



 THE MANAGEMENT AGENCY
NATIONAL AMERICAN FOULBROOD
PEST MANAGEMENT PLAN

ANNUAL REPORT 2022/2023

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WELCOME


We are pleased to present this annual report to beekeepers and the wider primary industry. We hope it supports a deeper understanding of the National American Foulbrood (AFB) Pest Management Plan (NPMP) and provides insight into its implementation and the progress made towards our shared goal.

It has been another year of significant change for The Management Agency. Between June 2021 and September 2022, we undertook three rounds of extensive consultation with New Zealand's beekeepers to capture their thoughts and insights regarding the next ten years of the NPMP. The feedback and ideas captured during those three rounds of consultation enabled us to put a robust proposal forward to the Minister for Biosecurity in March 2023. That proposal presented recommendations for an effective legal framework to enhance the sector's AFB elimination efforts. We expect the new plan order to be made in 2024, post-ministerial appointment and approval.

A detailed version of the NPMP Proposal can be found [here](#) while a summary of the proposal has been included in Section 3 of this report.

Despite current economic challenges for the apiculture industry, The Management Agency has continued to implement the NPMP. A 15% decline in colony numbers from the previous year (from 739,707 to 632,153) has highlighted the challenges that many beekeepers are facing. The Management Agency remains mindful of the use of levy funds during this period and continues to work with beekeepers on education and increased vigilance for instances of AFB risks arising from neglected and abandoned apiaries. The reduction in colony numbers will ultimately have an impact on levy income, precisely at a time when we face an increased biosecurity risk. With this foresight, we will continue to adapt and focus our efforts on activities and locations that offer the greatest impact.

It has been encouraging to see continual reporting of incidence of AFB by beekeepers. However, the greatest increase in the identification of AFB resulted from inspections by The Management Agency's AP2s (Authorised Persons). During 2022/23, a total of 24,792 hives were inspected by AP2s, up from 22,656 in 2021/22. Of the hives inspected, 2.67% (664) were found to have cases of AFB. Our increased inspection capacity has increased our ability to investigate reports of suspected non-compliance and, in turn, find unmanaged apiaries in the vicinity that prove to be a source of AFB. The Management Agency will continue with this effective form of AFB identification and elimination, but we would prefer to not have to. We would rather all beekeepers took responsibility for the elimination of AFB from their own hives, but the statistics show that some beekeepers fail to accept this responsibility—to the detriment of the sector as a whole. As a result, assessing the adherence of beekeepers to their Disease Elimination Conformity Agreement (DECA) obligations will be a focus for The Management Agency in the upcoming year.



HiveHub is now in its third year with most beekeepers logging in to easily complete their Annual Disease Returns or pay their levies without requiring assistance. The credit card functionality introduced on HiveHub has enabled over 1,000 beekeepers to pay their levy with ease. Greater use of the 'Non-Compliance' button on HiveHub has allowed our Operations Managers to assess each case diligently and provide swift feedback to the notifier on the outcome of the investigation. In the coming year, we will upgrade HiveHub so that its functionality continues to meet the needs of beekeepers. The data collected will assist with the implementation of the proposed amendments to the NPMP in 2024.

The uptake of the new online training modules for our AFB recognition and refresher courses has been encouraging. The online platform enables beekeepers to refresh their AFB knowledge at their convenience. The Management Agency considers that ongoing AFB education offers the best line of defence. Informing beekeepers of what to look for in a frame is the first step in the elimination of AFB.

2022/23 was a year of severe weather events affecting many parts of the country and the primary industries. The North Island's Cyclone Gabrielle in February 2023 had a significant impact on beekeepers who rely on the horticulture sector for pollination services. Between 5000 - 6000 hives were destroyed during the cyclone and many hives were unreachable due to road access being cut off. In the aftermath of the cyclone, The Management Agency contributed to the cost of a hive disposal site in Hawke's Bay allowing beekeepers to safely discard their affected hives and gear.

In June 2023, we said goodbye to Clifton King as The Management Agency's National Compliance Manager. Clifton's steadfast leadership saw The Management Agency grow from a whānau of two to six, moving AP2 inspections in-house. Eleven AP2s were recruited and the development of HiveHub provided a seamless and user-friendly platform for beekeeper administration and digital data management. Clifton's knowledge of disease management guided The Management Agency's deliverables through the highs and lows of the apiculture industry and we would like to recognise and thank Clifton for his five years of service to the Agency and the wider industry.

In July 2022, The Management Agency Board welcomed Jane Röllin to the Board. Jane's extensive experience has been invaluable to the Agency's future planning and implementation of the NPMP. Earlier this year, Trent Proffit (Ngāti Porou East Coast) also joined the Board to boost commercial beekeeper representation. Trent is currently the General Manager of one of the country's largest Iwi-owned commercial honey businesses and has spent over a decade focused on operational management across Primary Industry. Russell Marsh and Murray Lewis departed the Board. The Board would like to thank them both for their significant contributions and valuable input over several years.



In September 2023, The Management Agency welcomed Niharika (Niha) Long as General Manager. Niha brings over 10 years of experience working with the Ministry for Primary Industries, most recently in the post-border biosecurity space. Niha is committed to implementing the changes to the NPMP positively and sustainably while recognising the challenges many beekeepers face in the current economic climate. She appreciates the need for an adaptive approach to managing AFB elimination and intends to create a culture within the industry where tackling AFB is a collective responsibility.

Lastly, The Management Agency's progress to date toward the elimination goal would not be possible without the support and mahi of our dedicated team and all beekeepers passionate about protecting the beekeeping industry. We look forward to working with all of you in the coming year.

Mark Dingle
Chairman

Niharika Long
General Manager



PRIMARY OBJECTIVE

To reduce the reported incidence of AFB by 5% per year

Measure: Annual incidence of AFB

SECONDARY OBJECTIVES

To locate all places where beehives are situated and ensure each honeybee colony is inspected at least once per year for AFB

To identify American foulbrood cases in beehives

To eliminate American foulbrood in beehives by destroying American foulbrood cases and associated products and destroying or sterilising associated appliances

PRINCIPAL MEASURES

All beehive locations are notified as an apiary

All beehives are inspected at least once per year by a competent person

All cases of AFB are notified to The Management Agency

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

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

The Management Agency monitors beekeeper compliance with their elimination obligations and undertakes enforcement actions when appropriate

MONITORING MEASURES

Number of apiaries registered and number of unregistered apiaries identified

Number of apiaries and colonies inspected:
a) in accordance with COI requirements
b) on COI default by The Management Agency

Number of cases of AFB notified

Beekeeper compliance with plan rules 28, 29 and 31

○ % of beekeepers with a DECA
○ % of DECA holders implementing agreed AFB elimination procedures

The Management Agency monitoring and enforcement activity:
a) Number of apiaries inspected
b) Number of honey surveillance samples tested
c) Number and type of enforcement actions undertaken

PLAN RULES

Apiary registration and identification rules 15, 17, 18, 19, 20, 21, 22, 23, 24 & 25

Beehive inspection rules 11, 12, 13, 14, 32, 33, 34 & 35

AFB notification rule 26

Rules requiring the destruction of AFB beehives and other actions to prevent the spread of AFB 28, 29, 30 & 31

DECA rules for:
○ entering into a DECA 36 & 37 monitoring DECA holder AFB elimination performance 39
○ amendment and cancellation of DECAs 38 & 39

Rules for monitoring beekeeper compliance with their obligations 10, 27, 40

KEY ACTIVITIES

○ Registration of apiaries by beekeepers
○ Beekeepers report suspected unregistered apiaries

○ Beekeeper maintenance of apiary sites
○ Beekeepers ensure beehives are inspected in accordance with COI requirements
○ The Management Agency inspects beehives owned by COI defaulters

○ Beekeeper notification of AFB cases
○ Authorised Person notification of AFB cases

○ Beekeeper destruction of honey bees, bee products and materials associated with cases of AFB

○ AFB recognition and refresher training
○ Beekeepers enter into DECA
○ DECA holders eliminate AFB from their beehives as agreed
○ The Management Agency monitors DECA holder AFB elimination performance
○ Amendment and cancellation of DECA by The Management Agency

○ The Management Agency monitoring of beekeeper compliance
○ Enforcement of plan rules using Biosecurity Act 1993 powers

NPMP CONSULTATION


Between June 2021 and September 2022, The Management Agency held three rounds of consultation with New Zealand beekeepers on which, if any, new plan rules or powers are needed in the NPMP. The engagement was tailored to four major groups: beekeepers, tangata whenua, diagnostic laboratories, and landowners. A special thank you to the 1,065 beekeepers who made submissions during the consultation process. Your contribution has strengthened the NPMP for the next ten years.

Each consultation round was an opportunity to canvas beekeepers for their insights into the NPMP's issues and opportunities for improvement. Beekeepers showed that they appreciate that the benefits of implementing the NPMP are preferable to the economic risk beekeepers would be exposed to without a management plan. For example, under a 'no control' scenario, the industry is forecast to lose \$70 million in income over 10 years due to AFB affecting nearly 100,000 colonies¹.

The NPMP continues to:

- be focused on taking a nationally consistent disease control and management approach implemented by all beekeepers.
- stipulate necessary actions required by all beekeepers to control and eliminate AFB, through best husbandry practices.
- give mandate to The Management Agency to use its capability and capacity to respond to AFB outbreaks.
- allow The Management Agency to train new and veteran beekeepers in AFB recognition and support beekeepers with tools to eliminate AFB from their hives.

¹Nimmo-Bell & Associates, *Cost Benefit Analysis of the National American Foulbrood Pest Management Plan*, 3 August 2022



The proposal to strengthen the NPMP takes a multi-pronged approach with significant emphasis on several strategies, including:

- rolling out commercial training to upskill employee beekeepers for AFB recognition.
- communication and engagement to promote the benefits of implementing effective AFB elimination practices and the active review of DECA holders.
- improved traceability of beehives through registration codes.
- requirement for laboratories to provide AFB test results to The Management Agency.
- inclusion of the use of section 114 General Powers to support the implementation of infringement fines.

These have been captured by adding four new rules, amending eight existing rules, and adding two new powers which were supported by most beekeepers. The changes are aimed at ensuring:

- all beehive locations are notified as apiaries.
- all beehives are inspected at least once a year by a competent person.
- all honey bees, bee products, and appliances associated with AFB are destroyed promptly.
- Disease Elimination Conformity Agreement (DECA) holders are committed to eliminating AFB from their beehives.
- apiary inspections are targeted at areas with the highest risk of AFB.
- The Management Agency has access to the information and powers that are required to monitor beekeeper compliance with their elimination obligations and to take enforcement actions wherever appropriate.

A detailed and summary version of the proposed changes can be found [here](#).

The Minister for Biosecurity will consider whether the proposed changes meet the requirements specified by the Biosecurity Act 1993 before approving an amendment to the current plan order in 2024.

REPORTED INCIDENCE OF AMERICAN FOULBROOD OVER 12 MONTHS

In the 12 months preceding 31 May 2023, 3,449 cases (0.55% of colonies) of AFB were notified compared with 3,565 cases (0.48% of colonies) of AFB notified in the 12 months preceding 31 May 2022. The annual reported incidence of AFB since 1998 is shown in Figure 1.

Reported AFB incidence 1998 – 2023

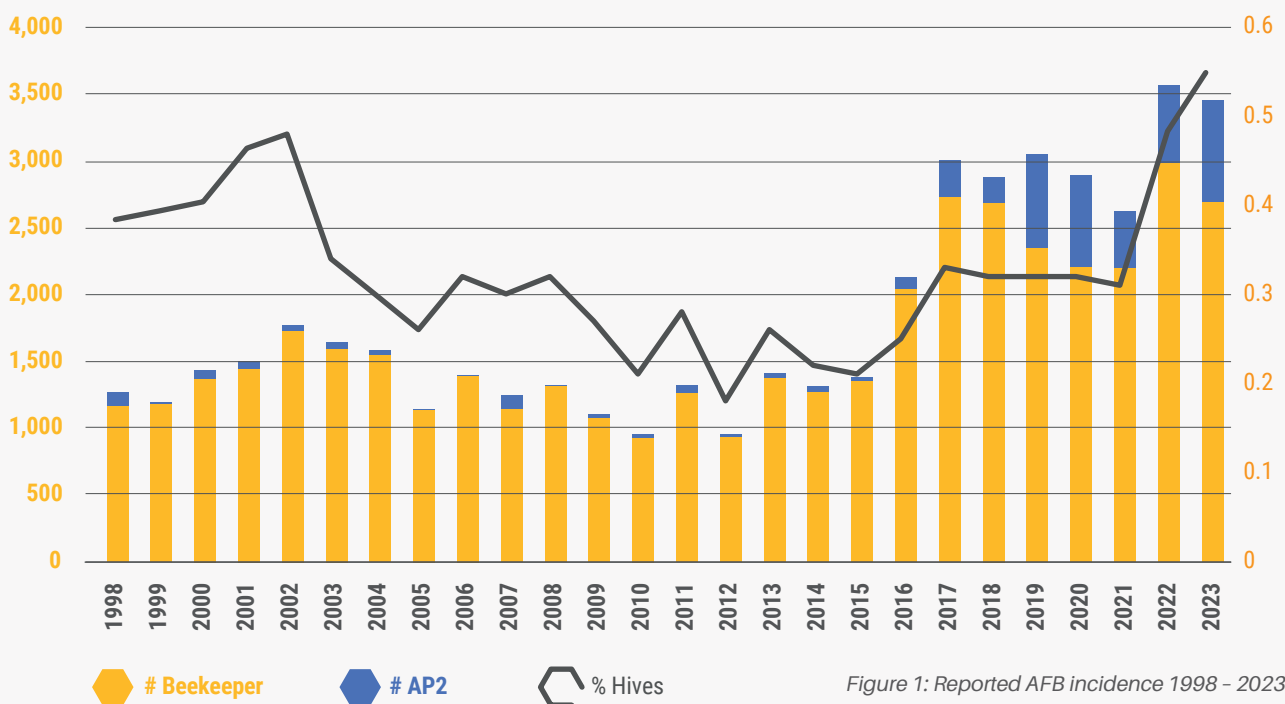


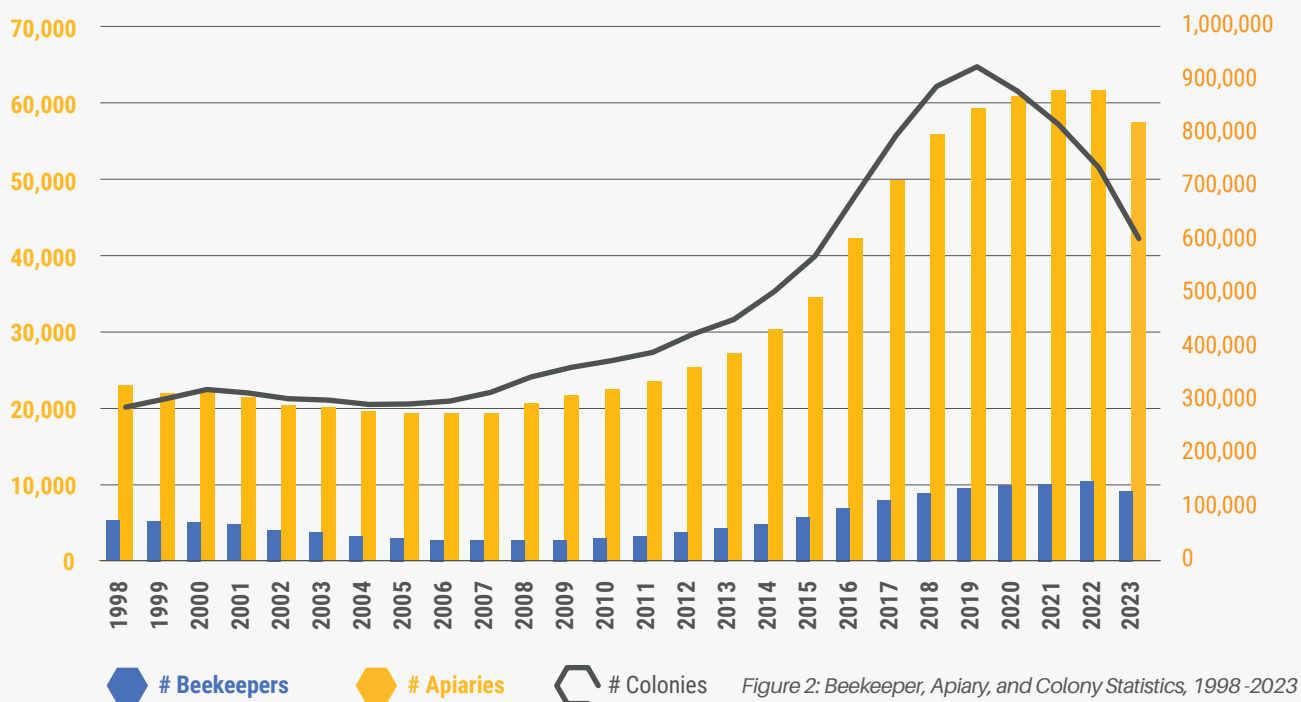
Figure 1: Reported AFB incidence 1998 – 2023

Despite the reduction in the number of AFB cases (from 3,565 in 21/22 to 3,449 in 22/23), the increase in the AFB incidence levels seen during this financial year is associated with:

- ◊ continued decline of colony numbers during the year.
- ◊ increased surveillance and reporting of AFB by beekeepers and AP2s.

The number of colonies located in registered apiaries declined by 14.5%. From 739,707 (recorded one year earlier) to 632,153 colonies as of 31 May 2023. The slightly higher incidence of AFB is due to AFB cases being expressed as a percentage of colony numbers. The number of registered apiaries and beekeepers was 57,139 and 9,533 respectively in 22/23 (Figure 2).

Beekeeper, apiary, and colony statistics, 1998 – 2023



Regional Breakdown of AFB

Reporting by both AP2s and beekeepers saw The Management Agency receive 2,044 AFB notifications during the 22/23 year, compared with 1,988 during the 21/22 year. A 2.8% increase. When reported AFB cases between 21/22 and 22/23 are broken down into regions (Figure 3), it is evident that certain regions have shown marked improvements in the management of AFB. Notably, Northland, Wellington, and Canterbury.

Both Northland and Wellington had one large beekeeping operator reporting high levels of AFB during 21/22. Following this, their hives were destroyed and the beekeeper subsequently left the industry. Additional factors in the overall reduction of AFB cases were some High-Risk Beekeepers operating in the Wellington region exiting the industry, and commercial beekeepers reducing their hive numbers and effectively managing AFB in their hives to meet the Chinese Overseas Market Requirements (OMAR).

The reduction of AFB cases reported in Canterbury is partly due to a reduction in the overall number of beekeepers and hives, as well as a decrease in the number of High-Risk Beekeepers in the region.

Reported AFB Cases per Region

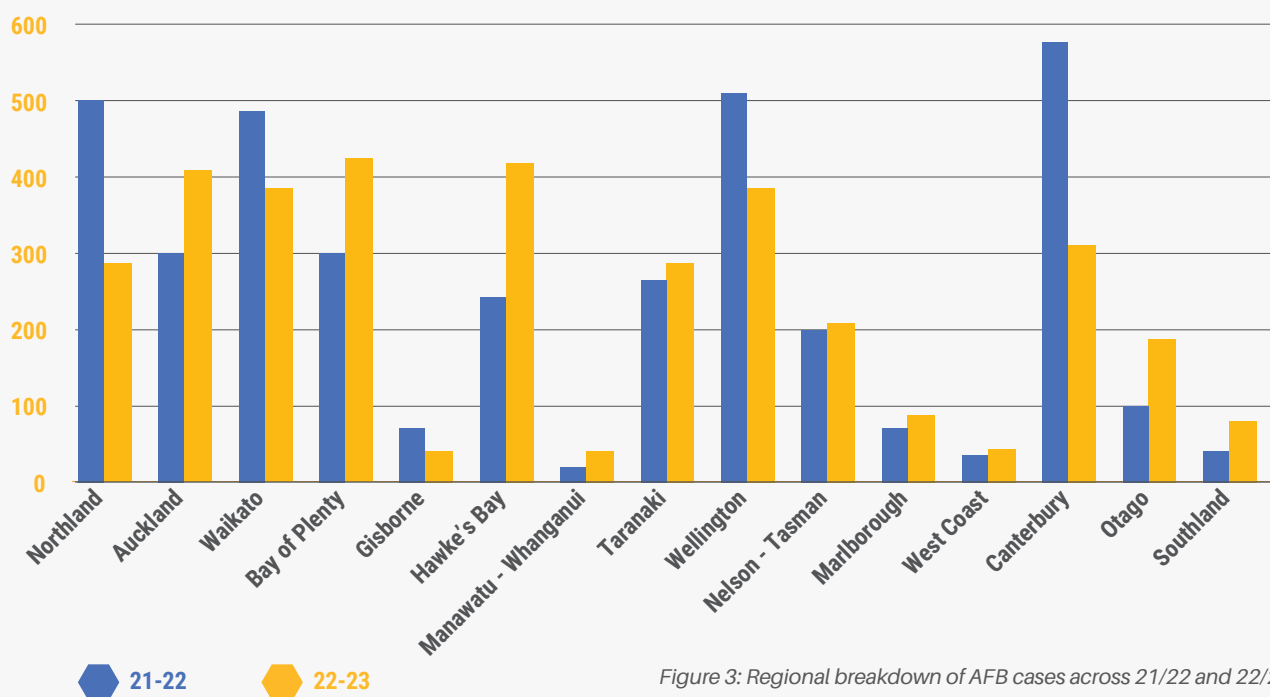



Figure 3: Regional breakdown of AFB cases across 21/22 and 22/23



Whilst a reduction in AFB cases is the goal, The Management Agency recorded an increase in AFB cases in other parts of the country. Specifically, in the Bay of Plenty and Hawke's Bay regions, which dominate as fruit pollination sites, we recorded the presence of High-Risk Beekeepers who contributed to the spread of AFB during spring 2022. An increase in AFB was also reported by large beekeeping operators in spring 2022 following the use of hive components from dead hives that had originally been diagnosed with Parasitic Mite Syndrome, but which also had AFB. The reduction of operating costs and staff numbers has also contributed to AFB mismanagement and varroa levels in autumn 2022.

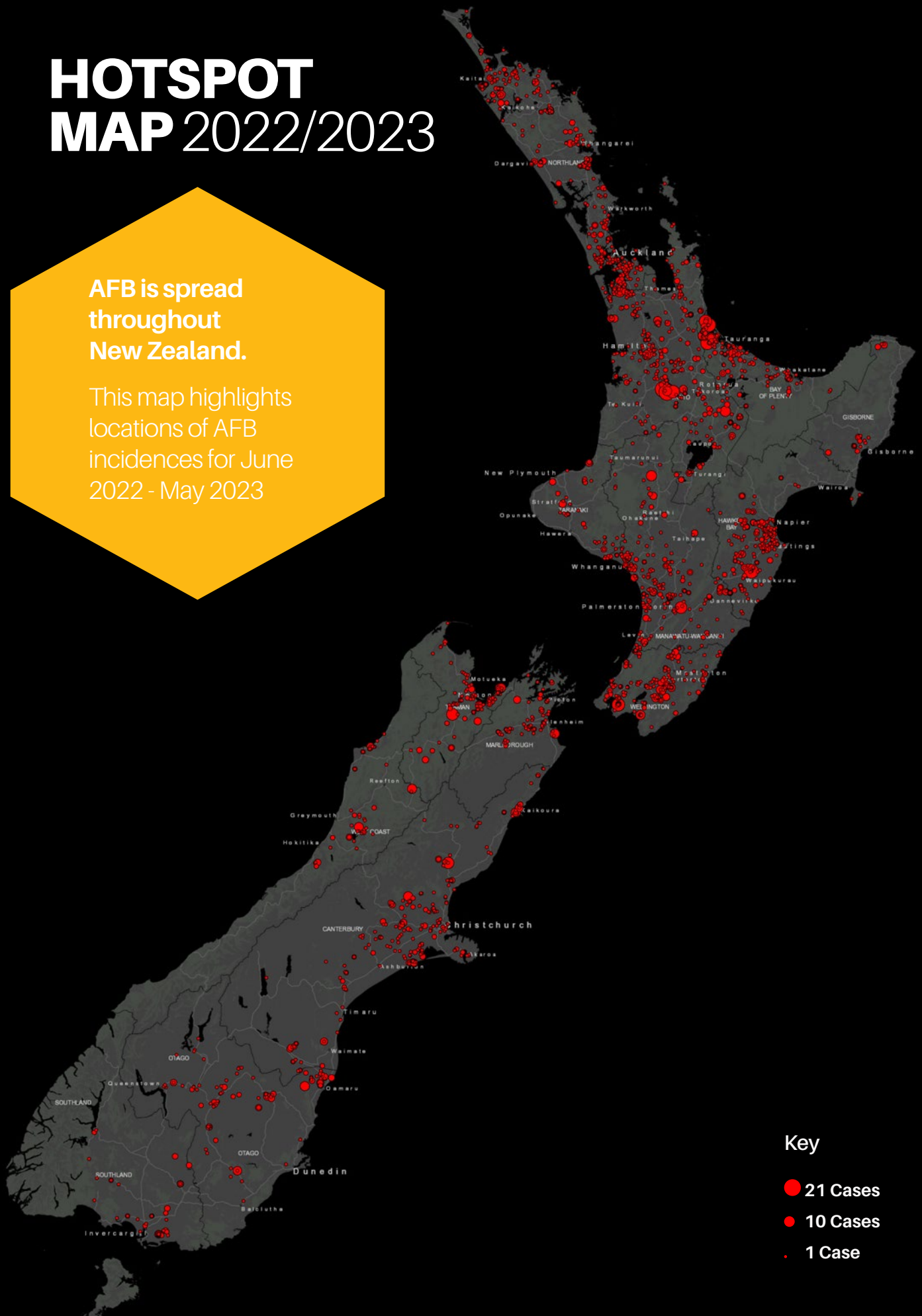
It must be noted that the effects of Cyclone Gabrielle have not yet been linked with any significant increase in AFB reports from the Gisborne and Hawke's Bay regions.



HOTSPOT MAP 2022/2023

**AFB is spread
throughout
New Zealand.**

This map highlights
locations of AFB
incidences for June
2022 - May 2023



MONITORING AND AUDITING AFB ELIMINATION EFFORTS

In addition to monitoring the annual reported incidence of AFB, The Management Agency monitors and audits beekeeper actions in adherence with the NPMP. This includes:

- the notification of places as apiaries.
- Annual Disease Returns (ADRs).
- Certificates of Inspection (COIs).
- notification of AFB.

Apiary and Beekeeper Registrations

The overall decline in colony numbers was reflected in the number of apiary and beekeeper registrations and deregistrations. A total of 7,635 new apiaries were registered and 11,613 apiaries were deregistered during the year.

Beekeeper registrations showed a similar trend with a total of 1,147 new beekeepers registered for the year, down from 1,644 in 21/22. Deregistrations increased from 1,508 in 21/22 to 1,932.

116 unregistered apiaries were identified by The Management Agency. 107 of these apiaries were either registered or removed by the beekeeper and the remaining 9 were destroyed under section 25 of the NPMP or section 119 of the Biosecurity Act 1993.

Annual Disease Returns

A total of 9,281 ADRs were received by 1 June 2023, up from 9,064 the previous year. The Management Agency observed an increase in online ADRs in 22/23 with over 93% of beekeepers completing their ADR on HiveHub.

Certificate of Inspections

A total of 4,422 beekeepers were required to complete a Certificate of Inspection on their beehives in 2022. 2,859 Certificates of Inspection (COIs) were received by 15 December 2022, compared to 2,673 the year before. 873 beekeepers owning 5,207 colonies on 1,378 apiaries had defaulted on their 2022 COI obligations, compared to 922 beekeepers the year before. 136 were deregistered.

Notifications of AFB (by beekeepers and AP2s)

In the 12 months preceding 31 May 2023, 2,101 cases of AFB were identified by The Management Agency across 3,449 hives owned by 683 beekeepers. 2,687 of these notifications were by beekeepers and 762 by AP2s (Table 1).

Of the 762 AFB cases found during AP2 inspections, 416 cases of AFB were detected in hives owned by 40 beekeeping operations identified as High-Risk. Twelve of these are no longer beekeeping and have deregistered. Nineteen of the newly identified High-Risk beekeepers were DECA holders with an average of 30.3% incidence of AFB.

Beekeeper notifications of AFB through HiveHub continues to be the best way for reporting to The Management Agency. All AFB notifications are assessed individually by The Management Agency's two Operations Managers who also identify whether any neighbouring apiaries are a source of AFB. Notifications assist us in triaging and prioritising AP2 inspections to focus on the greatest risk of AFB, (i.e. clusters of the disease in more than one apiary), followed by prompt action to mitigate the risk of further spread.

Table 1: Comparison of AFB notification types (beekeeper and AP2) across 2021/22 and 2022/23

Notification Type	2022/23	2021/22
Beekeeper Notifications	2,687	2,979
AP2 Notifications	762	586
Sum of hives with AFB	3,449	3,565

Compliance and Enforcement

All non-compliance notifications are assessed by The Management Agency with feedback provided to the notifier on the outcome of the investigation. We encourage beekeeper vigilance as it assists The Management Agency in identifying beekeeping operations with unregistered apiaries, neglected apiaries, and unreported AFB.

During the 2022/23 year, The Management Agency's AP2s conducted:

- 366 COI default inspections.
- 3,248 surveillances.
- 19 visits related to monitoring compliance with the S122 Notice.
- 207 inspections related to unregistered apiaries.
- 28 visits related to Section 128 Action on Default Notice.
- 190 visits related to High-Risk Beekeepers.

AP2 inspections by region

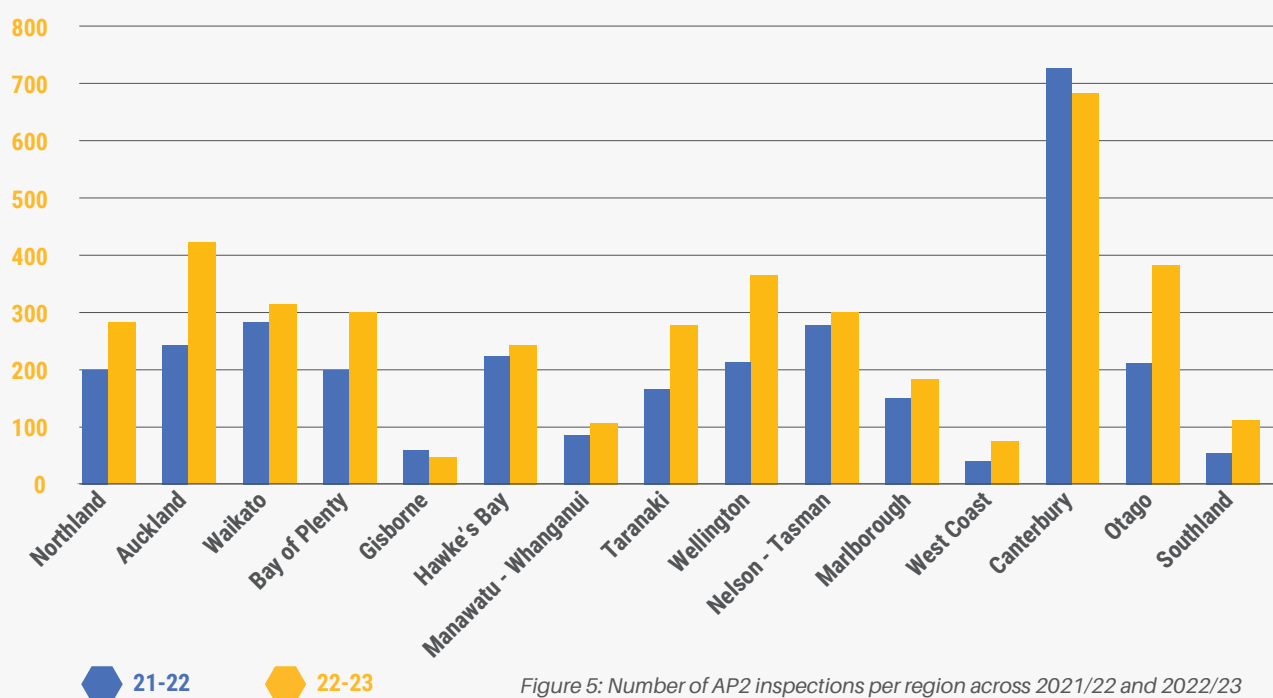


Figure 5: Number of AP2 inspections per region across 2021/22 and 2022/23

SUPPORTING BEEKEEPERS WITH AFB TRAINING AND RECOGNITION

A crucial part of supporting the elimination of AFB from managed hives is empowering New Zealand beekeepers to recognise AFB and understand their legal obligations. During the 2022/23 year, The Management Agency ran 53 AFB Recognition courses. A total of 773 beekeepers attended. Of that, 567 were first-time participants with 206 attending the course as a refresher.

Online AFB Recognition Courses

Following COVID-19-related disruptions to course registrations, The Management Agency developed and introduced an online module of AFB Recognition and Refresher courses in November 2022.

The modules are complete with high-definition photos (Figures 6 and 7) and instructional videos which have enabled beekeepers to work through the course content modules at their own pace.



Figure 6: High-definition image of a healthy pupa
(online AFB recognition course)



Figure 7: High-definition image of AFB in pre-pupa
(online AFB recognition course)

As of 31 May 2023, the full online course had been completed by 112 participants and the online refresher course had been completed by 160 participants.

Positive feedback received from participants has included the ability to re-watch videos as required and that the modules are easy to follow.

HONEY SURVEILLANCE

Honey surveillance is an inexpensive method for examining beehives that are likely to be free of AFB. A single negative test can be used to assess the AFB status of hundreds of beehives. This form of surveillance allows The Management Agency to verify beekeepers who are continuing to do well at eliminating AFB from their hives and triage AP2 apiary inspections to High-Risk Beekeeping operations.

For the 22/23 honey surveillance, 211 DECA holders were selected. They own 448,428 colonies and reported significantly less AFB than average.

A total of 356 honey samples were collected from 109 beekeepers. Of those, 265 samples tested negative, 56 samples were positive for one DNA marker, and 34 samples were positive for both DNA markers.

18 beekeepers supplied one batch of honey that showed a low level of AFB contamination. Such low-level AFB contamination suggests that there is a likelihood that an apiary in the vicinity may not be managing AFB effectively or has had AFB in the recent past, which The Management Agency will continue to monitor.

Four beekeepers supplied a batch of honey that tested positive for AFB at levels that suggest the beekeepers had harvested honey from hives showing clinical signs of AFB at the time of harvest. These beekeepers were contacted and advised on the best practices for producing honey that is free of AFB. It is recommended that beekeepers inspect their hives before the honey is harvested.

These results suggest that most commercial beekeepers are doing a good job of eliminating AFB from their operations. The results inform the prioritisation of apiary inspections for the coming year.

Apiaries owned by beekeepers where all honey samples were negative are unlikely to be inspected by The Management Agency. Follow-up inspections are prioritised to focus on beekeepers with multiple positive test results.

DECA HOLDERS

(Disease Elimination
Conformity Agreement)

OTHER SUPPORT FOR BEEKEEPERS

A total of 472 DECAs were agreed in 2022/23, down from 551 in 21/22. 399 of these were with hobbyist beekeepers while 73 were commercial.

56 DECAs were cancelled in total during 2022/23; 19 DECAs were cancelled due to beekeepers being identified as a High-Risk Beekeeper (AFB found greater than, or equal to, 10% of beehives at the time of AP2 inspections) and 37 DECAs on default of not submitting their Annual Disease Returns.

The Management Agency team responded to 10,527 beekeeper requests for assistance made via HiveHub or email, answered 4,594 0800(AFBPMP) phone calls, and made a further 2,977 outgoing phone calls to provide beekeepers with assistance.

A total of 74,355 HiveHub portal logins were recorded for the 2022/23 year, slightly up from 73,531 the previous year. We are committed to continually improving data function so that reporting for all beekeepers is simple, easy, and secure.



THE MANAGEMENT AGENCY BOARD AND STAFF

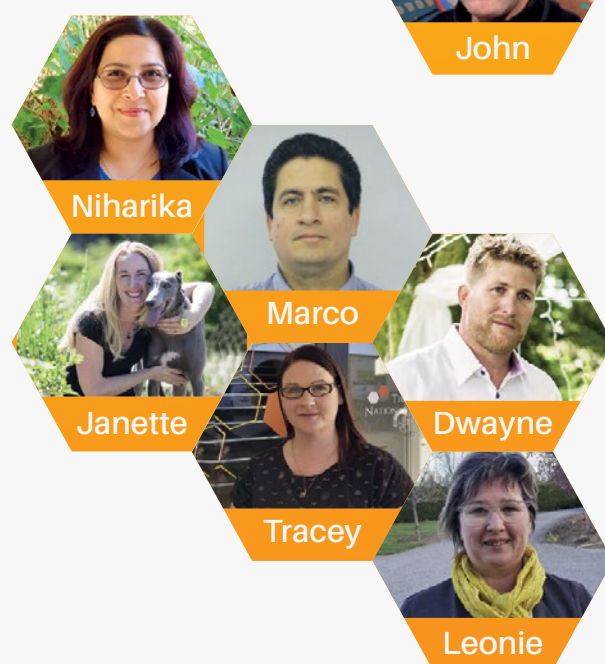
2023 Board Members

- **Chair:** Mark Dingle
- **Deputy Chair:** Val Graham
- Gabriel Torres
- Jason Ward
- Jane Röllin
- Trent Proffit
- Dennis Crowley
- **Advisor to Board:** Hayley Pragert
- **MPI Observer:** John Sanson



The Management Agency Staff

- Niharika (Niha) Long
- Marco Gonzalez
- Dwayne Hill
- Janette Gwilliam
- Tracey Gonzalez
- Leonie Elliot-Mason
- Nearly 50 dedicated AP2s across the North Island and South Island
- 19 AFB Recognition Course trainers across the North Island and South Island





 THE MANAGEMENT AGENCY
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PEST MANAGEMENT PLAN

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