



# Biosecurity Report 2022-23

Progressing a positive future for  
New Zealand dairy farming

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## **Ko ngā pae tawhiti whāia kia tata Ko ngā pae tata whakamaua kia tina**

### **The potential for tomorrow Depends on what we do today**

**A robust dairy sector is crucial to New Zealand's recovery as we navigate supply and workforce challenges, and the impacts of recent extreme weather events. Maintaining a strong border, being vigilant and taking a united approach to biosecurity have never been more important.**

With our border open, the connection between people, animals, the environment, our food security, and biosecurity has never been closer. To consider one without the others is an unbalanced equation.

Biosecurity is serious business for New Zealand dairy farmers. We continue to be the largest primary industry investor, strengthening the biosecurity system under the Government Industry Agreement for Biosecurity (GIA). We invested \$48 million in 2021-22 across *Mycoplasma bovis*, TB, National Animal Identification and Tracing (NAIT) and wider plant, pest, and animal biosecurity partnerships.

We are committed to leaving the biosecurity system stronger for the next generation.

Our community is experiencing first-hand the devastating impacts of adverse weather events. These events also enable the spread of pests, weeds, vectors and disease, as we have seen with the arrival of fall armyworm via wind currents from Australia. Multiple risks geographically closing in on our border, including foot and mouth and lumpy skin disease, and the heightened risk of other infectious diseases in the wake of Cyclone Gabrielle, are also a concern.

DairyNZ continues to partner with farmers, the Ministry for Primary Industries (MPI) and the wider community to address how we can collectively take responsibility and mitigate these threats.

In response to Indonesia's foot and mouth disease outbreak in 2022, we have focused on foot and mouth disease readiness during the past 12 months. A foot

and mouth disease outbreak would temporarily cripple our livestock industry, (\$34.2 billion in export revenue<sup>1</sup> to New Zealand's GDP in 2022) and have a considerable impact on New Zealand's economy.

DairyNZ has taken significant steps to prepare, including biosecurity response training and scenario planning, and work with partners to be foot and mouth disease ready. We are taking a farmer-centred approach to ensure the on-farm and farmer impacts, and our response in an outbreak are well understood. This work has informed New Zealand's national foot and mouth disease response strategy and readiness toolkit.

We are learning from each biosecurity response to achieve better outcomes for farmers and taxpayers. Work to strengthen and speed up our approaches to pest and weed incursions is progressing well. The total economic cost of pests to New Zealand was estimated to be over \$9 billion in 2019-2020<sup>2</sup>, so it is essential that our system settings are ready to react rapidly to any new risk, and we have the right tools available to manage these risks. More recently, we've provided input and awareness support for black grass, fall armyworm and yellow bristle grass incursions.

Thanks to the commitment of New Zealand dairy farmers, there is strong investment, richer knowledge, and a wealth of experience relating to biosecurity threats and how to manage them, with important outcomes to protect human and animal health. However, we can only protect ourselves if we work together to strengthen all the weak links in our defence.

With the return of widespread movement of people, animals, and goods, it takes all of us to protect what we've got and ensure our dairy farmers, who work to support the agricultural backbone of our economy, continue to succeed.

<sup>1</sup>Dairy and Meat and Wool Export Revenue from Situation and Outlook for Primary Industries (SOPI) December 2022 Final Tables, [37077-SOPI-December-2022-final-tables-web-data-release.xlsx \(live.com\)](#)

<sup>2</sup>Economic costs of pests to New Zealand 2020 Update, Prepared for MPI by Nimmo-Bell & Associates, [Economic costs of pests to New Zealand \(mpi.govt.nz\)](#)

# Our Commitment – protecting the dairy industry

Biosecurity is everyone's responsibility and core business for New Zealand's dairy industry. As new challenges continue to emerge, we are constantly reminded that prevention is better than cure and our resistance is reliant on community awareness and actions – over the fence and across the border.

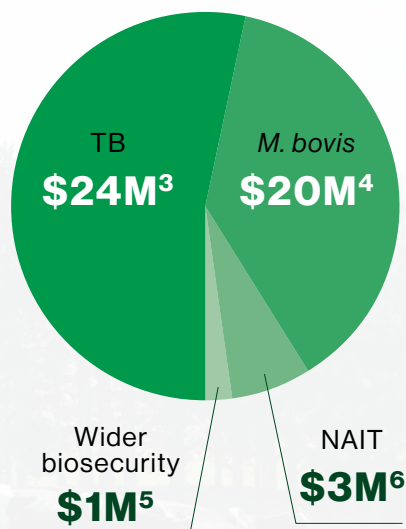
Our dairy farmers' contribution ensures we can take a whole of community approach in the changing battle against pests and diseases that can have a devastating impact on our productivity, environment, and our livelihoods.

We are committed to leaving the biosecurity system stronger for the next generation. Our partnerships are critical too. We support a whole of community approach and acknowledge that organisations and individuals are at different stages in their biosecurity journey.

## Dairy farmer contribution – leaving the system stronger

Dairy farmers are the largest primary industry investor in biosecurity under the Government Industry Agreement (GIA).

### Investment in biosecurity 2021-2022 financial year



*In 2022 dairy farmers invested **\$48 million** in New Zealand's biosecurity protection system.*

<sup>3</sup>Year end 30 June 2022, TB programme funding was \$14.5m dairy industry funding through the Commodity levy plus \$9.3m dairy slaughter levies from OSPRI 2021-2022 Consolidated Financial Statements, [OSPRI-Consolidated-Financial-Statements-2021-2022.pdf](#)

<sup>4</sup>Dairy industry share (94%) of industry contribution (32% of total cost) to the M. bovis programme for the 2021-22 Financial Year

<sup>5</sup>DairyNZ's wider involvement in plant, pest, and animal biosecurity projects and programmes for the 2021-22 Financial Year

<sup>6</sup>Year end 30 June 2022, NAIT funding was the dairy share (54.59%) of \$3.3m animal identification tag levies and tagged and untagged animal slaughter levies \$1.4m from OSPRI 2021-2022 Consolidated Financial Statements, [OSPRI-Consolidated-Financial-Statements-2021-2022.pdf](#)

## DairyNZ Biosecurity team

The DairyNZ Biosecurity team is dedicated to supporting our dairy community through readiness, risk assessment, partnerships, education, and support.

Our remit is broad and includes policy, advocacy, strategy, tactical and operations, spanning across governance level, DairyNZ and directly with our farming community.



**Liz Shackleton**  
Biosecurity  
Manager



**Carol Barnao**  
Principal Advisor  
Biosecurity



**Sarah How**  
On-Farm  
Biosecurity Lead



**Rachael Evans**  
Senior  
Biosecurity  
Advisor

## Partnerships – we're stronger together

As a community our national response capability is strengthened by the valuable partnerships we have.

Through these relationships we can ensure a whole of community and region-specific approach. We work alongside our farmers, MPI, Beef + Lamb New Zealand, OSPRI and the wider agricultural and business community to deliver and support on-farm biosecurity practice and governance:

- The *Mycoplasma bovis* Programme
- Foot and mouth disease (FMD) readiness and response
- Tuberculosis (TB) control
- National Animal Identification and Tracing (NAIT) animal movement
- GIA Plant Council initiatives (input and support of plant research, risk assessment)
- Plant/pest response support e.g., fall armyworm, black grass, yellow bristle grass
- Business Biosecurity Pledge – sharing our experiences with the wider community.



# Focus

## Response

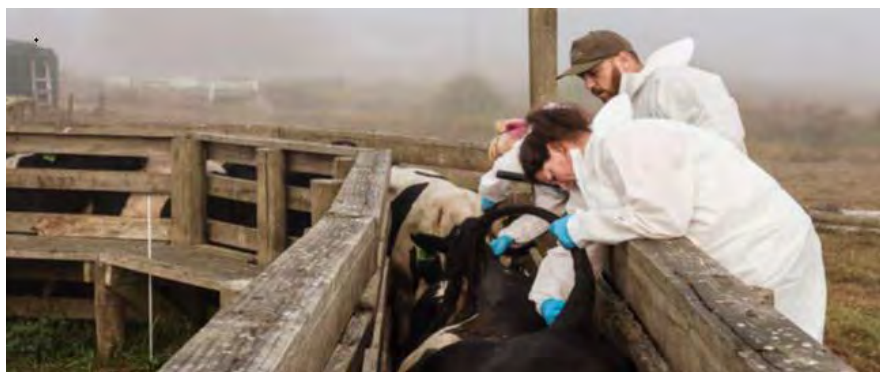
From January 2022 until April 2023 DairyNZ biosecurity efforts were centred on readiness for potential threats, and response to existing and new threats like *Mycoplasma bovis* and fall armyworm.

Jan – Mar 22	Apr – Jun 22	Jul – Dec 22	Jan – April 23
<p>Following the <i>M. bovis</i> Independent Review, GIA partners agree to undertake a dedicated FMD work programme.</p> <p>Fall armyworm detected in New Zealand for the first time.</p>	<p>Indonesia declares a national FMD outbreak emergency.</p> <p>New Zealand national FMD Taskforce assembled.</p> <p>DairyNZ supports 18/28 Taskforce workstreams of priority to farmers.</p> <p>DairyNZ Farmer FMD readiness toolkit – readiness and response communications plan, website review and awareness campaign.</p> <p>DairyNZ Biosecurity travel cards/guidance.</p>	<p>DairyNZ FMD farm risk management tools developed.</p> <p>Fall armyworm and yellow bristle grass – input and support.</p> <p><i>M. bovis</i> community co-design project - farmer workshops.</p> <p>Farmers investment in biosecurity showcased at New Zealand Biosecurity forum.</p> <p>OSPRI and funders work on a new funders' agreement.</p>	<p>Dairy risk assessment tool (DBRIEF) – top exotic pest, plant and animal risks to dairy farmers confirmed.</p> <p>DairyNZ FMD readiness work showcased at the World Organisation for Animal Health (WOAH) Global Emergency Management Conference in France.</p> <p><i>M. bovis</i> – Controlled Area Notice is lifted from Canterbury.</p>

## Mycoplasma bovis Programme

The *Mycoplasma bovis* Programme is a Government Industry Agreement between MPI, DairyNZ and Beef + Lamb New Zealand. It is funded and governed by these three organisations in partnership and operated by MPI.

New Zealand dairy farmers have contributed \$179m over the five years of the programme. Investment to date has made a significant contribution to New Zealand's dairy and beef sectors.



This disease eradication programme is funded by a combination of farmer levies and taxpayer money. We've made strong progress, however, there is more work to do as we near the end of delimiting the disease.

The Programme remains on track towards disease eradication as we transition to long-term surveillance. However, the success of the *M. bovis* Programme is reliant on downstream practice. It is vital our farmers are vigilant with their National Animal Identification and Tracing (NAIT) and on-farm biosecurity. DairyNZ continues to support uptake of good on farm biosecurity practices through partnership and sector standardised guidance.

## Foot and mouth disease

Foot and mouth disease (FMD) readiness has remained a major focus for DairyNZ out of the *Mycoplasma bovis* independent review. Following the Indonesian FMD outbreak in March 2022, we supported a dedicated FMD taskforce led by the Ministry for Primary Industries (MPI) to strengthen our national capability and readiness. DairyNZ's biosecurity team supported 18 out of 28 priority taskforce work areas including development of a national FMD disease management strategy and review of operational FMD plans of priority to farmers.



Work is underway to agree an Operational Agreement for FMD covering decision-making, cost share settings and how we will work alongside government and industry partners should an FMD outbreak occur in New Zealand.

To support our farmers, a suite of FMD readiness and response guidance tools were developed, including refreshed information on [dairynz.co.nz](https://dairynz.co.nz), innovative farm systems maps, a podcast, webinar, internal and external stakeholder updates.

In April, this work was showcased at the World Organisation for Animal Health (WOAH) Global Conference on Emergency Management in France. DairyNZ also strengthened our FMD business contingency plan, training and scenario planning as an organisation, and in partnership to be foot and mouth disease ready to best support our farmers.



## Fall armyworm

Fall armyworm (FAW) is thought to have been carried on storm fronts from Australia and arrived in New Zealand around February 2022.

Early detection, strong surveillance and effective management tools are our best defence against fall armyworm and DairyNZ is supporting farmers through communications, resources, farmer discussion groups and webinars.

To be better prepared for the next incursion and to support greater speed from decision-making to action, we are working to review and agree the priority plant, pest and animal disease risks for our dairy farmers, supported by their investment in DBRIEF (Dairy Biosecurity Risk Identification and Evaluation Framework).

## DBRIEF – being better prepared for the next incursion

DairyNZ has taken action to identify the large number of biosecurity risks that could come to New Zealand and impact dairy farmers. This project worked with leading New Zealand and international experts to examine the biosecurity risk of exotic pest plants, insect pests and animal diseases. On-farm these can affect pasture and crop yields, milk production, reproduction, animal welfare and farmer health and wellbeing.

From this joint work, we hope sector specific impact assessments can be agreed early on to support decision-making for future biosecurity responses.



## OSPRI – NAIT and TB programmes

A robust livestock traceability system (NAIT) and TB management programme are an essential part of a strong biosecurity system for New Zealand. As dairy farmers are major shareholders and funders in the above programmes, DairyNZ retains a strong focus to ensure OSPRI are positioned strongly to deliver on their strategic outcomes.

An effective NAIT system is critical to support a successful *M. bovis* programme. We have undertaken work with OSPRI and other funders to develop a new Funders' Agreement, to provide clarity on the core work to be delivered by OSPRI for the NAIT scheme.

# Outcomes

## We are:

- Collectively learning from each biosecurity response to achieve better outcomes for farmers, New Zealanders and our economy
- Bolstering our nation's readiness for foot and mouth disease in partnership
- Developing effective farmer-centred tools for response.

## We have:

- Strengthened the framework for levy investment in livestock diseases that threaten farmers' livelihoods
- A world first *M. bovis* disease eradication programme that remains on track
- Strengthened our national biosecurity system and partnerships.

## We are strengthening our biosecurity system through:

<b>Risk assessment</b>	DBRIEF gives us greater knowledge of current and emerging biosecurity risks to dairy farmers. The top exotic plant, pest and animal diseases to dairy farmers are known and this knowledge will be applied to optimise dairy farmers' future biosecurity investment.
<b>Readiness/ response processes</b>	Our systems, strategies, capability are strengthened to respond to foot and mouth disease and future plant, pest and disease incursions.
<b>Risk management support</b>	Clear guidance and support for farmers of key biosecurity risks and how to manage them – through a farm systems and farmer co-designed approach that enables communities to consider and address what is important to them.
<b>Partnerships</b>	Under our Government Industry Agreement (GIA) for Biosecurity Readiness and Response, we continue to closely partner with farmers, the Ministry for Primary Industries (MPI) and the wider primary sector partners to address how we can collectively take responsibility, leverage efficiencies and mitigate these threats.



# DairyNZ priorities

## KEY ISSUES FOR 2023

2023/24 is shaping up to be a critical year for our farmers' significant investment in the *M. bovis* Programme as we near the end of delimitation and our wider investment in OSPRI and other biosecurity initiatives.

### Our priorities include:

- 1 New Zealand dairy production and exports are supported** by a strong risk-based biosecurity framework integrated to existing systems (e.g., food safety) to deliver a resilient future.
- 2 Complete a Foot and Mouth Disease Operational Agreement** in partnership with the Government and the wider livestock sector. A plan with clear roles and responsibilities that recognises the significant social, cultural and economic effects should such a threat successfully reach New Zealand.
- 3 Utilise farmers' DBRIEF investment to agree top priority biosecurity risks** for dairy farmers with wider sector partners across exotic plant, pest and animal diseases.
- 4 Ensure the Biosecurity Act review** recognises that responsibility for biosecurity goes beyond the farmer. Everyone needs to play their part as beneficiaries of the biosecurity investment in our community.
- 5 Leverage opportunities and strengthen relationships** out of our recent *M. bovis*, Covid-19 and cyclone experiences to enable stronger collaboration across all livestock biosecurity initiatives as part of New Zealand's team of 5 million.
- 6 Build trust and confidence** to ensure our dairy farmers are committed to working in partnership to leave the biosecurity system stronger by minimising the impact of incursions through robust on-farm biosecurity measures.



# Spotlight

DairyNZ strongly believes in collectively learning from each biosecurity response to achieve better outcomes for farmers. The following projects were developed with dairy farmers and sector partners to support our dairy farming community.

## Foot and mouth disease – new tools to help farmers know their risk pathways

### THE PROJECT

### Risk pathways mapping

Being prepared is our best defence to stamp out foot and mouth disease quickly if it were to reach New Zealand.

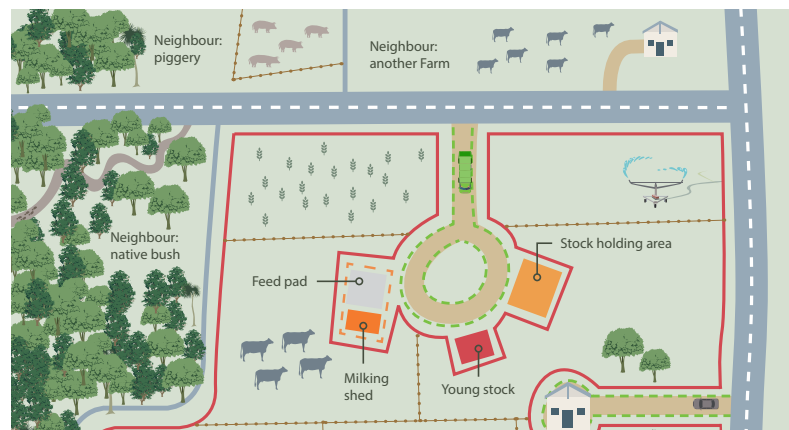
The 2022 foot and mouth disease outbreak in Indonesia was a timely reminder for New Zealand to review and refresh foot and mouth disease preparedness plans, systems and tools. In response to this, MPI established a foot and mouth disease task force to support a coordinated review and update of key elements of foot and mouth disease preparedness in partnership with DairyNZ and livestock sector organisations.

Through this work it became apparent a farm systems view was needed across preparedness plans for MPI and other livestock sector organisations to understand what the on-the-ground impact might be for New Zealand dairy farmers.

The DairyNZ biosecurity team hosted a workshop with MPI, Beef + Lamb New Zealand, the Deer Industry Association, and EpiVets to cast a farm systems lens on the potential impacts of a foot and mouth disease response.

As a result of this work, DairyNZ has developed an interactive farm system map for farmers to identify possible risk pathways (modes of spread) for foot and mouth disease, and a checklist of information to support preparation for a biosecurity response.

The map informs farmers what biosecurity risks might apply to their farm and how to mitigate these risks to safeguard their property and others. It also helps farmers identify possible modes of disease spread, specific to their properties, and how these might be mitigated with a biosecurity plan.



The map is supported by a handy checklist outlining key information for farmers to keep on-hand and up to date. Having this information ready to go if needed is crucial to support a swift biosecurity response to foot and mouth disease.

The interactive map and checklist can be viewed at [dairynz.co.nz/fmd-map](https://dairynz.co.nz/fmd-map)

This work will better inform New Zealand's preparedness plans and what the impacts on farm systems might be if restrictions are to be imposed under the Biosecurity Act 1993 during a foot and mouth disease outbreak.

## *Mycoplasma bovis* – a farmer-centred, farmer-led approach



THE PROJECT

### Ashburton Co-Design Project

A project in Ashburton is taking a co-design approach to solutions for farmers, by farmers who agree that more can be done to improve biosecurity practices on-farm.

“Reducing the risk of further *M. bovis* spread has been front-of-mind for our community,” says DairyNZ on-farm biosecurity lead, Sarah How.

“We knew we couldn’t default to a messaging campaign to see change, we needed to engage with the community to understand what barriers prevent good practice.”

With the support of the *M. bovis* Programme, DairyNZ initiated a farmer-centred design project in mid-2022 to encourage open innovation.

“Between June and December 2022, DairyNZ biosecurity and farm performance teams worked alongside Ashburton farmers and *M. bovis* Programme partners to explore and define what farmers experience as biosecurity pain points in their businesses,” says Sarah.

Key issues raised included the community’s lack of agreed biosecurity standards and poor access to information to help farmers make risk-based decisions regarding cattle movements and transactions.

“The Ashburton Co-Design Project workshops then led the community to design, test and refine possible solutions to address the issues raised.”

After processing hundreds of ideas, one possible solution was agreed on to develop and test further in the community. Robust testing ensued, and Sarah says the final version of this solution proposes creating a farm-level Animal Health and Biosecurity Star Rating that would appear as a suffix to a property’s TB status. This star rating would help to establish and socialise



*We needed to engage with the community to understand what barriers prevent good practice.*

what “good” biosecurity practice on-farm looks like, while giving cattle buyers, lessees, and graziers more health and biosecurity-related information “just-in-time” to help with their decision making.

“The evidence to support a property’s star rating would be verifiable and drawn from existing farm assurance programmes, and it is hoped that participating farmers would enjoy a competitive advantage in cattle markets over time,” Sarah says.

“The initiative also offers an option for farmers to counter any reputational risk they fear after being impacted by *M. bovis* infection.”

In March 2023, the *M. bovis* Programme approved funding to pilot the solution in Mid Canterbury.

The workshops and co-design process have had strong farmer and industry engagement, and received positive feedback about its inclusive approach, the value of problem-solving as a community and through a whole farm systems lens.

This is an ongoing programme and a wide range of primary sector partners will continue to be invited to contribute to the implementation of the pilot.

*DairyNZ* 

[dairynz.co.nz](http://dairynz.co.nz)