year beginning 1 July.</li> </ul>
<p><b>25 Destruction of beehives posing risk</b></p> <p>1. Where—</p> <ol style="list-style-type: none"> <li>a. 1 or more beehives have been situated for more than 30 consecutive days in a place that has not been notified to the management agency as an apiary; and</li> <li>b. [Revoked]</li> <li>c. an authorised person has complied with subclause (2); and</li> <li>d. the beekeeper has not notified the management agency of that place as an apiary before the expiry of the time limit in subclause (2)(b),—</li> </ol> <p>an authorised person may destroy the beehives and all honey bees, bee products, and appliances associated with those beehives (associated matter).</p>	<p>The intent of this rule to provide authorised persons with the power to destroy unregistered apiaries.</p> <p>The rule also describes the actions the authorised person must undertake to identify the beekeeper who owns the apiary prior to destroying the beehives and the information recording requirements.</p>

<p>2. Before action is taken under subclause (1), an authorised person must make reasonable attempts to find the owner of the beehives by—</p> <ul style="list-style-type: none"> <li>a. making inquiries, including inquiries of the occupier of the place where the beehives are situated; and</li> <li>b. fixing 1 weatherproof notice to one of the beehives instructing the owner to notify the management agency of that place as an apiary within 30 days of the date of the notice.</li> <li>c. (c)[Revoked]</li> </ul> <p>3. An authorised person must maintain records of—</p> <ul style="list-style-type: none"> <li>a. all beehives and associated matter destroyed under subclause (1); and</li> <li>b. the actions taken to identify the owner of the beehives and associated matter before their destruction.</li> </ul>	
<p><b>26 Notification of American foulbrood</b></p> <p>1. Where an American foulbrood case is discovered in a beehive, —</p> <ul style="list-style-type: none"> <li>a. the person in charge of the keeping of the honey bees must, within 7 days of becoming aware of the American foulbrood case, notify the management agency and the beekeeper in writing of the case; and</li> <li>b. an authorised person must, within 7 days of becoming aware of the American foulbrood case, notify the management agency in writing of the case.</li> </ul> <p>2. A breach of this rule is an offence under section 154N(18) of the Act.</p>	<p>The intent of this rule is to require beekeepers and authorised persons to notify the management agency of cases of AFB within 7 days of finding the case.</p>
<p><b>(New rule) Notification of beehive transfer</b></p> <p>1. Where the ownership of any beehives is transferred from one beekeeper to another –</p> <ul style="list-style-type: none"> <li>a. The beekeeper transferring the beehives must, with 14 days of the transfer, notify the management Agency in writing of the dates on which the ownership of beehives was transferred from the beekeeper, and, in each case, the number of beehives transferred and the name address and beekeeper registration number of the transferee and transferor</li> <li>b. The beekeeper receiving the beehives must, with 14 days of the transfer, notify the management agency in writing of the dates on which the ownership of beehives was transferred from the beekeeper, and, in each case, the number of beehives transferred and the name address and beekeeper registration number of the transferee and transferor.</li> </ul> <p>2. A breach of this rule is an offence under section 154N(18) of the Act.</p>	<p>The intent of the proposed new rule is to provide the management agency with timely access to beehive transfer information to enable tracing of potential spread of AFB from one beekeeper to another.</p>

<p><b>27 Annual Disease Return</b></p> <ol style="list-style-type: none"> <li>1. On or before 1 June in each year, every beekeeper must, for all beehives owned by that beekeeper, complete and send, whether electronically or otherwise, to the management agency an Annual Disease Return.</li> <li>2. An Annual Disease Return must be in the form provided by or obtained from the management agency and must contain—             <ol style="list-style-type: none"> <li>a. the number of honey bee colonies in beehives owned by that beekeeper; and</li> <li>b. the location of each beehive where an American foulbrood case was found and the dates on which those cases were discovered; and</li> <li>c. the dates on which the ownership of any beehives was transferred to or from the beekeeper and, in each case, the number of beehives transferred and the name, address and <b>identification code</b> of the transferee and transferor; and</li> <li>d. any change to the information supplied to the management agency in accordance with clause 17.</li> </ol> </li> <li>3. A breach of this rule is an <b>infringement</b> offence pursuant to regulations made under section <del>154N(18)</del> 165 of the Act.</li> </ol>	<p>The intent of this rule is to ensure that the management agency has accurate information about the number of honey bee colonies, AFB notifications, beehive transfers, apiary registrations and apiary information.</p> <p>The intent of proposed amendments to this rule are to:</p> <ul style="list-style-type: none"> <li>• require provision of beekeeper registration numbers to make it easier for the management agency to use beehive transfer notifications for AFB tracing purposes [2(c)], and</li> <li>• change the offence to an infringement offence (3).</li> </ul>
<p><b>28 Obligation of beekeeper to destroy honey bees and materials</b></p> <ol style="list-style-type: none"> <li>1. Where an American foulbrood case is discovered in a beehive, the beekeeper who owns that beehive must, within 7 days of becoming aware of that case, destroy by burning all honey bees, bee products, and appliances associated with that honey bee colony unless directed otherwise by an authorised person.</li> <li>2. The provisions of this clause do not apply to—             <ol style="list-style-type: none"> <li>a. a beekeeper who is acting in accordance with the relevant provision of a Disease Elimination Conformity Agreement between the beekeeper and the management agency; or</li> <li>b. a person acting in accordance with a permission, regulation, or authorisation provided for in sections 52 or 53 of the Act; or</li> <li>c. a person acting in accordance with an exemption given under clause 30.</li> </ol> </li> <li>3. A breach of this rule is an offence under section 154N(18) of the Act.</li> </ol>	<p>The intent of this rule is to require beekeepers to destroy all honey bees, bee products, and appliances associated with a case of AFB within 7 days, unless otherwise permitted.</p> <p>The intent of the amendment is to make it an offence not to destroy honey bees, bee product and products by burning as required by this rule.</p>

<p><b>29 Prohibition on dealings with materials associated with American foulbrood</b></p> <ol style="list-style-type: none"> <li>1. No person who suspects or knows that a honey bee colony is or was displaying any of the clinical symptoms of American foulbrood may use or expose—             <ol style="list-style-type: none"> <li>a. a bee product associated with that honey bee colony; or</li> <li>b. an appliance associated with that honey bee colony, other than an appliance sterilised by a method approved by the management agency, — in a manner that allows honey bees access to that product or appliance.</li> </ol> </li> <li>2. The method approved by the management agency must be a method generally recognised by the scientific community as effective in sterilising appliances contaminated with American foulbrood.</li> <li>3. The provisions of this clause do not apply to a person referred to in clause 28(2).</li> <li>4. A breach of this rule is an offence under section 154N(18) of the Act.</li> </ol>	<p>The intent of this rule is to make it an offence to expose bee products and unsterilised appliances associated with a case of AFB to honey bees.</p>
<p><b>30 Exemptions for research, education, and training</b></p> <ol style="list-style-type: none"> <li>1. The management agency may, by notice in writing, exempt any person from the obligations in clause 28, the prohibition in clause 29, or the prohibition in clause 31, for the purpose of research, education, or training relating to American foulbrood or <i>Paenibacillus larvae larvae</i> for such a time not exceeding 12 months and on such conditions as the management agency thinks fit.</li> <li>2. The management agency may grant an exemption only if, in the opinion of the management agency, the exemption will not allow the exposure or spread of American foulbrood or <i>Paenibacillus larvae larvae</i> beyond the area specified in the exemption.</li> <li>3. The management agency may at any time withdraw or amend the exemption—             <ol style="list-style-type: none"> <li>a. if the management agency is satisfied on reasonable grounds—                 <ol style="list-style-type: none"> <li>i. that the conditions on which the exemption was granted have been breached; or</li> <li>ii. that the exemption is resulting, is likely to result, or has resulted in the exposure or spread of American foulbrood or <i>Paenibacillus larvae larvae</i> beyond the area specified in the exemption; or</li> </ol> </li> <li>b. at the request of the holder of the exemption.</li> </ol> </li> <li>4. American foulbrood may be communicated, released, or spread for the purposes of section 52(a) of the Act in the circumstances set out in an exemption given under this clause.</li> </ol>	<p>The intent of this rule is to provide the management agency with authority to grant exemptions from the requirements of clauses 28 and 29 to facilitate research, education, and training.</p>

<p><b>31 Dealing with products from honey bee colony with American foulbrood</b></p> <ol style="list-style-type: none"> <li>1. No person may transfer ownership or possession to any other person, or remove from the place where they are situated, any honey bees, bee products, or appliances associated with any honey bee colony where that person knows or suspects that the honey bee colony is or was displaying any of the clinical symptoms of American foulbrood.</li> <li>2. A person is exempt from the prohibition in subclause (1) if that person—             <ol style="list-style-type: none"> <li>a. is a person to whom clause 28(2) applies; or</li> <li>b. is acting in accordance with the written consent of an authorised person.</li> </ol> </li> <li>3. An authorised person may grant consent only if, in the opinion of that authorised person, there is unlikely to be any significant risk of exposure or spread of American foulbrood to any beehives or honey bee colonies caused by the actions authorised by the consent.</li> <li>4. A breach of this rule is an offence under section 154N(18) of the Act.</li> </ol>	<p>The intent of this rule is to make it an offence to transfer ownership or possession, or move honey bees, bee products, or appliances associated with a case of AFB, unless otherwise permitted.</p>
<p><b>32 Certificate of Inspection</b></p> <ol style="list-style-type: none"> <li>1. Every beekeeper must ensure that every honey bee colony in every beehive owned by that beekeeper is inspected for American foulbrood cases by an authorised person on or after 1 August and on or before 30 November each year commencing in 1999.</li> <li>2. The inspection specified in subclause (1) may, if the beekeeper agrees, be carried out by a person named as a person responsible for disease management in a Disease Elimination Conformity Agreement between any other beekeeper and the management agency.</li> <li>3. Within 14 days after the inspection is completed or before 15 December of each year, whichever is the earlier, every beekeeper must complete a Certificate of Inspection in a form provided by or obtained from the management agency and forward to the management agency the Certificate of Inspection together with the statement made in accordance with clause 33.</li> <li>4. The obligations in subclauses (1) and (3) do not apply to a beekeeper who holds a Certificate of Inspection Exemption from the management agency.</li> <li>5. A breach of this rule is an <a href="#">infringement</a> offence pursuant to regulations made under section <del>154N(18)</del> 165 of the Act.</li> </ol>	<p>The intent of this rule is to ensure that every honey colony receives at least one inspection for AFB each year by a person competent to recognise AFB.</p> <p>This rule does not apply to beekeepers who hold a Certificate of Inspection Exemption. However, the DECA associated with the Certificate of Inspection Exemptions requires these beekeepers to ensure that all honey bee colonies receive more than one inspection for AFB by a person competent to recognise AFB.</p> <p><a href="#">The intent of the amendment to this rule is to change the offence to an infringement offence.</a></p>

<p><b>33 Statement by person inspecting honey bee colonies</b></p> <p>1. Every authorised person, or person referred to in clause 32(2), who carries out an inspection under clause 32 must complete and sign a statement confirming—</p> <ol style="list-style-type: none"> <li>a. that the inspection of the honey bee colonies was carried out by that person; and</li> <li>b. the location (including the road name, if any, and the address of the place) of the honey bee colonies inspected; and</li> <li>c. the number of honey bee colonies inspected in each place; and</li> <li>d. the name and initial of the occupier of the place where the honey bee colonies are situated; and</li> <li>e. the date of the inspection; and</li> <li>f. the location and number of American foulbrood cases (if any) and the dates on which those cases (if any) were found; and</li> <li>g. a record of the actions taken (if any) by the person inspecting, in respect of each American foulbrood case found.</li> </ol> <p>2. A breach of this rule is an offence under section 154N(18) of the Act.</p>	<p>The intent of this rule is to require the person inspecting colonies for a Certificate of Inspection to provide the information required and declare that they have inspected the colonies for AFB as stated.</p>
<p><b>34 Obligation to notify beekeeper of American foulbrood case</b></p> <p>Where an authorised person, or person referred to in clause 32(2), discovers an American foulbrood case during any inspection carried out under this plan, the person who found that case must notify in writing the beekeeper who owns the beehive in which that case was found of the case.</p>	<p>The intent of this rule is to require the person inspecting colonies for a Certificate of Inspection to notify the beekeeper of any AFB cases found.</p>
<p><b>35 Obligation to specify approved methods</b></p> <ol style="list-style-type: none"> <li>1. The management agency must approve the methods by which an inspection under clause 32 must be carried out.</li> <li>2. The methods approved by the management agency must be methods generally recognised by the scientific community as effective in the detection of American foulbrood.</li> </ol>	<p>The intent of this rule is to provide the management agency with the authority to:</p> <ul style="list-style-type: none"> <li>• specify the inspection methods for Certificates of Inspection, and</li> <li>• recognise new inspection methods providing these inspection methods have been recognised as effective by the scientific community.</li> </ul>

<p><b>36 Certificate of Inspection Exemption</b></p> <ol style="list-style-type: none"> <li>1. The management agency must, from time to time, notify beekeepers of the opportunity to obtain a Certificate of Inspection Exemption.</li> <li>2. The management agency must grant a Certificate of Inspection Exemption to any beekeeper in relation to beehives owned by that beekeeper if that beekeeper enters into a Disease Elimination Conformity Agreement with the management agency.</li> <li>3. The management agency must, by notice in writing to the beekeeper, revoke a Certificate of Inspection Exemption if requested, in writing, at any time, by the beekeeper to do so, and the Disease Elimination Conformity Agreement is cancelled at the time of the revocation.</li> </ol>	<p>The intent of this rule is to enable the management agency to recognise Disease Elimination Conformity Agreement holders' commitment to eliminate AFB from their beehives by granting an exemption from the annual Certificate of Inspection requirements.</p>
<p><b>37 Disease Elimination Conformity Agreement</b></p> <ol style="list-style-type: none"> <li>1. A beekeeper and the management agency may at any time enter into, or amend, a Disease Elimination Conformity Agreement if—             <ol style="list-style-type: none"> <li>aaa. the beekeeper has passed a course in American foulbrood case recognition; and</li> <li>a. the beekeeper agrees to implement the agreement by ensuring that the persons named in the agreement as the persons responsible for disease management supervise or carry out the procedures and practices specified in that agreement; and</li> <li>b. the management agency is satisfied—                 <ol style="list-style-type: none"> <li>i. that the practices and procedures set out in the agreement are, if carried out, sufficient to reduce or maintain at zero the overall annual rate of American foulbrood cases in beehives owned by the beekeeper; and</li> <li>ii. the beekeeper is likely to implement the practices and procedures set out in the agreement; and</li> <li>iii. the persons named in the agreement as responsible for disease management are sufficiently familiar with and are suitable persons to supervise or carry out the practices and procedures specified in the agreement.</li> </ol> </li> </ol> </li> <li>2. The Disease Elimination Conformity Agreement must specify—             <ol style="list-style-type: none"> <li>a. the methods to be used for the inspection of honey bee colonies for American foulbrood; and</li> <li>b. the number of inspections to be carried out each year; and</li> <li>c. the times during the year when the inspections will be carried out; and</li> </ol> </li> </ol>	<p>The intent of this rule is to specify the conditions under which a beekeeper and the management agency may enter into a Disease Elimination Conformity Agreement and to specify the minimum specifications for that agreement.</p>

<p>d. the systems to be used to record the time of inspections, the results of inspections, and the actions taken in respect of American foulbrood cases and associated bee products and appliances; and</p> <p>e. the systems to be used to record movements of appliances and bee products in and out of an apiary; and</p> <p>f. the methods to be used to destroy American foulbrood cases and associated appliances and bee products, including, where necessary, the movement of such cases, appliances, and bee products; and</p> <p>g. the methods to be used to sterilise appliances salvaged in relation to any American foulbrood case; and</p> <p>h. the methods to be used to sterilise and disinfect appliances used in inspecting honey bee colonies for American foulbrood; and</p> <p>i. the name of the natural persons who are—</p> <p style="padding-left: 20px;">i. responsible for disease management; and</p> <p style="padding-left: 20px;">ii. responsible for liaising with the management agency in relation to the agreement.</p> <p>3. The Disease Elimination Conformity Agreement must require the destruction of American foulbrood cases and associated bee products.</p> <p>4. The methods specified by a Disease Elimination Conformity Agreement for inspection or sterilisation are not required to be methods approved under clause 29 or clause 35 but must be methods generally recognised by the scientific community as methods effective in detecting American foulbrood or in sterilising appliances contaminated with American foulbrood.</p>	
<p><b>(New rule) Training of employee beekeepers</b></p> <p>This clause applies to beekeepers who have entered into a Disease Elimination Conformity Agreement between the beekeeper and the management agency.</p> <p>1. A beekeeper must ensure that all employee beekeepers (persons employed or contracted by a beekeeper who undertakes honey bee husbandry procedures) to:</p> <p style="padding-left: 20px;">a. Have passed a recognised course in American foulbrood case recognition, either:</p> <p style="padding-left: 40px;">i. prior to the initiation of their employment, or</p> <p style="padding-left: 40px;">ii. within six months of the initiation of their employment, and</p> <p style="padding-left: 20px;">b. Where a recognised course in American foulbrood recognition has been passed, the date of their most recent American foulbrood case recognition or refresher course is not more than five years ago.</p>	<p>The intent of the proposed new rule is to ensure that all employee beekeepers employed by Disease Elimination Conformity Agreement holders have:</p> <ul style="list-style-type: none"> <li>• passed an AFB Recognition course prior to completing 6 months of employment, and</li> <li>• completed their most recent AFB Recognition or Refresher course with the last 5 years.</li> </ul> <p>The proposed amendment also provides the management</p>

<p>2. A beekeeper must keep the following records:</p> <ol style="list-style-type: none"> <li>a. The dates of employment of employee beekeepers</li> <li>b. The AFB Training records of employee beekeepers.</li> </ol> <p>3. A beekeeper must keep the records described in subclause 2 for two years.</p> <p>4. A beekeeper must provide the management agency with the records described in subclause 3 within seven days of receiving the request.</p>	<p>agency with the power to request employment and training records to verify compliance with this rule.</p>
<p><b>38 Amendment of Disease Elimination Conformity Agreement by management agency</b></p> <ol style="list-style-type: none"> <li>1. The management agency may, at any time and by written notice to a beekeeper given in accordance with subclause (2), amend a Disease Elimination Conformity Agreement if, following consultation with the beekeeper, the management agency is satisfied on reasonable grounds that the overall annual rate of American foulbrood cases in the beehives owned by the beekeeper is—             <ol style="list-style-type: none"> <li>a. not zero and is not decreasing; or</li> <li>b. not zero and is not likely to decrease unless the amendment is made.</li> </ol> </li> <li>2. If the management agency amends a Disease Elimination Conformity Agreement, it must give written notice to the beekeeper specifying the decision and the reasons for the decision.</li> </ol>	<p>The intent of this rule is to provide the management agency with the authority to amend a beekeeper’s Disease Elimination Conformity Agreement to ensure that the AFB elimination practices and procedures specified in the agreement, if carried out, are sufficient to eliminate AFB.</p>
<p><b>39 Review of Certificate of Inspection Exemption</b></p> <p>1AAA. The management agency must monitor on an annual basis the level of American foulbrood disease in beehives owned by beekeepers holding a Certificate of Inspection Exemption.</p> <ol style="list-style-type: none"> <li>1. The management agency may at any time revoke a Certificate of Inspection Exemption by written notice to a beekeeper given in accordance with subclause (2) if, following consultation with the beekeeper, the management agency is satisfied on reasonable grounds that—             <ol style="list-style-type: none"> <li>a. the beekeeper has breached the Disease Elimination Conformity Agreement; or</li> <li>b. the overall annual rate of American foulbrood cases is increasing in the beehives owned by that beekeeper; or</li> <li>c. the beekeeper has not completed a recognised AFB Recognition or Refresher course within the last five years; or</li> <li>d. the beekeeper has breached the new proposed rule ‘training of employee beekeepers’ (see above).</li> </ol> </li> </ol>	<p>The intent of this rule is to require the management agency to monitor the AFB elimination performance of DECA holders and to enable the management agency to revoke Certification of Inspection Exemptions if the beekeeper either:</p> <ul style="list-style-type: none"> <li>• breaches their DECA or</li> <li>• is clearly failing to eliminate AFB.</li> </ul> <p>The intent of the proposed amendment to this rule is to enable the management agency to revoke Certificate of Inspection Exemptions if the</p>

<p>2. If the management agency revokes a Certificate of Inspection Exemption, it must give written notice to the beekeeper specifying the decision and the reasons for the decision.</p> <p>3. The Disease Elimination Conformity Agreement is cancelled at the time of the revocation.</p>	<p>DECA holder does not comply with the proposed new:</p> <ul style="list-style-type: none"> <li>• five yearly Refresher training requirement; or</li> <li>• employee beekeeper training requirements.</li> </ul>
<p><b>(New rule) Transitional provisions for Review of Certificate of Inspection Exemption</b></p> <p>The provisions of subclauses 39(1)(c) and 39(1)(d) do not apply within two years of the of the date that amendment to the plan order is made.</p>	<p>The intent of this rule is to provide DECA holders with a two-year transitional period to comply with the new requirements to:</p> <ul style="list-style-type: none"> <li>• complete five yearly refresher training</li> <li>• ensure that all employee beekeepers meet the new AFB recognition and refresher training requirements.</li> </ul>
<p><b>40 Inspections and audits</b></p> <p>a. The management agency must—</p> <p style="padding-left: 20px;">a. audit a beekeeper’s compliance with his or her obligations under this order if the management agency has reasonable grounds to suspect that—</p> <p style="padding-left: 40px;">i. there has been a significant or recurring failure by the beekeeper to comply with any of those obligations; or</p> <p style="padding-left: 40px;">ii. any statement made by the beekeeper in an Annual Disease Return, a Certificate of Inspection, or a notification of an American foulbrood case is inaccurate, misleading, or false in a material particular; and</p> <p style="padding-left: 20px;">b. carry out surveillance of beehives to detect American foulbrood; and</p> <p style="padding-left: 20px;">c. from time to time carry out work, other than the work specified in paragraphs (a) and (b), to enable the management agency to measure the success of the plan in achieving its primary objective.</p> <p>b. The management agency may audit a beekeeper’s compliance with his or her obligations under this order in any area that, in the management agency’s opinion, has a high or persistent incidence of American foulbrood disease.</p>	<p>The intent of this rule is to confirm the management agency is accountable for:</p> <ul style="list-style-type: none"> <li>• monitoring beekeeper compliance with Plan rules, and investigating where there is reasonable ground to suspect non-compliance</li> <li>• monitoring AFB levels in beehives and measuring the success of the Plan against its primary objective.</li> </ul>

## 22. Rules whose contravention is proposed to be an offence under the Biosecurity Act 1993 [s.61(2)(i)]

A breach of existing AFB Plan Rules (clauses) 10, 11, 13, 14, 15, 20, 21,22, 24,26, 27, 29, 31, 32, and 33, as amended on 18 September 2012 are offences under the Biosecurity Act 1993.

The proposed AFB Plan amends the offence provisions of the following existing Plan Rules:

- 10, 13, 14, 20, 21,22, 24,26, 29, 31, and 33 continue to be offences under the Biosecurity Act 1993
- 28 (Obligation of beekeeper to destroy honey bees and materials) becomes an offence under the Biosecurity Act 1993, and
- 11, 15, 27 and 32 become infringement offences pursuant to section 165 of the Biosecurity Act 1993 (i.e., under a Biosecurity (Infringement Notice) regulation).

The proposed AFB Plan includes the following new rules, which would also become offences under the Biosecurity Act 1993:

- requirement for laboratories to provide AFB test results
- notification of beehive transfer.

### *Rules proposed to be infringement offences*

Making Plan Rules an offence under the Biosecurity Act 1993 is an effective deterrence to noncompliance. However, it is not practical or cost effective for the AFB Agency to prosecute over 4,000 cases per year in court, as indicated by the figures shown in Table 6 below. Consequently, the Agency is overly reliant on the use of warnings. The lack of subsequent prosecution may lead to a decline in respect for AFB Plan enforcement and an increase in offending.

**Table 6: Plan Rules with the highest number of offences**

Rule	Rule title	Number of offences
Rule 27	Annual Disease Return	Over 2,500 offences per year
Rule 32	Certificate of Inspection	Over 1,500 offences per year
Rule 15	Prohibition on keeping bees in place other than apiary (i.e., beehives must be in registered apiary sites if placed on that site for 30 or more consecutive days).	Over 250 detected offences per year

It is also proposed that Rule 11 ‘Obligation to keep honey bees in moveable-frame hives’ is an infringement offence, as the requirement to keep bees in moveable-frame hives is fundamental to the ability to regularly inspect beehives for AFB.

The benefits of specifying Rules 11, 15, 27 and 32 as infringement offences will:

- enable simpler and more efficient law enforcement for bulk offending, and
- create greater awareness of, and respect for, Plan Rules designed to reduce the impacts of AFB on beehives and beekeepers.

*Proposed penalties for infringement offences*

The proposed infringement penalties for breaches of Plan Rules 11, 15, 27 and 32 are shown in Table 7 below.

**Table 7: Proposed infringement penalties**

Plan Rule	Infringement fine for an individual person	Infringement fine for a corporation
11. Obligation to keep honey bees in moveable-frame hives	\$400	\$800
15. Prohibition on keeping bees in place other than apiary	\$400	\$800
27. Annual Disease Return	\$200	\$400
32. Certificate of Inspection	\$400	\$800

The proposed penalties shown in Table 7 are at the lower end of ranges imposed by comparable enforcement agencies. A higher penalty of \$400 for individuals and \$800 for corporations is proposed for breaches of Plan Rules 11, 15, and 32 as these have a direct impact on the achievement of the Plan’s objectives. A comparatively lower penalty of \$200 for individuals and \$400 for corporations is proposed for a breach of Plan Rule 27, as this has lesser impact on the achievement of the AFB Plan objectives.

The implementation of infringement penalties will be consistent with Ministry of Justice guidelines and the management agency will:

- regularly communicate with those beekeepers in breach of rules, including providing reminders of the requirement to comply with Plan Rules
- provide offending beekeepers with a warning that they have breached a Plan Rule, and give them the opportunity to rectify the offending; e.g., by registering the apiary, completing a late Certificate of Inspection or Annual Disease Return
- impose the infringement penalty when the offending beekeeper fails to rectify the offending after receiving reminders and warnings.

### 23. The management agency [s.61(2)(j)]

Apiculture New Zealand Inc (ApiNZ) is the designated management agency for implementing the AFB Plan. ApiNZ delegated this responsibility and associated powers, to an independent Board (AFB Agency Board). The AFB Board established an independent entity to implement the AFB Plan (AFB Agency), and it maintains oversight over this entity. ApiNZ intends to continue with these current governance arrangements.

The AFB Agency operates independently of ApiNZ and maintains separate business systems, policies, and governance. The AFB Agency Board is responsible for the prudent use of levy payer funds to implement the AFB Plan, and appointment to the Board is based on merit following a standard recruitment process. Membership of ApiNZ is not a criterion for appointment to the AFB Agency Board, apart from one Board position that is required to be held by a member of the ApiNZ Board.

Since the formation of ApiNZ in 2016 the AFB Agency Board has overseen several improvements to enhance the AFB Agency's capacity and systems to implement the AFB Plan. These improvements include:

- improved follow-up and investigation into reports of suspected non-compliance behaviour
- more effective monitoring of beekeeper elimination of AFB through doubling the number of apiaries inspected each year, and implementation of a new expanded honey surveillance programme
- enforcement of Plan Rules to ensure that non-compliant beekeepers are held to account and are not able to continue practices that create AFB spread risks
- improved the quantity and quality of support provided to beekeepers through the formation of a dedicated in-house team, and
- replaced ApiWeb with a modern fit for purpose system, HiveHub<sup>77</sup>, to make it easier for beekeepers to comply with Plan Rules.

The AFB Agency Board will continue to oversee improvements in the implementation of the Plan to ensure that the Plan objectives are achieved.

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<sup>77</sup> ApiWeb was an online data collection tool used to collect compliance information from beekeepers. It was not very user-friendly and the subject of complaint from many beekeepers. In response, the AFB Agency replaced ApiWeb with a purpose-built application known as 'HiveHub'. HiveHub supports beekeepers to maintain compliance records while at the apiary, including notifying AFB cases and registering or deregistering apiaries.

24. Proposed means to monitor or measure the achievement of the plan's objectives [s.61(2)(k)]

A framework for monitoring and measuring the achievement of the AFB Plan objectives is shown in Table 8 below.

The framework is based on the six proposed principal measures (see section 7) which underpin the proposed plan objectives (see section 6). The direct relationship between the objectives and the principal measures are set out in a logic map in section 7 (Figure 2).

It is expected that the proposed performance measures will be developed and adapted over time as needed. Additional measures that relate to the day-to-day administration of the AFB Agency will be set by the AFB Agency Board.

*Measuring the Primary Objective of the Plan*

The primary objective of the AFB Plan is to manage AFB to reduce the reported incidence by an average of 5% each year.

This objective will be reported against directly. Reported incidence is measured for a 12-month period beginning July in any year. The number of AFB cases notified to the AFB Agency over the 12-month period is expressed as a percentage of the total number of registered honey bee colonies.

*Framework of Principal Measures and Performance Measures*

**Table 8: Performance measures to monitor achievement of proposed AFB Plan objectives**

<b>Principal Measures and Performance Measures</b>
<p><b>Principal Measure</b></p> <p>a. All beehives are situated in a place notified to the management agency as an apiary.</p> <p><b>Performance Measures</b></p> <ul style="list-style-type: none"> <li>Monitoring the number of registered apiaries and the number of unregistered apiaries.</li> </ul>
<p><b>Principal Measure</b></p> <p>b. All beehives are inspected at least once per year by a person competent to recognise AFB.</p> <p><b>Performance Measures</b></p> <ul style="list-style-type: none"> <li>Monitoring the number of apiaries and colonies inspected in accordance with annual Certificate of Inspection requirements.</li> </ul>

- Monitoring the number of apiaries and colonies inspected by the management agency on default of Certificate of Inspection requirements.
- Monitoring the maintenance of beehives and apiaries, in order that they are kept in a condition that allows effective inspections. Factors monitored include:
  - number of apiaries identified where honey bees are not kept in moveable-frame beehives
  - number of apiaries identified without proper access to beehives
  - average apiary condition recorded at AP2 inspection.

**Principal Measure**

- c. All cases of AFB are reported to the management agency.

**Performance Measures**

- Monitoring the number of the number of cases of AFB notified by beekeepers, Authorised Persons, and through Certificate of Inspections.

**Principal Measure**

- d. All honey bees, bee products, and appliances associated with detected cases of AFB are destroyed; and other actions are undertaken to prevent the spread of AFB.

**Performance Measures**

- Monitoring beekeeper non-compliance with proposed Plan Rules 28, 29 and 31 which requires all honey bees, bee products and appliances associated with cases of AFB to be destroyed. These rules also make it an offence to undertake specified actions that may spread AFB.

**Principal Measure**

- e. Disease Elimination Conformity Agreement (DECA) holders eliminate AFB from their beehives.

**Performance Measures**

- Monitoring the AFB elimination performance of DECA holders will be achieved through:
  - assessment of laboratory test results provided under the proposed new Plan Rule
  - honey surveillance test results

- apiary inspections performed by authorised persons, and
- AFB notifications made by beekeepers.
- Secondary monitoring measures include:
  - number of beekeepers and employee beekeepers passing AFB Recognition Training
  - number of beekeeper and employee beekeepers completing AFB Refresher Training
  - percentage of registered beekeepers with a DECA
  - percentage of colonies owned by registered beekeepers with a DECA
  - number of DECAs entered
  - number of DECAs amended
  - number of DECAs cancelled.

**Principal Measure**

- f. The management agency monitors beekeepers' compliance with their AFB elimination obligations and undertakes enforcement actions when appropriate.

**Performance Measures**

- Monitoring management agency inspection and enforcement activities, including:
  - number of apiaries inspected
  - number of honey surveillance samples tested
  - number and type of enforcement actions undertaken.

25. The actions that it is proposed local authorities, local authorities of a specified class or description, or specified local authorities may take to implement the plan, including contributing towards the costs of implementation [s.61(2)(l)]

It is not proposed that any actions be taken by local authorities to implement the AFB Plan, or that they should contribute towards implementation costs.

26. Any basis, on which the management agency is to pay compensation for losses incurred as a direct result of the implementation of the plan [s.61(2)(m)]

The AFB Plan does not provide for compensation to beekeepers.

Compensation can be extremely expensive and can also create unwanted incentives that lead to perverse outcomes. Payment of compensation would result in levy payer funds being used to compensate non-compliant beekeepers who by their actions or inactions had allowed the level of AFB to increase in their beehives.

The AFB Agency Board considers it would be unfair to compliant beekeepers that have eliminated AFB to use levy payer funds to compensate non-compliant beekeepers.

27. Information on the disposal of the proceeds of any receipts arising in the course of implementing the plan [s.61(2)(n)]

Proceeds from infringement fines will be applied to the costs of implementing the AFB Plan.

It is not envisaged that there will be any other receipts arising while implementing this Plan. In the unforeseen event that any other receipts do arise, these would be applied to the costs of implementing this Plan.

28. Whether or not the plan would apply to the EEZ [s.61(2)(o)]

The AFB Plan does not apply to the exclusive economic zone or to any part of the exclusive economic zone.

29. Whether the plan includes portions of road adjoining land it covers, as authorised by section 6, and, if so, the portions of road proposed to be included [s.61(2)(p)]

The AFB Plan does not cover any roads of the kind referred to in section 64(3)(l) of the Act.

30. The anticipated costs of implementing the plan [s.61(2)(q)]

The future cost of the AFB Plan is estimated as:

- \$1.7m per annum associated with the AFB Agency, funded by the Biosecurity (American Foulbrood – Beekeeper Levy) Order 2003
- \$17.8m per annum of beekeeper costs associated with implementing AFB elimination practices including: inspecting beehives for AFB, destroying AFB beehives and associated products and materials, and beekeeper and employee training. These measures are required to eliminate AFB and the benefits are largely captured by beekeepers.

### 31. How it is proposed that the costs be funded [s.61(2)(r)]

The AFB Plan is to be funded:

- (a) by beekeepers from a levy paid under the Biosecurity (American Foulbrood – Beekeeper Levy) Order 2003
- (b) from other funds (if any) received by the management agency for the purpose of implementing the Plan.

### 32. Period the proposed plan will be in force [s.61(2)(s)]

It is proposed the duration of the AFB Plan be 10 years from the date that the plan is made.

### 33. Consultation on the proposal and the outcome [s.61(2)(t)]

A three-part consultation is being conducted during 2021–2022 on what, if any, new AFB Plan rules or powers are needed. The first (Round One) consultation took place during June–July 2021 and the findings are set out in this report.

#### **Round One, June–July 2021**

The purpose of the first round of consultation was to seek the views and ideas of beekeepers on the potential contents of a new Plan. Consultation activities included:

- presentation at the ApiNZ Conference, Rotorua (June 2021)
- series of webinars
- formal submission process.

There were 434 submitters to the Round One consultation, and based on their feedback, the AFB Agency developed several recommended changes to the AFB PMP to enhance:

- training, education, and support
- beekeeper commitment and practices
- surveillance and prevention
- enforcement and penalties.

The recommended changes were subsequently presented in a second round of consultation that took place during November–December 2021.

### **Round Two, November–December 2021**

The Round Two consultation focussed on communicating the recommended changes to the AFB PMP and getting feedback. Consultation materials were developed and posted on the AFB Agency website, and comprised:

- summary booklet outlining the recommended changes
- PDF presentation of the recommended changes
- analysis of Round One submissions
- AFB Agency response to Round One submissions
- recorded webinar from Round One consultation.

Round Two consultation activities undertaken during November–December 2021 included:

- series of five weekly webinars
- series of eight regional meetings with beekeeper groups
- formal submission process.

There were 342 submitters to the Round Two consultation, and all the proposed changes received a high level of support. In particular, the proposed changes that received the highest overall level of support were for:

- the AFB Agency having the power to destroy AFB-infected hives and take actions to prevent the spread of AFB? (89% supported)
- requiring Beekeeper Registration Numbers to be provided when declaring beehive transfers, as part of an Annual Disease Return? (83% supported)
- requiring DECA holders to ensure their employee beekeepers complete and pass an AFB Recognition Course, as a condition of retaining their DECA? (79%).

Feedback received on the proposed changes was a significant input that guided the drafting of the detailed AFB Plan, which was the subject of the third and final round of consultation.

### **Round Three, August–September 2022**

The Round Three consultation sought feedback on the draft AFB Plan. Consultation materials were developed and posted on the AFB Agency website, and comprised:

- consultation document providing a summary outline of the proposed AFB Plan
- logic map, diagrammatically showing the relationship between the proposed objectives, principal measures, and rules
- cost benefit analysis report on the proposed Plan
- PDF presentation of the recommended changes.

Round Three consultation activities undertaken included:

- series of weekly webinars
- series of regional meetings with beekeeper groups
- formal submission process.

[section to be completed at the conclusion of the consultation process]

34. Any matter that the national policy direction requires to be specified in a plan [s.61(2)(u)]

Matters have been considered in relation to directions on setting objectives, programme description and on analysing benefits and costs are listed in this section.

#### Information on setting objectives

Information to meet National Policy Direction 2015 (NPD 2015) requirements on setting objectives is shown in Table 9 below.

**Table 9: National Policy Direction 2015 Requirements**

Requirements	Information
The subject	The subject is <i>Paenibacillus larvae</i> as described in section 3 of this proposal
The particular adverse effect or effects of the subject on the matters listed in section 54(a) of the Act that the plan addresses	The adverse effects are set out in section 4 of this proposal.
The pest management intermediate outcomes that the plan is seeking to achieve	The pest management intermediate outcome the AFB Plan is seeking to achieve is “eradication”, which means to reduce the infestation level of the subject to zero level in an area in the short to medium term.
The geographic area to which the outcome applies	The geographic area to which the outcome applies is apiary sites in New Zealand.
The extent to which the outcome will be achieved (if applicable)	The primary objective of the AFB Plan is to reduce the reported incidence of AFB by an average of 5% per year. This is expected to result in a 40% reduction in the reported incidence of AFB over the 10-year term of the Plan.

**Directions on programme description**

The type of programme is an “eradication programme”, in which the intermediate outcome for the programme is to reduce the infestation level of the subject, or an organism being spread by the subject, to zero levels in an area in the short to medium term.

**Directions on analysing benefits and costs**

Information to meet the NPD 2015 requirements on analysis benefits and costs is provided in section 10 of this proposal, and cost–benefit analysis documents prepared by Nimmo-Bell.

**Directions on proposed allocation of costs for pest and pathway management plans**

Information to meet this requirement is provided in sections 11, 12, 13 and 35 of this proposal.

35. Steps taken to comply with the process requirements in the national policy direction, if there were any [s.61(2)(v)]

There are no process requirements in the NPD 2015 to be met. The Minister must make a determination under section 100E of the Act, as to whether this NPMP proposal is inconsistent with the national policy direction.

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## Glossary/Interpretation

**Act** means the Biosecurity Act 1993.

**American foulbrood case** means a honey bee colony displaying any of the clinical symptoms of American foulbrood.

**apiary** means a place to which clause 16 of the Plan applies or a place notified as an apiary in accordance with clause 17 of the Plan.

**appliance** means any beehive, comb, extractor, or other object, that is being or has been used in connection with beekeeping.

**authorised person** means a person appointed under section 103(1)(b) of the Act for the purposes of the plan.

**bee product** means honey, honeydew honey, beeswax, venom propolis, pollen, or royal jelly; and includes any other product collected by honey bees, derived from honey bees, or derived from a bee product.

**beehive** means a thing constructed for the keeping of honey bees and that is being used or has been used for that purpose; but does not include an introduction cage or a mailing cage.

**beekeeper** means a person who owns beehives.

**Certificate of Inspection Exemption** means an exemption granted under clause 36 of the Plan.

**cost benefit analysis (CBA)**. CBA is an economic analysis tool that informs the efficient allocation of scarce resources across different sectors of the economy to maximise net benefit (i.e., benefits less costs) or utility in decision-making.

**Disease Elimination Conformity Agreement** means the document signed in accordance with clause 37 of the Plan.

**employee beekeeper** means a person employed or contracted by a beekeeper who undertakes honey bee husbandry procedures.

**honey** means the fluid, viscous, or crystallised substance produced by honey bees from the nectar of blossoms or from secretions of, or on, living parts of plants other than blossoms, which honey bees collect, transform, or combine with substances of their own, and store in combs.

**honey bee** means *Apis mellifera*; and includes its eggs, larvae, pupae, and semen.

**honey bee colony** means a group of honey bees living in a beehive; but does not include a queen honey bee and attendant worker honey bees for the time being held in a mailing cage or an introduction cage.

**identification code** means the code given to or used by a beekeeper in accordance with clause 19 of the Plan.

**incidence rate.** The annual infection rate of AFB. It is expressed as AFB-infected hives over total hives per year. **Recorded incidence rate** is AFB-infected hives notified to the management agency. **Actual incidence rate** is assumed to be a higher rate as the recorded incidence rate is considered to be under-reported.

**introduction cage** means a cage used for introducing a queen honey bee to a beehive.

**mailing cage** means a cage used for transporting a queen honey bee and attendant worker honey bees.

**moveable-frame hive** means a beehive from which any frame or comb (as the case may be) that forms part of the beehive may be easily removed for visual inspection without causing damage to that frame or comb.

**Plan** means Biosecurity (National American Foulbrood Pest Management Plan) Order 1

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