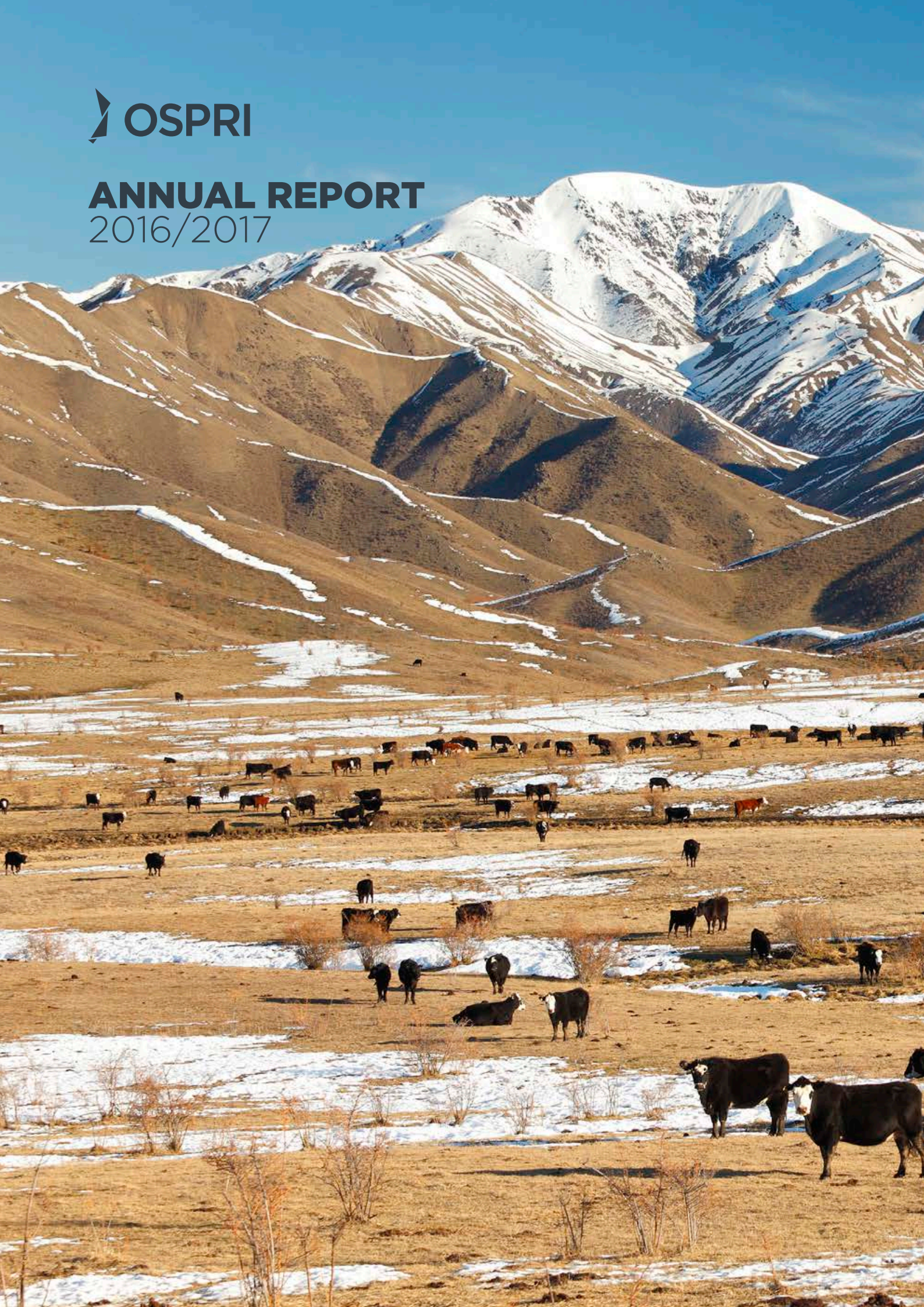
OSPRI

# ANNUAL REPORT
2016/2017



# ANNUAL REPORT
2016/2017

OSPRI New Zealand (OSPRI) was established on 1 July 2013. It currently manages the National Animal Identification and Tracing (NAIT) and TBfree programmes.

This is the Annual Report for OSPRI New Zealand Limited.

NAIT TBfree

OSPRI New Zealand's shareholders and investors:

DairyNZ DEER INDUSTRY NEW ZEALAND beef+lamb new zealand Ministry for Primary Industries Manatū Ahu Matua

OSPRI New Zealand's Stakeholders' Council comprises representatives from:

Beef + Lamb New Zealand

Dairy Companies Association of New Zealand

DairyNZ

Deer Industry New Zealand

Federated Farmers Dairy

Federated Farmers Meat and Fibre

Local Government New Zealand

Meat Industry Association New Zealand

Ministry for Primary Industries

New Zealand Deer Farmers Association

New Zealand Stock and Station Agents Association

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# CHAIRMAN & CEO REPORT

**Jeff Grant**
Chairman

**Michelle Edge**
Chief Executive

Significant progress has been made during the past year in respect of OSPRI's two key programmes. Focus has remained on the development of new approaches to meet the eradication goals under the amended TB Plan, contribution to the NAIT review and the delivery of the eASD Pilot programme. Additionally we have demonstrated our expertise, technical knowledge and the ability to add value to industry, through collaboration across a range of projects, including the Battle for our Birds and the Differential Slaughter Levy.

It is noteworthy that this work has occurred at the same time as the company has delivered significant business improvement and efficiencies, through a dedicated change process that commenced in 2015, which resulted from the $20M reduced revenue model for the TBfree programme.

Despite this reduced funding we have seen TBfree's operational spend reduce by only $14m to $50m for the year. As a result the OSPRI Group has made a surplus of $7m in the current year.

The Board and management acknowledge the participation, guidance and ongoing commitment of OSPRI's shareholders and stakeholders during the past year. The Board in particular wishes to thank the investment and support of the Crown through the Ministry for Primary Industries. We also recognise the efforts of OSPRI staff and contractors over this time.

The 2016/17 year was the first year under the amended TB Plan introduced on 1 July 2016. The amended plan builds on the previous ahead-of-target successes of TB eradication from wildlife across 1.6 million hectares of the total 10 million hectares of TB vector risk area. This progress, based on sound research and operational improvement, led to agreement of the following new plan objectives:

- TB freedom in livestock by 2026
- TB freedom in possums by 2040
- Eradication of bovine TB from New Zealand by 2055.

In the past year we have approved revocation of an additional 230,000 hectares of vector risk area bringing the total area revoked to 1.83 million hectares since 2011. Disease control area changes during the year resulted in 289,000 fewer livestock TB tests for farmers; a total of 3.47 million livestock TB tests were carried out.

A fundamental component of the amended plan implementation has been the development and delivery of the National Operational Plan (NOP), approved in the last quarter of 2016 by the Minister for Primary Industries. The NOP guides the delivery and management of the TB Plan by specifying:

- TB Plan objectives, with milestones and analysis of when and where they will be achieved
- High-level outlines of disease control methods and technical specifications
- Livestock testing and movement control processes and obligations.

A key change introduced by the NOP has been the development of more than 100 individual local plans to eradicate TB through TB management areas (TMAs). This has been a significant undertaking, requiring cross-company expertise and resource inputs. TMAs are areas of similar habitat, disease patterns, geography, and control history.

> Significant progress has been made during the past year in respect of OSPRI's two key programmes.

Each TMA has a specific and detailed local operational plan designed to eradicate TB as efficiently as possible by a target date. Each TMA is described in a notice which will be updated annually.

This new approach delivers improved public information and engagement opportunity with landowners and users about the timing and locations of our pest management work. The forward planning element of TMAs will also allow us to work with key stakeholders such as the Department of Conservation and Regional Councils to identify opportunities for economies of scale and future collaboration in pest management. This will be a focus for the 2017/18 year.

Alongside the TMA approach, we have also implemented a new pest control operations procurement model that promotes and increases innovation and collaboration with service suppliers. This will lead to improved levels of service and quality and reduced OSPRI management overheads.

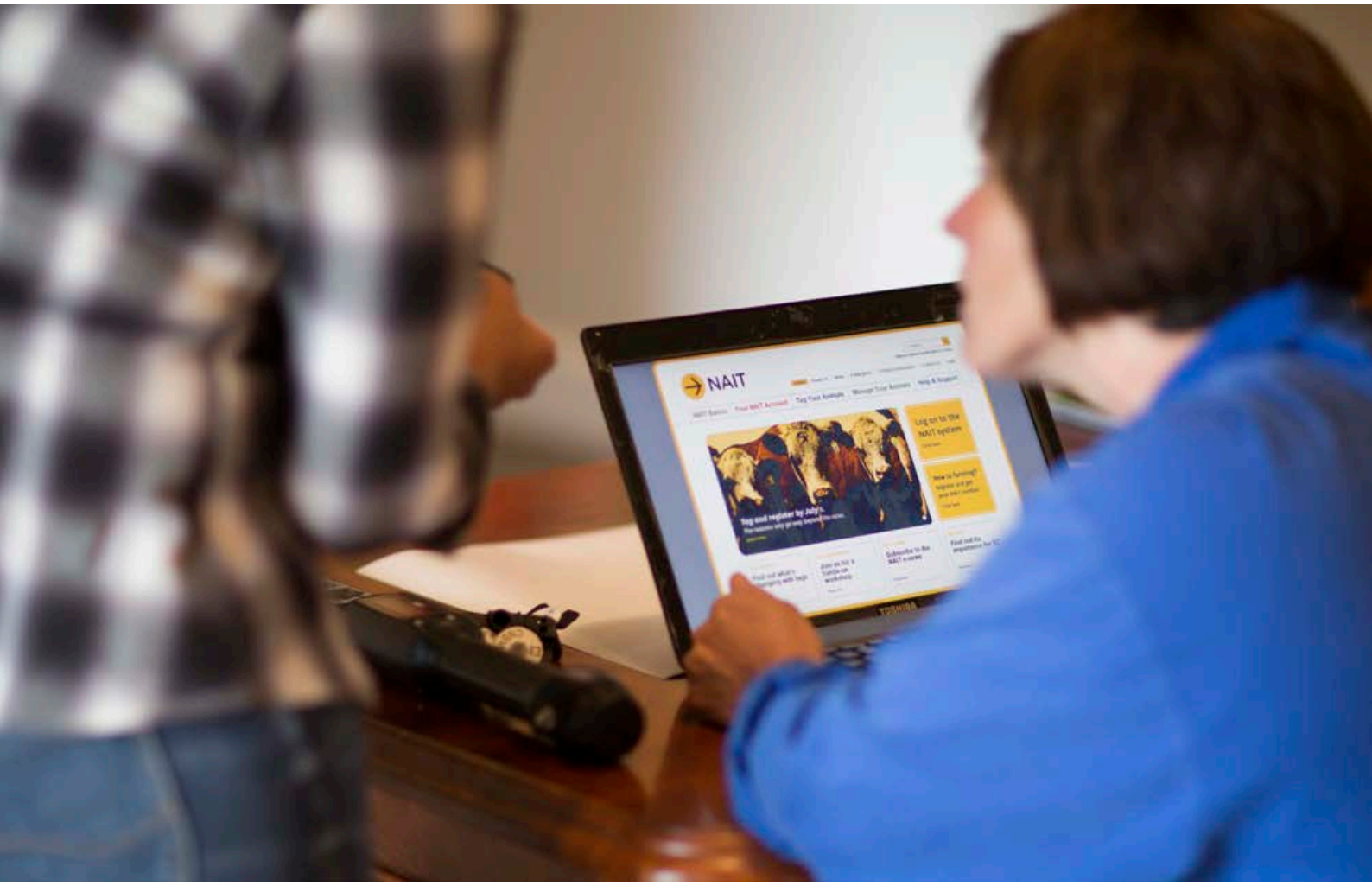
Wildlife control and survey activities during the past year covered a total of 5.5 million hectares. Our pest management teams have continued to deliver operational work to a high standard across the country with the 2016/17 programme of work delivered on time and within budget. We have also improved our engagement and response to stakeholder feedback, for example close consultation with deer hunting groups in the central North Island has led to widespread use of deer repellent on 1080 baits across areas of high hunting value.

OSPRI's expertise at managing large-scale pest and predator control is highlighted by our assistance with delivery of the Department of Conservation's Battle for Our Birds campaign. This work involved 11 different operations and pest control carried out over 390,000 hectares, which included areas targeted for, or adjacent to, TBfree aerial operations. We have signed a further master services agreement with the Department of Conservation for similar work in this coming year, with operations dependent on predator numbers and locations.

We have also engaged with Regional Councils both through Local Government forum meetings and individually, for the purposes of developing an environmental scan of pest control operations. This will contribute to the development of the OSPRI strategic plan and potential collaboration in service delivery under the Predator Free 2050 arrangement with other agencies.

During the year work has also been underway to develop a more targeted risk-based TB livestock testing approach and implementation strategy. This will be an important undertaking in the upcoming year with an initial trial to test and validate the approach across high risk infected herds and through a pilot with the deer industry.

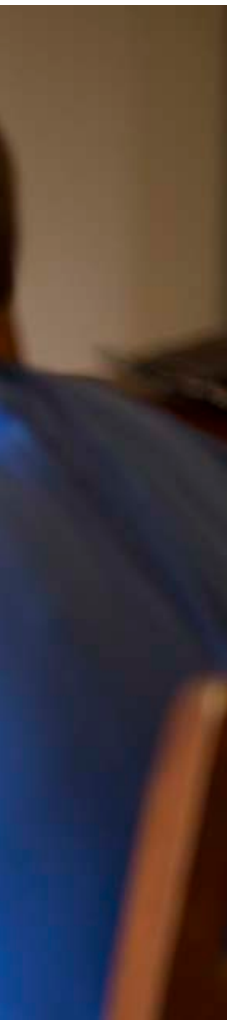
We are also undertaking the integration of TB testing data with NAIT for the purposes of individual animal and premises status assignment in accordance with movements that will enable enhanced surveillance and monitoring. NAIT already enables the capture of key attributes as defined in its initial Business Plan, therefore this key step will see greater utilisation of the traceability system for animal health management, monitoring and surveillance. Two other programmes that have been under development have included the shift in deer testing to an in-house model aligned with cattle testing, and




the development of the revised post-mortem slaughter surveillance programme.

Another notable achievement has been the successful deployment of the Differential Slaughter Levy, developed on behalf of the Ministry for Primary Industries and livestock industries, which facilitates the identification of livestock at slaughter by production type and therefore, the collection of industry-specific levy revenue for funding the TB Plan. The production types of 9.4 million animals were updated prior to go live, and the project was delivered well under budget with fewer disputes than anticipated. Collection of slaughter data remains important and the ability to define the livestock slaughtered will also contribute to New Zealand's economical and statistical recording and monitoring abilities.

The NAIT team has been focused on providing technical input, advice and general support to the NAIT Review, and we have developed a series of key policy papers for consideration by the Review's Technical User Committee and Steering Committee. Currently we are responding to the draft recommendations proposed by the Technical User Committee, and in the upcoming year will continue to support and assist with the next steps of focus-group testing, industry consultation, and building the necessary capacity to ensure successful implementation and continued support of the refreshed NAIT programme. Plans for NAIT



> The past year has enabled us to demonstrate our breadth of expertise and ability to add value.

application changes to respond to the review recommendations are under development and will be initiated upon the acceptance of the recommendations by industry and Government.

We have also continued to effectively manage the NAIT application during this period and have introduced system enhancements to improve ease and reliability for users, and which have increased performance by 40%. Over 80,000 farmers are registered with NAIT, and 7.1 million animal movements were recorded over the year.

Another key project that highlights how OSPRI capability can add value to the industry is the successful pilot with Red Meat Profit Partnership and Silver Fern Farms for an electronic animal status declaration (eASD) which allows farmers to complete ASD forms electronically and send them to meat processors by smartphone or internet. To date in the Pilot, there have been 432 eASDs created and recorded in the new application (173 cattle, 258 sheep and one deer).

This programme is now moving to phase one implementation, being extended to other processors and more suppliers. We are awaiting a decision by the reference group, comprising industry agencies and MPI, on our published business case proposal for full eASD implementation that includes its integration with NAIT to capitalise on the national database abilities and the potential alignment of single livestock movement transaction efforts by industry.

These projects, together with continued high levels of service to meet our programme requirements, have been delivered in tandem with a significant reduction in corporate costs. OSPRI's change programme and re-structure, developed to respond to reduced revenues, resulted in a staffing reduction from 163 permanent staff to 106 and from 19 contractors to five, between 2015 and 2017. Other efficiencies have reduced corporate costs and maximised programme spend, despite the reduction in overall revenue.

We have demonstrated continual business improvement through expanded and timely stakeholder engagement, more effective event planning and joint extension activities with industry partners. Notable company health and safety policy changes have included the substitution of quad bikes and Robinson helicopters with safer modes of transport, and ensuring that all remote workers have two-way communications. Ten well-received Health & Safety field days were run for regional contractors (six days) and TB testers (four days). We will introduce our new health and safety strategy in the upcoming year. Additionally, an ACC audit during the year resulted in our tertiary grading being maintained for the next two years.

The past year has enabled us to demonstrate our breadth of expertise and ability to add value. We look forward to the consultation phases of the NAIT review and the ensuing implementation of the review outcomes, the introduction of risk-based testing, further eASD industry discussions, and continued effective engagement with all stakeholders in the upcoming year. We are confident that we are well-positioned to maintain the strong focus on our programmes and stakeholder needs.

**Jeff Grant**
Chairman

**Michelle Edge**
Chief Executive

# STAKEHOLDERS' COUNCIL REPORT

**Anders Crofoot**
Chairman, Stakeholders' Council

The Stakeholders' Council representatives have been encouraged to see a renewed focus in the past year on the company's two key programmes of TBfree and NAIT. In particular, the Council notes, and is supportive of, the progress under the new TB Plan, OSPRI input into the NAIT review, and ongoing work and engagement with stakeholders and industry.

A number of Council representatives are participants in the NAIT programme review process, as members of either the Steering Committee or Technical User Committee. Both levels of committee have engaged in robust discussion on technical and policy questions with the aim of developing recommendations that will enhance key areas of the scheme and provide greater user benefits. Council members look forward to continued participation in finalising the set of recommendations and the following consultation stages.

The Council also notes the positive progress towards implementation of an electronic Animal Status Declaration (eASD) form, which will provide value for all stakeholder constituents.

OSPRI's ongoing collaboration with the Department of Conservation in the Battle for our Bird programme has provided an opportunity to coordinate the pest control work of both organisations and has resulted in additional TBfree work being carried out in blocks adjoining key TB risk areas. The proposed engagement with Regional Councils in the next year should be similarly valuable in identifying alignment, leverage and potential collaboration for the best investment on behalf of OSPRI investors.

The Council has noted with appreciation the increased engagement by the company, with two formal reporting and discussion forums for shareholders and stakeholders held in the past financial year, in addition to the detailed briefings provided to three scheduled meetings of the Stakeholders' Council.

These have provided increased opportunities for stakeholders to be informed about and provide direction to the company on its progress and activities, and to interact with Board members, management and staff.

Jeff Grant was reappointed as the Beef+Lamb representative director during the course of the year. Ian Marshall has acted as independent chair of the Board Audit & Risk Committee for the past year and the Council thanks him both for this service, and his assistance with the replacement director interviews.

The Council undertook a director selection process in the second half of 2016, in accordance with the constitution, following the resignation of Keith Sutton. The recommended candidate, Mike Pohio, was appointed by shareholders at the 2016 AGM, and we are gratified to hear that he is adding value to the Board.

In terms of Council members, I thank Jim van der Poel for his commitment and efforts over several years and welcome Ian Brown as the DairyNZ representative.

The Council's total expenditure of $9,300 in the 2016–17 financial year was incurred in respect of its three meetings, together with commissioned work in relation to the director candidate selection process.

The Council looks forward to continued engagement with the Board and management in the next year, and to providing input and advice on the key items of work for 2017–18.

**Anders Crofoot**
Chairman, Stakeholders' Council

# STAKEHOLDER CONSULTATION

OSPRI is committed to working with its stakeholders to achieve efficient application of agency and levy funds through its programmes and service delivery. This is enhanced by the focus on increasing co-investment and collaboration in areas of traceability, animal health, and biosecurity and pest management. OSPRI regularly engages with the Ministry of Primary Industries, the Department of Conservation, Local Government, industry agencies and community groups.

These engagements and collaborations ensure that industry and Government funding of OSPRI programmes is appropriately and effectively invested to deliver maximum impact. A range of key consultation processes support OSPRI and provide advice on its investment and operational activities and services. These include, but are not restricted to, regular engagement with:

- OSPRI investors and shareholders (DairyNZ, Beef + Lamb New Zealand, Deer Industry NZ, the live animal export industry and the Ministry for Primary Industries) in six monthly and annual planning and budget discussions
- Ministry for Primary Industries (MPI) to ensure that OSPRI continues to demonstrate effective management of the statutory TBfree and NAIT programmes and that appropriate policy and programme activities are undertaken in a timely manner. OSPRI meets with MPI to discuss and agree on programme reporting requirements, strategic planning and to proactively share information
- The OSPRI Stakeholders' Council to gain agreement on investment focus and the key activities concerning the development and delivery of the TBfree and NAIT programmes. The Stakeholders' Council also provides advice to support the overall governance and service delivery of OSPRI
- The TBfree and OSPRI Committees for purpose of outreach and extension, and to ensure that advice is obtained at local level on behalf of the farming community.

# OSPRI AT A GLANCE

Effective animal health management and the control of animal diseases and pests that threaten biosecurity and the natural environment in New Zealand rely on the co-operation of Government agencies, industry organisations and businesses, communities and individuals in the primary sector.

The Ministry for Primary Industries (MPI) is tasked with maximising export opportunities, improving agricultural productivity, ensuring the food we produce is safe, increasing sustainable resource use and protecting New Zealand from biological risks.

In support of their initiatives, the Government and industry partner and co-invest in two major programmes: TBfree (the management of the National Bovine Tuberculosis Pest Management Plan) and NAIT (the National Animal Identification and Tracing programme). The TB programme is directed at the eradication of TB from New Zealand, while NAIT is the national livestock traceability programme, capable of tracing livestock movements for the purposes of managing animal health, disease outbreaks, food safety or biosecurity risks.

OSPRI is the whole owner of TBfree New Zealand Ltd and NAIT Ltd, which are the statutory management agencies appointed for the implementation of the TBfree and NAIT programmes respectively. OSPRI has capability in areas of biosecurity, animal health, traceability and pest management, and partners with industry and Government to deliver these services.

## OUR CORE PROGRAMMES

TBfree

### THE TBFREE PROGRAMME

To date, progress towards the ultimate objective of eradicating the disease from New Zealand has been better than expected. Investment associated with the TBfree programme is directly channeled into major areas of service delivery as follows:

- **Disease management**
  Key activities include livestock TB disease surveillance through post-mortem monitoring at slaughter and on-farm TB testing. There is also provision of diagnostic services for cattle and deer herds, case management of herds diagnosed with TB infection, and monitoring and controlling livestock movement to prevent disease transmission through movement of potentially infected livestock. There is also analysis and reporting of results and, where necessary, slaughter of livestock with compensation payable to the owner.
- **Pest management**
  Eradication of TB in wildlife is delivered through an intensive, targeted possum control programme, wildlife surveillance, field operations and monitoring, post-mortem analysis and diagnostics, and industry and community engagement and liaison.

- **Research and programme development** Fundamental and applied research is carried out to support the control and eradication of TB in wildlife and livestock, animal health and disease analysis, testing methodologies and diagnostics, with related activities to provide a scientific basis for programme design.
- **Corporate and Contact Centre support** OSPRI uses a range of mechanisms to ensure that farmers, stakeholders and other affected parties are well-informed about the TBfree programme, activities and operations.

The amended TBfree programme, developed through joint industry, scientific and Government consultation during 2015, aims to achieve:

- Biological eradication of TB from New Zealand by 2055;
- TB freedom[1] in livestock by 2026; and,
- TB freedom in possums by 2040.

The above targets are to be achieved whilst ensuring the annual infected herd period prevalence stays at or below 0.2% throughout the term of the plan.

The new TB Plan provides a range of advantages, including:

- A clear goal for full eradication of TB from New Zealand;
- A reduced level of annual expenditure – ($60m average, down from $80m previously) due to new approaches to testing and pest control; and

1 Defined as statistical confidence that the disease is no longer present in the animal or wildlife population

- Streamlined funding arrangements that give greater funding security and greater flexibility.

Efficient delivery of the TB Plan will be achieved through more targeted risk-based approaches to livestock TB disease management and pest control, which will leverage improved monitoring, data availability and research outcomes.

## THE NAIT PROGRAMME

NAIT Ltd was established through a partnership between the beef, deer and dairy industries and the Ministry for Primary Industries (MPI). NAIT Ltd is a subsidiary of OSPRI New Zealand Ltd. The NAIT system was established to implement an effective lifetime traceability system for its livestock and animal products (currently cattle and deer) and the system provides the capacity to:

- link people, property and livestock;
- record and demonstrate lifetime livestock and livestock product traceability; and
- contribute to New Zealand's ability to prepare for and respond to animal health, food safety and biosecurity incursions.

There are four main drivers for the NAIT system:

- **Biosecurity**
  The implementation of an effective livestock traceability system enables New Zealand to respond to a biosecurity incursion or exotic disease event by tracing suspect or infected livestock and locating, prioritising and treating suspect or infected premises or animals.
- **Food safety**
  New Zealand must be able to provide assurance to local and overseas markets about food safety standards and product integrity through traceability of livestock and the associated property of origin of those products. NAIT supports traceback in the event of a food safety incident, residue or contamination issue and can hold information including slaughter monitoring data and other information relating to chemical or veterinary treatments that inform product integrity status.
- **Market assurance and access**
  New Zealand needs to provide assurance to both local and overseas markets and customers of the attributes associated with livestock product integrity and wholesomeness, for which traceability is a clear enabling requirement.
- **Animal health surveillance**
  National livestock traceability systems such as NAIT provide the ability to integrate animal health information and enable the monitoring, surveillance and management of both endemic and exotic diseases. NAIT provides support for decisions on the disease status of livestock or livestock products being sold, slaughtered or exported, and also provides capacity for the assignment of individual animal and premises status in association with animal health issues and diseases. This means any response activities, whether for treatment, vaccination or slaughter, can be prioritised on the basis of location and animal status, enabling more effective emergency response.

OSPRI delivers the NAIT programme to achieve these objectives through a range of activities as prescribed in the **NAIT Act (2012)** including:

- Overseeing policy, standards development, licence provision and accreditation;
- Supporting NAIT animal registration, data entry, movement/transaction recording;
- Providing Government, industry and customers with reporting, alongside undertaking general monitoring and evaluation activities;
- Providing and maintaining a secure, current and credible database;

- Providing extension, field and service support for implementation, policy and system issues;
- Communicating NAIT requirements and promoting programme uptake and adoption;
- Providing resource and input to livestock trace-back exercises facilitated by Government; and
- Providing input to, and integration with, the whole of chain livestock traceability system for domestic and export products.

# GOVERNANCE

OSPRI New Zealand Ltd (OSPRI) as a parent company was incorporated on 6 June 2013 by the acquisition of Animal Health Board Incorporated (now TBfree Limited) and National Animal Identification and Tracing Limited (NAIT).

OSPRI recognises the value of strong corporate governance. As a company responsible for the investment of funds by its shareholders and the Crown, OSPRI must meet and demonstrate sound governance processes to shareholders and stakeholders. The OSPRI Board oversees company strategy, financial performance, risk management, internal governance and management process and overall company delivery in accordance with legislative and commercial requirements. Committees of the Board include the Audit and Risk Committee and Human Resources Committee. The NAIT Data Access Panel is a separate and independent governance body that oversees data access in accordance with the provisions of the NAIT Act.

OSPRI's shareholders are DairyNZ Limited, Beef + Lamb New Zealand Limited and Deer Industry New Zealand Limited. OSPRI has a Stakeholders' Council comprising representatives of the shareholders, Ministry for Primary Industries and seven other interested stakeholder groups: New Zealand Deer Farmers Association, Local Government New Zealand, New Zealand Stock and Station Agents Association, Federated Farmers Dairy, Federated Farmers Meat and Fibre, Meat Industry Association New Zealand and the Dairy Companies Association of New Zealand.

## **TABLE 1:** PROVIDES AN OUTLINE OF OSPRI'S GOVERNANCE FRAMEWORK.

| GOVERNANCE ELEMENT | REQUIREMENT TO BE ADDRESSED BY OSPRI GROUP |
|---|---|
| **Enabling legislation** | TBfree New Zealand Limited (TBfree) manages the National Pest Management Plan (NPMP) for bovine tuberculosis (TB) as Management Agency, in accordance with the provisions of the Biosecurity Act 1993 and the Biosecurity (National Bovine Tuberculosis Pest Management Plan) Order 1998.<br><br>NAIT Limited is responsible for implementing New Zealand's National Animal Identification and Tracing (NAIT) programme and operates under the National Animal Identification and Tracing Act 2012 as the NAIT Organisation. |
| **Governance legislation** | OSPRI, TBfree and NAIT are provided for with separate constitutional requirements and recognised under the Companies Act 1993 and the Charities Act 2005. The Shareholders engage with OSPRI through a formal Shareholder Agreement and through the constitutional consultation mechanism of the Stakeholders' Council which operates in accordance with agreed stated rules. |
| **Financial control** | The OSPRI Group and subsidiary companies maintain accounts and records of transactions and affairs in accordance with New Zealand's accepted accounting practices for large companies (NZGAAP). The OSPRI Group of companies is a not-for-profit public entity. |
| **Audit process** | Independent internal and external audits are applied to OSPRI and its subsidiaries to review and assess financials, risk, fraud, quality of internal financial and governance processes and policies. |
| **Fraud and risk management** | OSPRI's fraud and risk management framework through the company's Audit and Risk Committee includes processes for project, programme and portfolio level risk management, general compliance and operational risk management and financial risk management. |
| **Monitoring performance** | OSPRI monitors, measures and evaluates its performance to continually improve its effectiveness and efficiency. These measures are reported to Stakeholders on a regular basis. |
| **Reporting to Stakeholders** | OSPRI reports to Stakeholders on an annual and quarterly basis and more regularly through technical advisory groups and the regional TBfree and national OSPRI committees. Specific reports to shareholders and the Ministry for Primary Industries are made in accordance with OSPRI's regulatory requirements and deliverables. |
| **Planning and reporting** | OSPRI's corporate planning and reporting approach includes an Annual Operating Plan that outlines the annual budget, workplans, resources and research requirements for the year. This provides the opportunity for the Stakeholders' Council and shareholders to respond to changing strategic requirements and external drivers for the company. An Annual Report provides information on the projects and activities of the OSPRI Group in relation to the goals set in the Annual Operational Plan for a given financial year. |

# KEY HIGHLIGHTS FROM 2016/17

**3,764,483**
**ANIMALS REGISTERED IN NAIT**

**83,326**
**FARMERS REGISTERED WITH NAIT**

**7,130,146**
**MOVEMENTS RECORDED IN NAIT**

**54 TB INFECTED HERDS** AS AT END OF JUNE 2017

**3.47 MILLION**
**LIVESTOCK TB TESTS WERE CARRIED OUT**

**DISEASE CONTROL AREA CHANGES** RESULTED IN
**289,000**
**FEWER LIVESTOCK TB TESTS** FOR FARMERS

**5.5 MILLION HECTARES**
COVERED BY WILDLIFE CONTROL AND SURVEY ACTIVITIES

**ERADICATED TB FROM POSSUMS ACROSS 230,000 HA**
OF VECTOR RISK AREA

**TB NOW ERADICATED FROM POSSUMS ACROSS 1.83 MILLION HA**
SINCE 2011

**300** PEST CONTROL CONTRACTORS SPENT ALMOST
**300,000** HOURS CHECKING MORE THAN
**340,000** TRAPS AND INSPECTING
**40,000** DETECTION DEVICES

**CONTACT CENTRE** – **64,631** INBOUND CALLS – **51,246** OUTBOUND CALLS – **9,600** AVERAGE TOTAL CALLS PER MONTH 2016/17 COMPARED TO APPROXIMATELY 16,000 IN 2014/15 AND 2015/16

**TB INFECTED HERD PERIOD PREVALENCE OF 0.11** AS AT END OF JUNE

# OSPRI
# PROGRAMME UPDATES

OSPRI's core programmes, NAIT and TBfree underpin the Company's mission statement by delivering livestock traceability, TB disease management and wildlife pest management for enhanced biosecurity and biodiversity outcomes.

# THE NAIT PROGRAMME

In 2015/16, NAIT reached the finalisation of its three-year transition period and focus during this period has been on communication and encouraging uptake of the system.

In 2016, a review of NAIT was initiated by OSPRI for purposes of evaluating progress and performance against its stated aims. While it was noted that 3–4 years of implementation represented a reasonably short timeframe before the consideration of review, it is also appreciated that there are some key business rules and legislative provisions that could be enhanced for more user-friendly, practical and economic uptake across industry.

On completion of the review, OSPRI will seek to revise its NAIT operational plan and three-year strategy in accordance with resulting and agreed Government and industry recommendations. In the meantime, efforts have been directed at enhancing reporting functions, streamlining the NAIT application to improve overall function (this has increased by 40%) and on stocktake of data to inform future policies and standard operating procedures, alongside revision of the standards that underpin the Act and are administered by NAIT Limited.

OSPRI continued working with industry and Government partners and agencies to ensure awareness of the potential benefits of NAIT, with a focus on the medium term goals of the programme, which are as follows:

- That the NAIT system provides credible national data relating to deer and cattle location and movement for over 80% of the national cattle and deer herd;
- That the NAIT system enables the demonstration of disease freedom and the resumption of cattle and deer (and product) trade following any adverse biosecurity or food safety event;
- That NAIT data is an integral part of New Zealand's primary industry preparedness activities and assists in the response to a biosecurity or food safety event;
- That the NAIT system supports market access and supports both product integrity and customer preferences for the trading of animal products with lifetime traceability attributes.

There is a need to establish standards and performance metrics for traceability such that the outcomes of NAIT can be evaluated more effectively in context of both biosecurity and food safety requirements. Equally, the development of such standards would further identify the role of NAIT in contributing to national biosecurity trace-back exercises and activities for readiness and incursion response. These standards and performance metrics are under development and will be promoted post the acceptance of the outcomes of the NAIT review.

## ACTIVITIES DURING THE YEAR

During the year OSPRI has continued to work with industry and Government partners and agencies to ensure awareness of the potential benefits of NAIT, with a focus on the medium term goals of the programme. Alongside this we set out to achieve the following key goals and objectives:

- That the NAIT system is evaluated and recommendations provided to Government for continual improvement
- That the NAIT system is delivered in accordance with policy, regulatory and programme objectives
- That the NAIT system is maintained and uptake is enhanced
- That NAIT participates in livestock traceability activities underpinning disease preparedness and emergency response and recovery
- That NAIT is supported by effective engagement, extension and education activities.

Outlined below is a summary of key highlights and activities undertaken throughout the year to meet these goals and objectives.

## MANAGEMENT OF NAIT PROGRAMME

The focus for this activity has been on ensuring that NAIT is delivered in accordance with policy, regulatory and programme objectives. This work has included continuing to implement the policy framework upon which the NAIT Act is based, communicating requirements to end users, working with accredited entities, information providers and tag manufacturers to ensure that the programme and its supporting processes are applied consistently, and constantly reviewing its implementation progress to inform future standard operating procedure and policy development. Key focus areas have remained to be supporting information providers and accredited entities, including reviewing the available resources to support them in utilising the NAIT system, drafting the NAIT device, accreditation and identification standards (noting these will be finalised in conjunction with the NAIT review) and working with NAIT system users to provide regular and reliable operational and technical advice.

Day-to-day support for the NAIT system has also been provided by the OSPRI Contact Centre, where approximately 56,000 calls and 22,000 emails have been addressed to support users in their movement transactions and account registration activities.

Engagement with tag manufacturers and support for quantifying applications under the device accreditation standards has continued. In addition, regular engagement has continued with stakeholders to identify priorities on a continual basis and opportunities for NAIT to underpin key

industry, Government or market access programmes. Examples of developments here have included addressing production type requirements for several sectors and applying livestock dates of birth on behalf of industry for specified sectors. Regular communications to industry have also been undertaken, with NAIT featuring in OSPRI e-news provided to systems users. These have ensured focus on the core elements of the programme and how these are applied in practice within the industry. Ongoing work for the NAIT operations team involves working with the wide array of NAIT system users to address issues, priorities and system level needs.

Finally, activities have continued to ensure that NAIT data is stored and maintained, kept current and remains fit for purpose. This involves regular analytical assessment of the data retrieved from the NAIT application reporting platforms. The NAIT reports have been redesigned to reflect more appropriate industry level and system level performance outcomes, such as registration by PICA, saleyard and meat processor entity; registration trends by user type, animal production type and the nature of registration, movement recording by timeframe (24 and 48 hours) by user type; trends of tagging and untagged livestock over time and data relating to tags and slaughter.

Next steps for supporting NAIT operations will be examining the resources available to end users of the system, including training and support materials, user guides and standard operating procedures that will provide key tools for farmers, saleyards, meat processors, tag manufacturers, and registered information providers and accredited entities. Further to this will be the development of the NAIT notice programme that will provide a series of succinct factsheets relating to NAIT programme requirements and user functions.


# EVALUATING THE NAIT SYSTEM: THE NAIT REVIEW

In 2016, a review of NAIT was initiated by OSPRI with Government and shareholders for purposes of evaluating progress and performance against the programme's stated aims and business case. A governance process for the review was established, involving a Steering Committee comprising the main stakeholder (industry and Government) groups, and a Technical User Committee representing the individual sectors along the supply chain and the interests of users of the system. Both committees have independent chairs, with OSPRI staff contributing technical and policy advice. Issues under discussion in these committees have included tag retention, tag supply and distribution, upload of NAIT movements, definition of premises (location), movement recording, traceability standards, registration of premises and livestock, transactions for movements, linkage with movement documentation (ASD/eASD), tag identification and compliance, amongst others.

It is anticipated that a report on outcomes of the review will be provided to the Ministry for Primary Industries towards the end of 2017 for consideration, followed by a wider consultation process anticipated in 2018. The next consideration is the potential legislative amendments, with MPI then leading consultation on these and OSPRI leading the implementation plans for addressing the recommendations of the NAIT review. Some recommendations, under the auspices of the current NAIT Act, may be able to be addressed operationally, while others that require legislative amendment will be considered in accordance with Government processes and timelines.


The proposed changes to address the recommendations are anticipated to range from system level enhancements to policy and communication processes. Activities may involve analysis and product design, software development and quality assurance, database development, and management and operational activities to support and underpin the implementation of system level changes with user groups. Work has continued on the consistent implementation of the NAIT system, including continued technical and policy support and advice for users and entities that currently engage with the system including Government (policy and verification representatives), information providers, meat processors, saleyards and other commercial and farm management agencies.

Work has commenced towards the mapping of the NAIT notices, described as policy notices reflecting key aspects of the NAIT system and its function under the NAIT Act. These are intended to support communication of the system, its functions and user expectations, with continual analysis of system outputs and key performance indicators. Work has also continued towards the revision of the Device Accreditation standard with related consultation, including with tag manufacturing representatives. Further work over the coming year will include standard revision and re-publication of the information providers and accredited entities, including performance and monitoring requirements, pending the outcomes of the NAIT review recommendations and their acceptance by industry and Government.

## NAIT SYSTEM ENHANCEMENTS

The NAIT system plays a major role in the successful implementation of the NAIT scheme and in ensuring national traceability for biosecurity and market access purposes. Since the NAIT system was implemented in July 2012, significant improvements have been made to ensure that system is robust and usable. While these changes have contributed to its current solid state, there are still areas that will be enhanced following the completion of the NAIT review.

During the year we made a number of important changes to the system with the focus on improving data integrity and implementing legislative and regulatory requirements. These include:

- Development and implementation of a NAIT reporting and monitoring platform. This initially involved an assessment of the existing reporting platform against the revised and newly developed KPIs and performance metrics. This work will continue into the 2017–2018 year, involving development of custom reports to meet the requirements for traceback, statistical analysis, epidemiological investigations and market access verification in areas of livestock traceability, biosecurity, verification and compliance.
- Work has commenced towards enhancing NAIT reporting and examining arrangements for the monitoring platform intended to be developed in the 2017–2018 year (informed by the NAIT review), that will monitor performance of NAIT account holders and users, and apply key performance indicators in tandem with the reporting platform to support regular monitoring and reporting activities for the NAIT system.
- Work has been underway towards a series of key NAIT system enhancements including refinement of the Impractical To Tag functionality, movement data capture functionalities and user interface. Work has also commenced towards the potential development of the NAIT mobile application, for purposes of improving access and usability in remote areas or during travel where connectivity may be weak.

## CONTRIBUTION TO LIVESTOCK DISEASE TRACEBACK EXERCISES

OSPRI participates in livestock traceability activities underpinning disease preparedness and emergency response and recovery. NAIT participates in 3–4 of these exercises a year, involving reporting to Government on animal movements and transactions, location of identified livestock, and reporting on premises and quantums of NAIT number movement activity that would mirror the required traceback in the event of a livestock standstill or emergency response. NAIT has contributed a number of reports of livestock transactions and movements to and from locations including farms, saleyards and processing plants and has provided individual NAIT number casing support for purposes of locating infected animals, cohort animals and related premises for preparation for disease response activities within prescribed requirements of the Act.

Work has continued in collaboration with MPI towards evaluating the NAIT reporting approach and the performance indicators for disease exercises, so that they effectively represent the core programme outputs and specified regulatory requirements.

The NAIT team have continued to provide technical advice and support throughout these exercises to contribute to learnings that will support future livestock standstill exercises or live responses. Further work will involve specifying the role and support of the NAIT system for traceback exercises and disease responses, enhancing reporting mechanisms for Government and examining the broader capabilities able to be offered by OSPRI to support Government and other entities involved in endemic and exotic disease responses. This will involve quantifying the role and support required from NAIT in relation to Government-Industry Agreements, since effective traceback contributes to reducing costs associated with both response to an incident and ongoing recovery activities.

## NAIT EXTENSION ACTIVITIES

OSPRI undertakes a range of targeted engagement, extension and education activities to support NAIT uptake in industry and increase awareness of the programme. These activities have remained in developmental stages this year predominately due to the NAIT review and the need to contemplate the re-fresh of supporting materials, messages and approaches that will form part of a renewed extension programme. A key focus has been improving the communication with information providers and accredited entities and supporting their ongoing interface with the NAIT application.

Focus will remain on developing and communicating case studies to demonstrate the value NAIT adds to animal health attributes, herd and production level performance measurement, biosecurity response and market access. OSPRI has developed its overall extension strategy and this will include a range of activities directed at implementing the NAIT programme post review. Equally, OSPRI has continued to focus its communications on NAIT programme activity, in order to continually support end users of the system and promote the role of traceability in validating food safety, product integrity and disease status in order to demonstrate to customers and importing countries that their standards are met.

OSPRI has promoted NAIT at a range of events, including Fieldays at Mystery Creek where an OSPRI ‘pit stop’ support stand was provided to engage farmers and assist with their understanding and application of livestock movement transactions. OSPRI staff interacted with over 650 farmers, providing them with one-on-one advice on how to use the NAIT system and addressed a wide range of other NAIT related queries. Overall sentiment about NAIT was good with 89% of farmer views being positive (41%) or neutral (55%).

# THE TBFREE PROGRAMME

## OBJECTIVES OF THE TBFREE PROGRAMME

To date, progress towards the ultimate objective of eradicating bovine TB from New Zealand has been better than expected. Investment associated with the TBfree programme is directly channeled into major areas of service delivery as follows:

- **Disease management**
  Key activities include livestock TB disease surveillance through slaughter premise post-mortem monitoring and on-farm TB testing. There is also provision of diagnostic services for cattle and deer herds, case management of herds diagnosed with TB infection, and monitoring and controlling livestock movement to prevent disease transmission through movement of potentially infected livestock. There is also analysis and reporting of results and, where necessary, slaughter of livestock with compensation payable to the owner.
- **Pest management**
  Eradication of TB in wildlife is delivered through an intensive, targeted possum control programme, wildlife surveillance, field operations and monitoring, post-mortem analysis and diagnostics, and industry and community engagement and liaison.
- **Research and programme development**
  Fundamental and applied research is carried out to support the control and eradication of TB in wildlife and livestock, animal health and disease analysis, testing methodologies and diagnostics, with related activities to provide a scientific basis for programme design.
- **Corporate and Contact Centre support**
  OSPRI utilises a range of mechanisms to ensure that farmers, stakeholders and other affected parties are well informed about the TBfree programme, activities and operations.

The National Pest Management Plan (TB Plan) which OSPRI's TBfree programme operates under was independently reviewed in 2015/16 (see www.tbplanreview.org.nz). The review demonstrated that eradication of bovine TB is feasible and that industry and Government investment should focus on this goal. As a result an amended TB Plan commenced on 1 July 2016 with the following objectives:

1. Eradicate TB from New Zealand, by achieving:
   - TB freedom in cattle and deer herds by 2026
   - TB freedom in possums by 2040
   - Biological eradication by 2055.

> To date, progress towards the ultimate objective of eradicating the disease from New Zealand has been better than expected.

2. Maintain annual infected herd period prevalence below 0.2% throughout the term of the plan.

Livestock disease management approaches towards the achievement of the plan objectives are based on:

- Surveillance for TB in cattle and deer through routine on-farm tests and inspection of carcasses at slaughter premises
- Controls on the movement of cattle and deer from individual herds or geographic areas of higher TB risk, to prevent transmission of TB from herd to herd via livestock movement
- Application of test and slaughter plans to eradicate within-herd infection
- Wildlife vector control, principally of possums, and in some cases ferrets, to prevent wildlife-vectored infection of herds.

Wildlife pest management operations required to meet the TB Plan objectives involve:

- Intensive possum control within and around designated Vector Risk Areas (VRAs) where it is considered that TB is being maintained in possum populations
- Surveillance to determine presence/absence of TB in possums or other wildlife
- Application of a Proof of Freedom (POF) framework in which data is compiled from possum control history, possum population density measures, wildlife disease surveillance and history of wildlife-vectored infection in livestock, which is then analysed to provide a statistical estimate of the probability that the possum population is free of TB
- The use of POF determinations to guide decisions as to the continuation and intensity of further vector control or surveillance, including decisions to cease active management.

## REPORTING ON PROGRESS

Progress toward achievement of the milestone of TB freedom in livestock will be monitored through annual targets for reduction in the number of TB infected herds. Progress toward achievement of the milestone of TB freedom in possums will be monitored through annual targets for reduction in the national extent of VRAs.

With the implementation of the amended TB Plan in 2016, it has been necessary for funder organisations (MPI, Beef+Lamb NZ, Dairy NZ and Deer Industry NZ) to develop new funding and accountability arrangements for the Plan. As a result a single multi-party agreement (the TB Plan Funders' Agreement) has been established, replacing the previous bilateral agreements with each of the funding parties.

The new Funders' Agreement reflects the more strategic nationally focused approach and outcomes of the amended TB Plan. This includes enabling a more flexible approach to funding, to support a multi-year approach to planning and operational delivery. It also sets out the process for reviewing, and adjusting as required, industry sector funding shares to reflect any changes over time in the relative size and value of the sectors. The Funders' Agreement also sets out OSPRI's quarterly and annual reporting responsibilities and processes for engaging with funders on annual budget development.

Work is currently underway between OSPRI and funders to finalise criteria to support annual progress assessments and three-yearly "health checks". The health checks will involve

OSPRI and funders working together every three years to assess OSPRI's delivery and progress against the TB Plan, and whether funding is sufficient to meet the objectives of the TB Plan.

## ANNUAL PROGRESS ASSESSMENTS

OSPRI reports quarterly (including an annual report) to TB Plan funders on progress against the Plan objectives, key initiatives and emerging issues. While some key performance indicators can only be meaningfully be reported on an annual- or even biennial-basis, other measures will be reported on in quarterly reports and used to inform quarterly meetings between OSPRI and funders' technical and policy staff.

Bi-annual meetings between senior managers of funders and OSPRI have also been initiated to provide an opportunity for all sides to raise and discuss any issues or concerns they may have with any aspect of the TB Plan or OSPRI's progress in executing it – in effect delivering the 'no-surprises' intent of the arrangements set out in the funders agreement.

## DEVELOPMENT OF TB MANAGEMENT AREAS (TMAS)

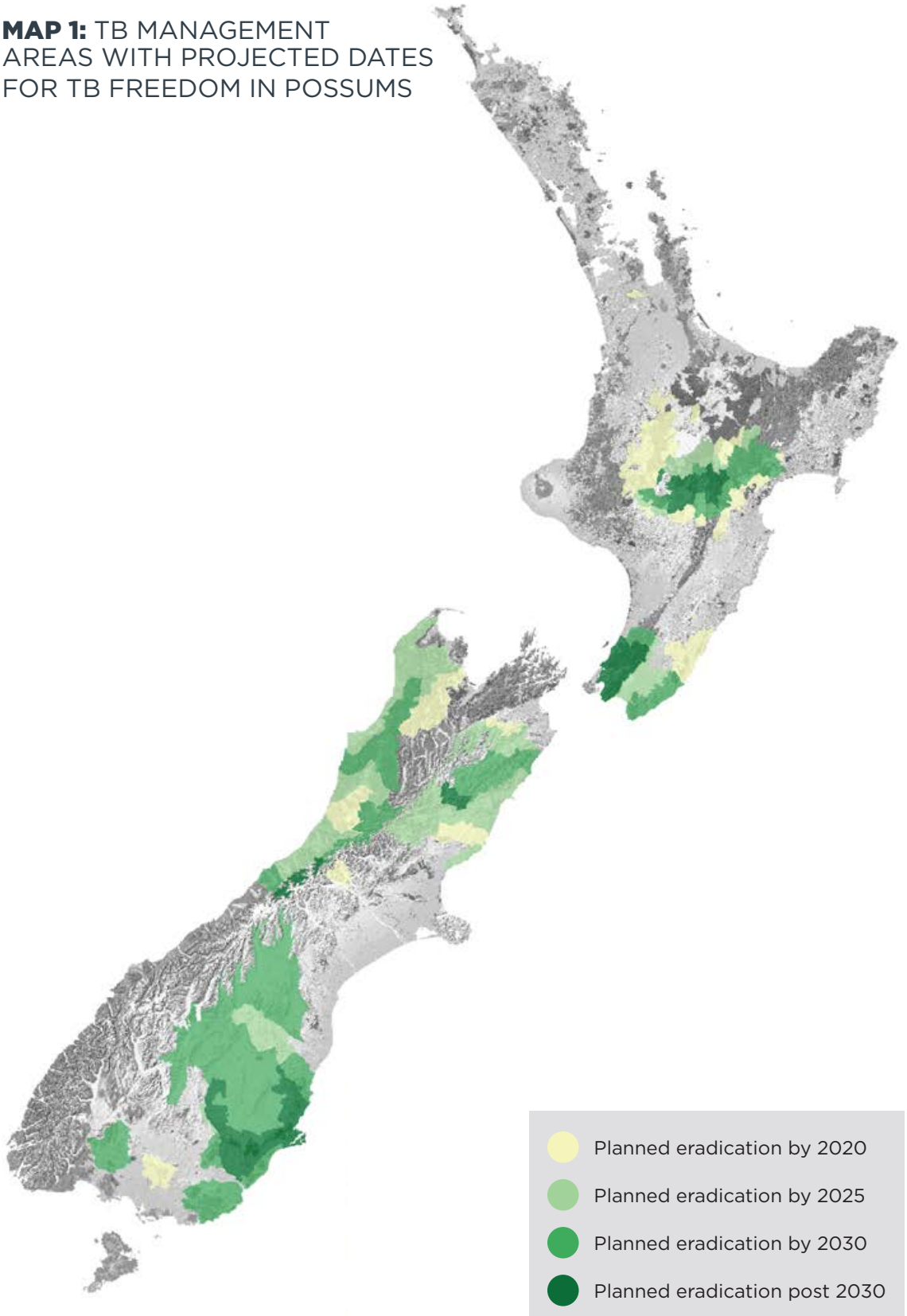
A key development during the year has been the introduction of TB Management Areas (TMAs). Pest management under the TB Plan will be delivered through a framework of over 100 TMAs according to disease patterns, geographical features, control history, and future control needs. This will enable possum control and wildlife disease surveys to be designed, contracted and delivered in a more efficient manner, through a smaller number of longer-term and more sustainable contracts. This will lead to reduced operational costs and a better, safer and more knowledgeable contractor workforce.

Each TMA plan will be reviewed annually and these individual TMA plans are set out in their respective Area Disease Management Plans, available at www.tbfree.org.nz/strategies-plans-and-reports.aspx.

Major steps were taken during the year to enhance communication and consultation on our pest management operations. This led to the development of a national consultation process for the year ahead on proposed operations, alongside the establishment of TMA notices that describe the eradication targets, operations and timelines associated with proposed operations for each area over a longer term. In June 2017 OSPRI distributed the first round of notices to landowners, affected parties and wider interest groups to facilitate greater understanding and awareness of planned and proposed control operations in the context of local and regional TB eradication goals.

This new approach is intended to improve public awareness about the timing and locations of our pest management work and enhance consultation and engagement with affected individuals and communities. The forward planning element of TMAs will also allow us to work with key stakeholders, such as the Department of Conservation and Regional Councils, to identify opportunities for future collaboration or operational alignment in pest management activities.

**MAP 1:** TB MANAGEMENT AREAS WITH PROJECTED DATES FOR TB FREEDOM IN POSSUMS



# SUMMARY OF PROGRESS

Under the former TB Plan OSPRI, with its industry partners, made excellent progress. Highlights included:

- Eradication of TB from 1.6 million hectares since that plan started in 2011 to 30 June 2016 (the TB Plan required VRA reduction of 2.5million ha by 2026)
- Proof-of-concept of TB eradication from possums within two large continually forested areas
- Maintaining an annual infected herd period prevalence rating well below the 0.4% target with 0.09% annual period prevalence for the year to 30 June 2016
- Infected herd levels maintained as low as possible with 43 herds infected as at 30 June 2016.

In 2016/17, being the first year of the new TB Plan, the following progress against the Plan objectives was made:

- Eradication of TB from 230,000 hectares of land as at 30 June 2017
- Infected herd levels at 54 as at 30 June 2017
- Annual Infected Herd period prevalence at 0.11 as at 30 June 2017.

The following graphs demonstrate progress of the TB programme through various management plans since 2003.

**FIGURE 1:** NUMBER OF INFECTED CATTLE AND DEER HERDS AT 30 JUNE

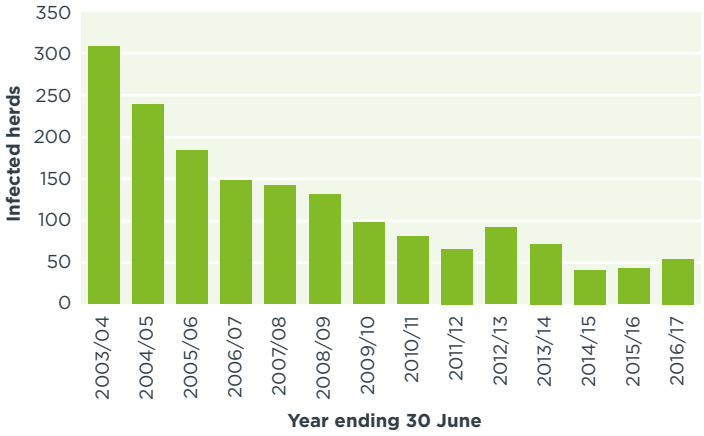
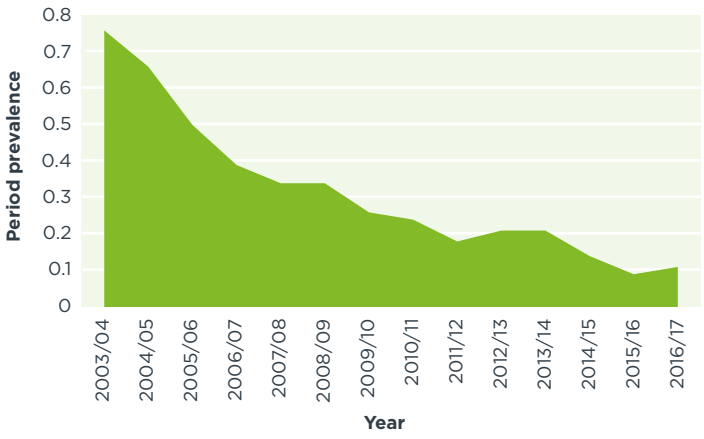



**FIGURE 2:** ANNUAL INFECTED HERD PERIOD PREVALENCE (CATTLE AND DEER)




# ERADICATION PROGRESS

During the first two years of the new TB Plan (2016/17–2017/18) we plan to declare possum TB freedom over 460,000 hectares.
The actual number of hectares declared free of possum TB infection in the first year of the new TB Plan (2016/17) was 230,200 hectares; 50% of the reduction planned for the first two years, so TB Plan progress is considered on track.

The cumulative area progressed to eradication since the previous plan started in 2011 was 1.83m hectares by the end of 2016/17 year.

# REGIONAL OVERVIEW

## NORTHERN NORTH ISLAND

The Northern North Island started and ended the 2016/17 year with eight infected herds. Seven of these herds are in Waikato (five dairy herds and two short-term grazing dairy support herds associated with four of the dairy herds) with the remaining infected herd being a dairy herd in Taranaki. Seven of these had completed a clear whole herd test by the end of the financial year and there is confidence that these will all become clear of TB during 2017/18.

There have been no findings of established possum infection outside of TB VRAs during 2016/17.

The VRA status of 152,920 hectares was revoked through the proof of freedom process during 2016/17.

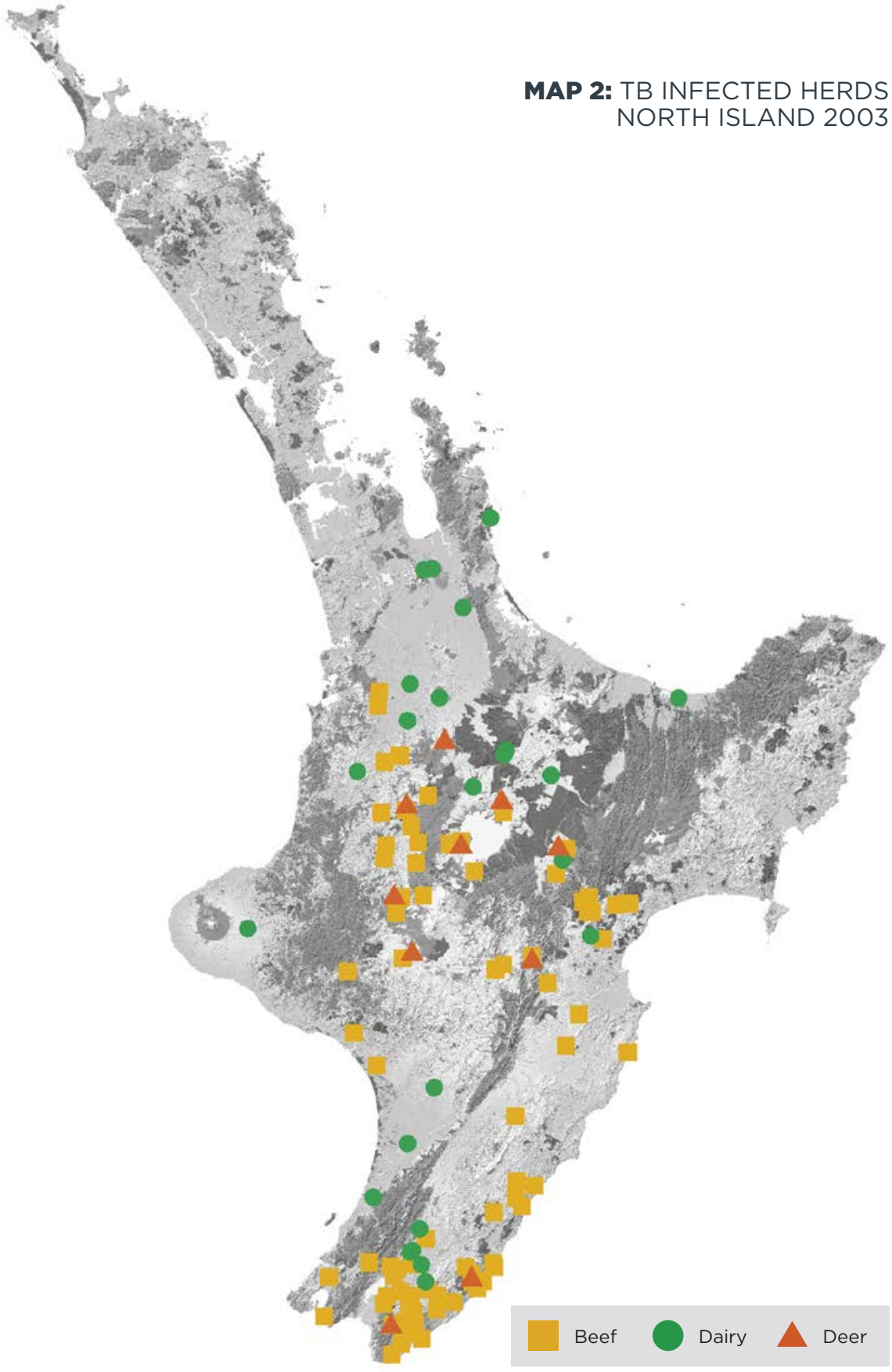
## SOUTHERN AND EASTERN NORTH ISLAND

The Southern and Eastern North Island started the 2016/17 year with two infected herds and ended the year on 30 June 2017 with three. Two of these herds are in the Wellington region (one dairy herd and one beef breeding herd) with the remaining infected herd being a dairy herd in Hawke's Bay.

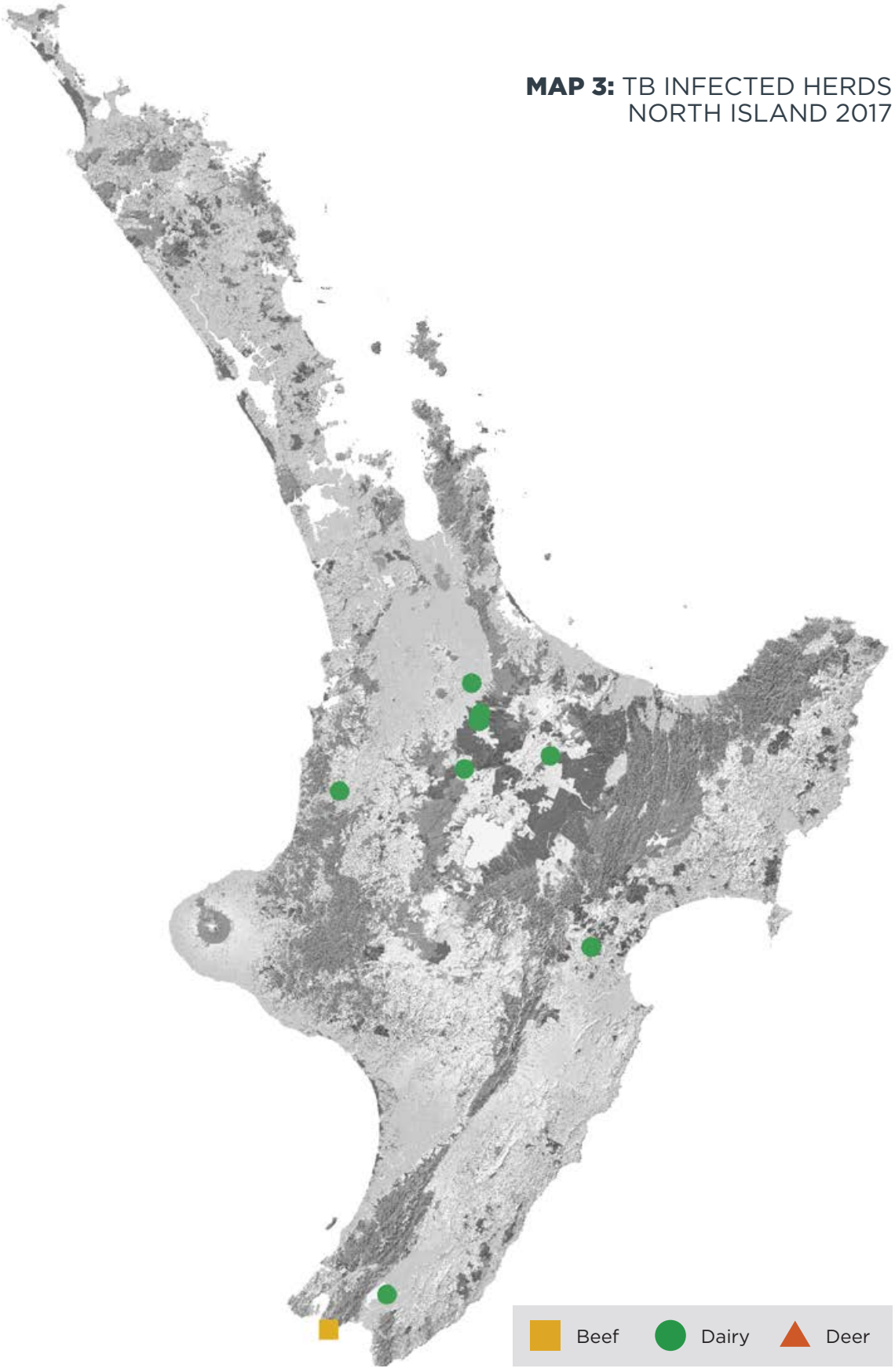
There have been no findings of established possum infection outside of TB VRAs during 2016/17.

The VRA status of 77,280 hectares was revoked through the proof of freedom process during 2016/17.

**MAP 2:** TB INFECTED HERDS
NORTH ISLAND 2003



**MAP 3:** TB INFECTED HERDS
NORTH ISLAND 2017



## NORTHERN SOUTH ISLAND

The Northern South Island started the 2016/17 year with 20 infected herds and ended the year on 30 June 2017 with 34. Of these herds, 28 were on the West Coast (23 dairy herds, three beef breeding herds, one beef dry herd and one deer game estate), three were in Canterbury (two beef breeding and one dairy herd), two were in Marlborough (both beef breeding) and one in Tasman (dairy herd).

The Northern South Island contributed most of the overall increase in national infected herd numbers compared with the previous financial year, with the majority of this increase coming from the West Coast. There have been two reasons for this:

1. A greater than expected increase in herd breakdowns in the West Coast TB Management Areas yet to receive the full impact of the pest management programme; and
2. A reduction in the rate of clearance of infected herds, resulting from herds being held under an infected status for longer periods, with additional testing to ensure eradication of within-herd infection.

Both of these issues are now being addressed and it is expected there will be a significant net reduction in West Coast infected herds during 2017/18.

There have been no findings of established possum infection outside of TB VRAs during 2016/17 and no revocation of Vector Risk Areas (VRA).

## SOUTHERN SOUTH ISLAND

The Southern South Island started the 2016/17 year with 13 infected herds and ended the year on 30 June 2017 with nine. All of these herds were in Otago (four beef breeding herds, one dairy herd and four deer breeding herds).

There have been no findings of established possum infection outside of TB VRAs during 2016/17 and no revocation of VRA.

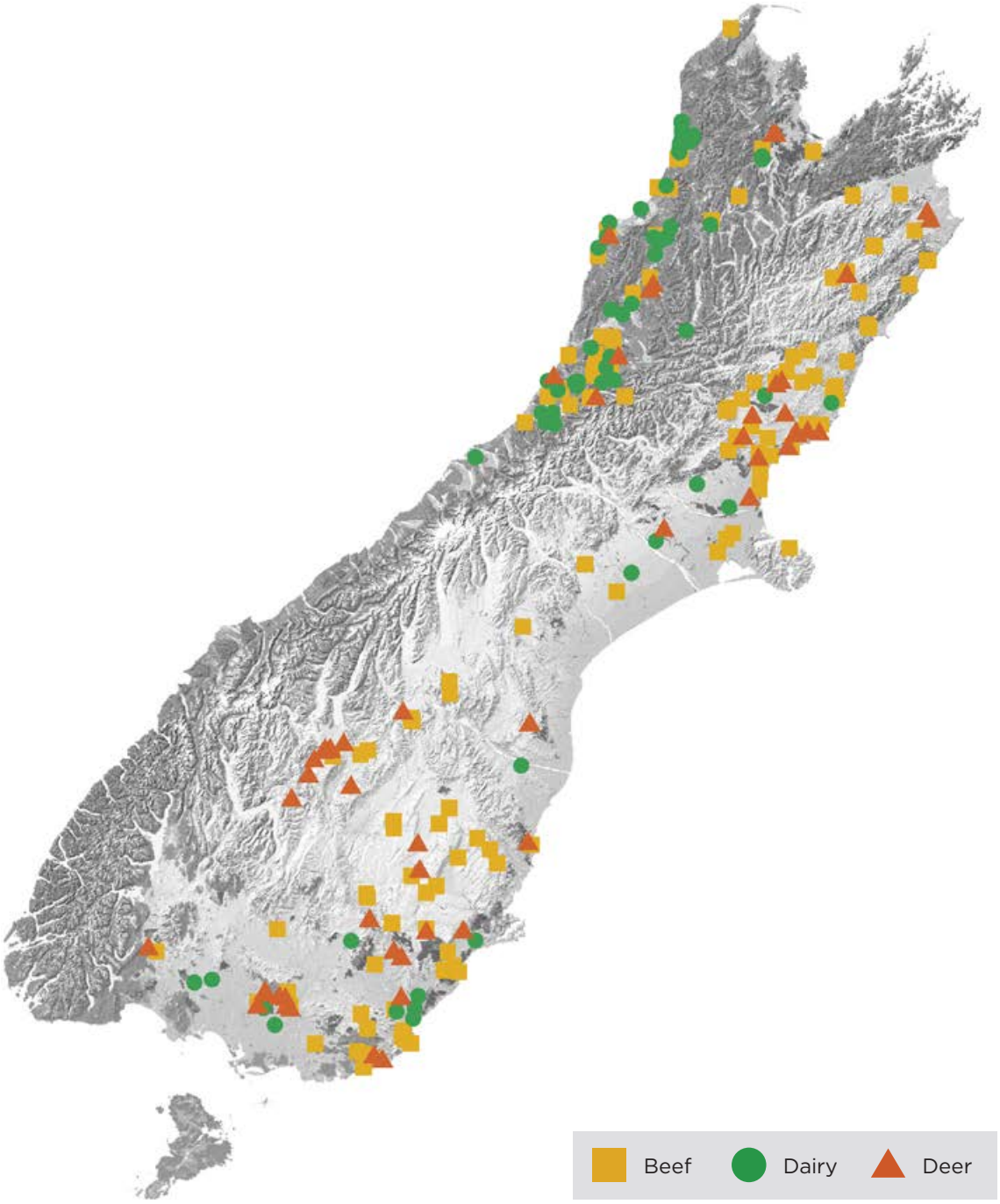
## UPDATE ON HOKONUI HILLS

In collaboration with Landcare Research, OSPRI has undertaken 3 years of operational research in the Hokonui Hills, with the aim of developing a proof of concept methodology for eradicating TB in possums. Research was directed at applying known operational technologies over large land areas of dense bushland and habitat with known TB infection in possums. The research also involved radio-tracking possums, monitoring possum numbers before and after aerial 1080 control and performing necropsies on possums, with intensive surveillance of other species such as pigs to look for the presence or absence of TB. The aim of the work is to prove the feasibility of eradication and also to determine the most efficient way of achieving this.

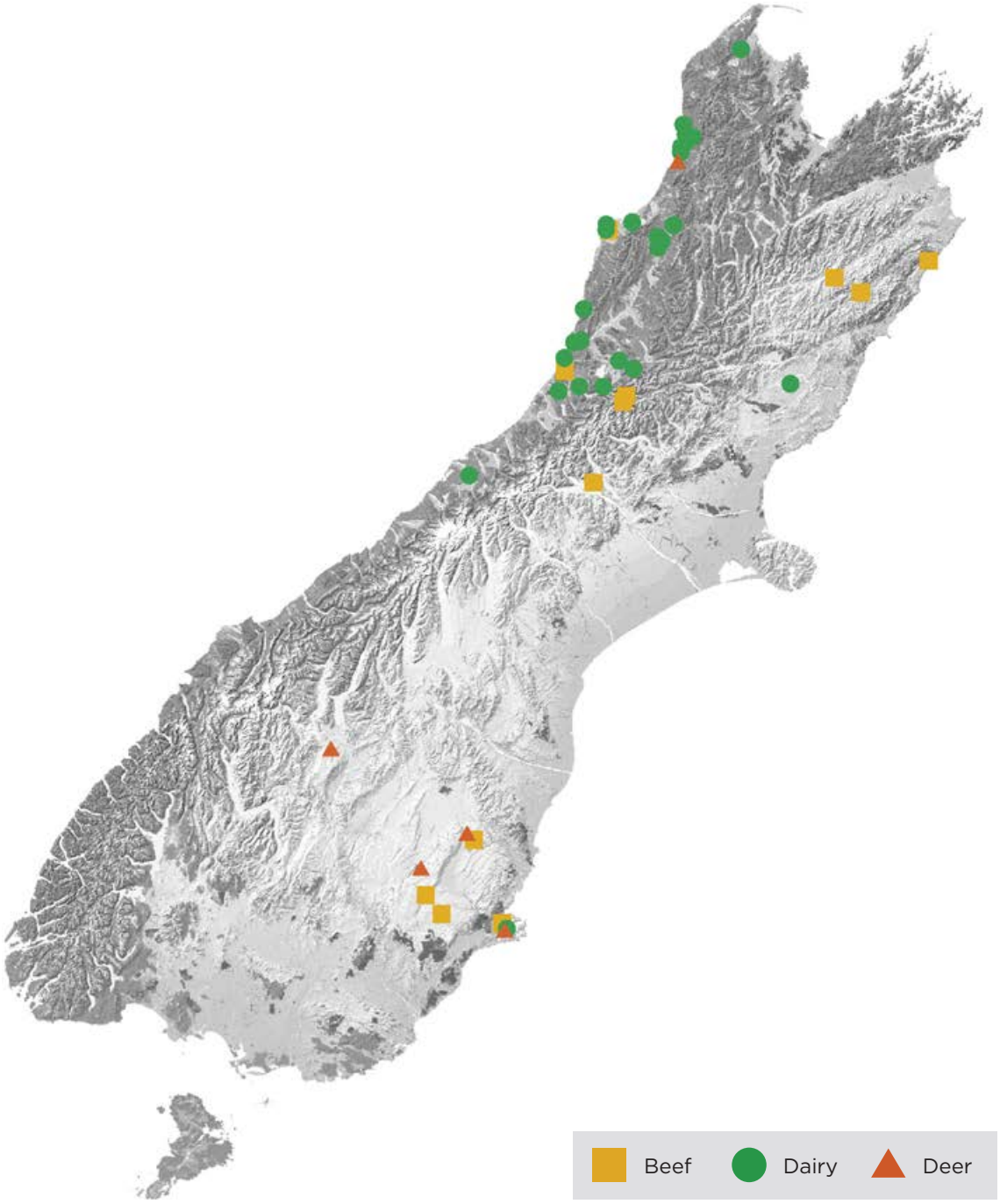
The standard programme for eradication of TB from possums in such areas involves up to three aerial 1080 control operations for intensive possum control, followed by surveillance of possums and/or other species such as ferrets and pigs to prove freedom. The research programme however, involved fewer aerial operations, coupled with ground control and intensive surveillance activity, rather than the standard three aerial applications followed by routine surveillance.

Recent surveillance work has since identified a pig with TB. The research outcomes had indicated that the likelihood of this finding indicating ongoing TB infection in the local possum population was very low. However, given these recent findings, further surveillance will be carried out to assess the potential level and spread of infection. Based on the outcomes of this, further control may be required. Pig surveys will continue in 2017/18 to help identify any need for further possum control, should the degree of prevalence of TB infection indicate that this is required.

## **MAP 4:** TB INFECTED HERDS SOUTH ISLAND 2003



**MAP 5:** TB INFECTED HERDS
SOUTH ISLAND 2017



# PEST MANAGEMENT OPERATIONS

Pest management is by far the largest component of the TBfree programme. Control operations are designed to reduce the number of pests (defined as vectors) that carry and spread TB to farmed livestock. Research demonstrates that possums are the main wildlife vectors of TB in New Zealand and they are the primary focus of control operations.

Eradication of TB is achieved by reducing the possum density to a very low level (about one possum per 10 hectares) for a period of at least five years. This low density means the disease is unable to be maintained within possum populations and will subsequently disappear from both possums and eventually other wildlife.

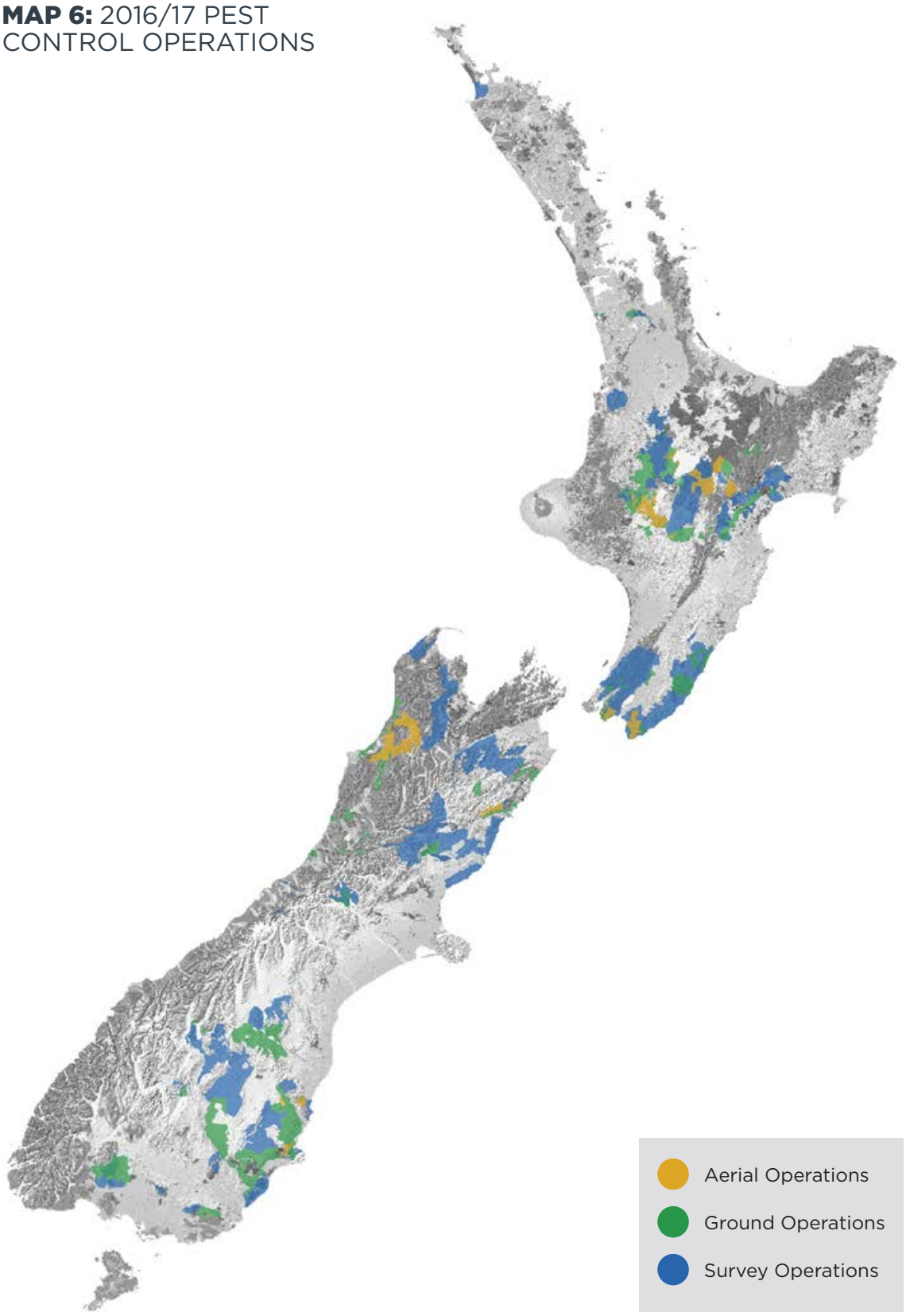
An important aspect of the TBfree programme is surveying wildlife to detect whether TB is still present following a period of sustained possum control. This involves trapping or culling possums and other sentinel species, such as pigs and ferrets, followed by post-mortem examination and analysis. The results are used to help determine whether freedom from TB within designated areas has been achieved, or if further control work is needed. We expect to find few – if any – TB-infected possums or other wildlife in these surveys, as significant possum control effort has already been undertaken.

## OVERVIEW OF 2016/17 PEST CONTROL ACTIVITIES

OSPRI, with Government and industry funding, invested $33.7 million in 2016/17 for the delivery of ground and aerial pest control operations, with approximately $24.9 million on ground control (including monitoring and surveillance) and approximately $8.8 million on aerial operations.

Over the course of these operations, more than 300 contractors spent almost 300,000 hours setting and inspecting more than 340,000 traps and detection devices, completing field surveillance work, capturing wild pigs for monitoring and conducting aerial treatment operations. The location and extent of pest control operations are shown right.

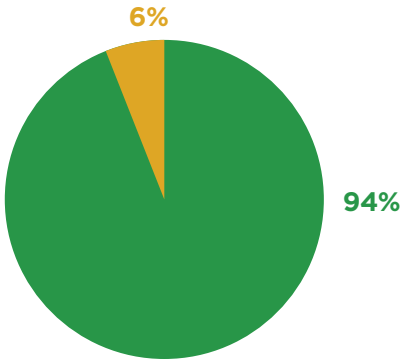
**MAP 6:** 2016/17 PEST CONTROL OPERATIONS



## OVERVIEW OF PEST MANAGEMENT ACTIVITIES FOR 2016/17

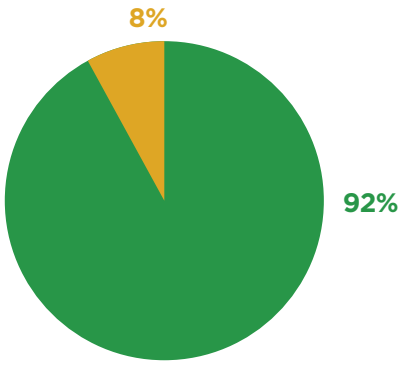
### **TABLE 2:** NATIONAL STATS

| | TOTAL HECTARES | SPEND |
|---|---|---|
| Ground Operations | 5,486,000 | $ 24,937,000 |
| Aerial Operations | 349,000 | $8,795 |



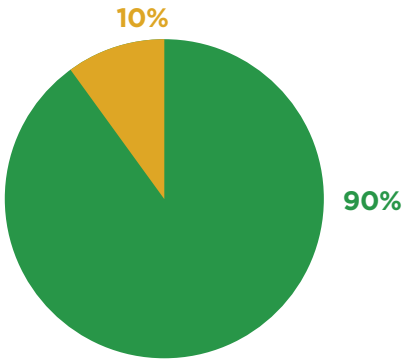

### **TABLE 3:** NORTH ISLAND

| | TOTAL HECTARES | SPEND |
|---|---|---|
| Ground Operations | 2,133,000 | $11,154,000 |
| Aerial Operations | 185,000 | $4,603,000 |



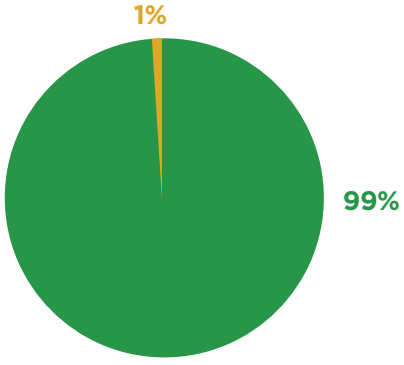

### **TABLE 4:** NORTHERN SOUTH ISLAND

| | TOTAL HECTARES | SPEND |
|---|---|---|
| Ground Operations | 1,295,000 | $3,977,000 |
| Aerial Operations | 143,000 | $3,227,000 |




### **TABLE 5:** SOUTHERN SOUTH ISLAND

| | TOTAL HECTARES | SPEND |
|---|---|---|
| Ground Operations | 2,058,000 | $9,806,000 |
| Aerial Operations | 21,000 | $965,000 |




Aerial Operations  Ground Operations

## WILDLIFE AND PEST SPECIES SURVEILLANCE

Data on wildlife population levels and disease status is gathered through surveillance activities that support the TB eradication programme. These data are analysed through proof of freedom models to provide statistical evidence that the control programme has successfully removed TB from the possum population.

In 2016–2017, all findings of TB infected wildlife were within existing Vector Risk Areas (VRAs). The locations of areas where TB animals were found (as well as areas where no TB animals were found) will enable more cost-effective targeting of further control required to eradicate TB from wildlife.

A summary of 2016/17 survey work is outlined below.

### SURVEYS IN VECTOR FREE AREAS (VFAs)

To confirm that VFAs remain free of disease, wildlife surveys are undertaken to determine whether TB wild animals could be present. Surveys are also undertaken when infected herds are found in VFAs and wild animals are suspected as a potential source of infection, or conversely if there is concern that wild animals may have become infected from contact with infected cattle or deer.

VFAs account for 70 percent of NZ's total land area and in 2016/17 contained 18 percent of infected cattle herds. The infection risks posed to VFAs are from TB-infected wild animals migrating from adjacent Vector Risk Areas (VRAs), or from hunters unwittingly liberating TB-infected game animals or dumping infected carcasses or carcass parts. Any of these could create a source of infection for local scavenging wildlife, especially feral pigs and ferrets, and to a lesser extent, possums.

A number of intensive wild animal surveys were carried out in VFAs adjacent to VRA boundaries during 2016/17. These will continue where it is considered that there has been a risk of TB-infected wild animals moving into VFAs. Surveys to check for infected wild animals are also undertaken where there is any clustering of infected herds in a VFA.

In 2016–2017, a total of 154 possums, 323 wild pigs, 83 ferrets, and 10 deer were surveyed from 16 sites within VFAs, with no detection of TB.

### SURVEYS IN VECTOR RISK AREAS (VRAS)

Surveys in VRAs are undertaken to gather disease and wildlife population data in order to declare the VRA (or part of it) free of disease, or to delineate the extent or spread of disease to focus further possum control efforts.

In 2016–2017, all findings of TB in wildlife were from existing VRAs. These findings will enable more cost-effective targeting of further control work.

**TABLE 6:** NUMBER OF WILD ANIMALS IN 2016/17 SAMPLED BY SPECIES, AND THE NUMBER AND PERCENTAGE FOUND TO BE INFECTED WITH *MYCOBACTERIUM BOVIS (M. BOVIS)*.

| | POSSUMS | WILD PIGS | WILD DEER | FERRETS | OTHERS |
|---|---|---|---|---|---|
| Number sampled | 3571 | 2575 | 99 | 3678 | 25 stoats, 11 feral cats and 3 weasel |
| Number (%) with TB | 24 (0.64%) | 14 (0.54%) | 2 (2.0%) | 20 (0.54%) | 0 |

# DECLARING AN AREA FREE OF TB

Meeting the TB Plan's objectives requires the progressive reduction in size of VRAs and the prevention of TB becoming established in VFAs.

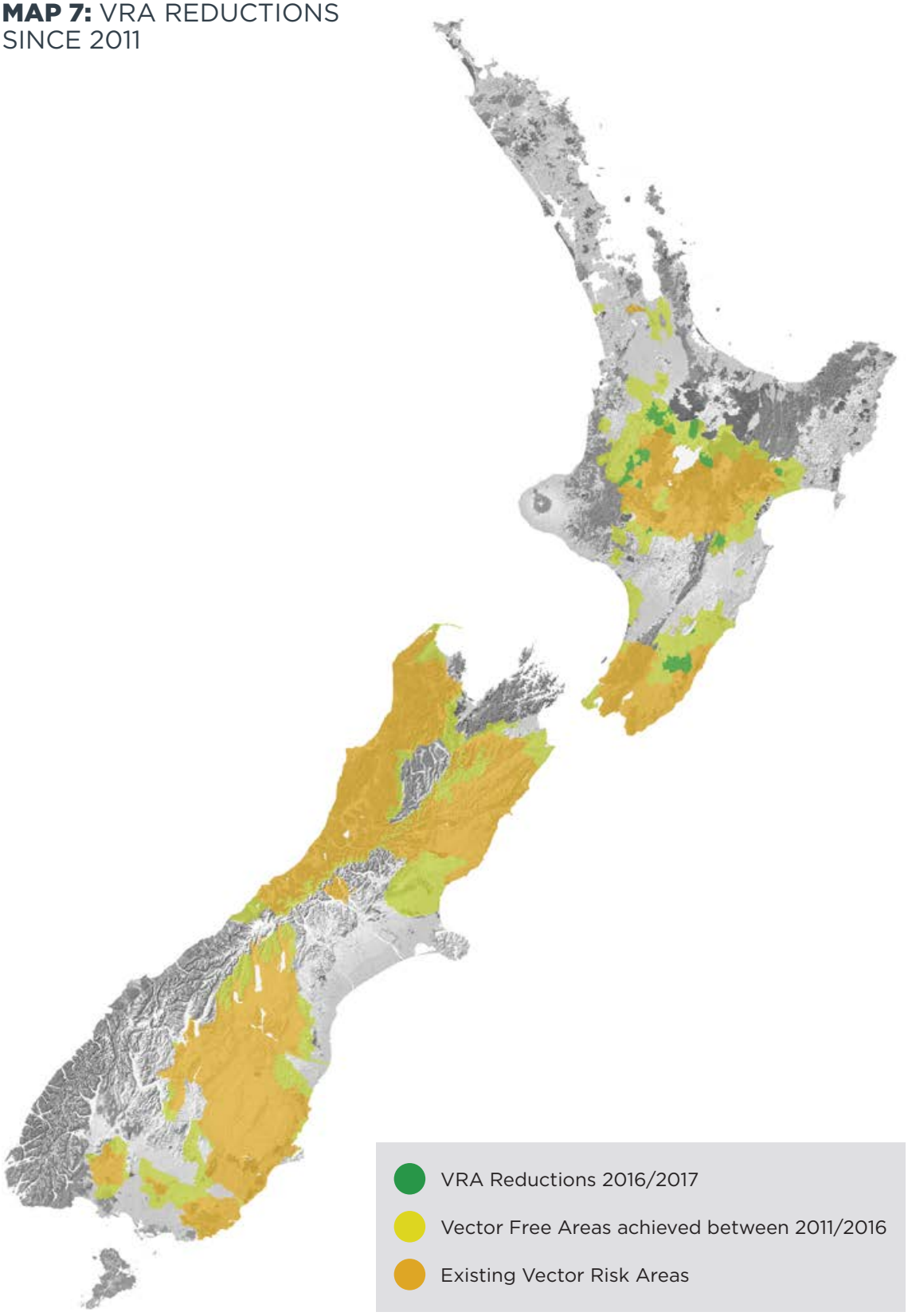
For an area to have its VRA status revoked, a panel of reviewers must agree that the evidence indicates a very high probability of freedom from TB in the possum population. This decision is mainly based on:

- Qualitative data on the area's TB history, the effectiveness of possum control and the results of wildlife surveys
- Quantitative data that includes the outputs from a Spatial Possum Model and Bayesian-based software (Proof of Freedom utility) that indicates there is around 95% probability that TB has been eradicated from the possum population
- Risk assessment that evaluates the risks and potential costs of making a wrong decision.

In 2016/17, 22 reports on areas proposed for VRA revocation were reviewed by a panel of five experts, including two external panelists. After considering each report, the panel agreed that there was a high probability around 95% TB had been eradicated from 18 of the areas.

The OSPRI Board of Directors subsequently approved the revocation of the VRA status for these 18 sites, totaling 230,200ha. This included reductions in the size of VRAs in the Central North Island and Southern North Island. Since 1 July 2011, VRA status has been revoked from 1.83m hectares. As at 30 June 2017 there were 15 remaining discretely defined VRAs, with a combined area of 7,980,000ha.

**MAP 7:** VRA REDUCTIONS SINCE 2011



# ANIMAL HEALTH MANAGEMENT AND TB DISEASE CONTROL

TB control and eradication relies on an effective disease management system that includes animal health surveillance through TB testing and slaughter plant surveillance of cattle and deer, restriction of movement of at risk livestock either at area or herd level, and effective infected herd case management following TB diagnosis. This section of the report summarises the outputs of the TB programme in terms of livestock health.

## ANIMAL HEALTH SURVEILLANCE

Surveillance for TB in livestock relies on a combination of on-farm TB testing and post-mortem examination at slaughter.

During the 2016/17 year, 111 cattle were found with TB as a result of TB testing, and a further 50 cattle were found with TB during routine slaughter inspection. No deer were found with TB as a result of TB testing, but two were found with TB at slaughter inspection.

TB testing of cattle involves the application of a caudal fold skin test utilising tuberculin (a purified protein derivative of the TB organism) injected into the skin of the tail fold, which is then examined 72 hours later. In deer the skin test is applied into the skin on the side of the neck (mid-cervical test). Most skin test positives (determined by a thickening of the skin at the injection site) then have a subsequent ancillary serial blood test (Bovigam® gamma interferon blood test) applied to assist in ruling out false positives to the skin test. If the blood test result is positive, animals are determined to be reactors and are taken for slaughter.

If TB is diagnosed in a herd following confirmation through approved laboratory testing, a Restricted Place Notice under section 130 of the Biosecurity Act 1993 is placed on the herd. This restricts any movement of stock from the herd (except to slaughter) without a permit. This on-farm biosecurity process then limits any spread of the disease through cattle or deer movement from that point forward.

The infected herd then comes under case management by a veterinarian. The case management process involves tracing any movement into and out of the herd prior to diagnosis. Any livestock identified as having moved out of the herd will then have further TB testing undertaken in their destination herd. Livestock movement information is also used to assist in determining whether cattle or deer movement is likely to have been a contributing source for introduction of disease (see section on infected cattle herds).

DNA analysis of the TB organism (*M. bovis*) is also used to help determine whether TB has been introduced by contact with wildlife or by livestock movement, or was potentially residual within the herd. An important aspect of case management is engagement with the farmer to understand the cause of the disease and the best management regime – including further TB testing and slaughter of test positives – in order to clear the herd as quickly as possible. A herd cannot be declared free of TB until it has had at least two clear whole herd tests at a minimum of six months apart.

OSPRI runs an extension programme in liaison with DairyNZ, Beef + Lamb New Zealand and Deer industry (DINZ) as well as Federated Farmers in order to increase farmer understanding of TB and the eradication programme. The extension programme also provides support for farmers who have TB diagnosed in their herd, to help them manage their herd through to TB freedom.

### INFECTED HERDS AND NATIONAL PERIOD PREVALENCE

At 30 June 2017, there were 49 infected cattle herds, compared to 39 at 30 June 2016. During the year, TB was identified in 32 cattle herds, nine more than in 2015/16. For explanation of this increase see Northern South Island regional report on page 36.

## **TABLE 7:** DISEASE METRICS OVER THREE DIFFERENT TIME PERIODS FOR CATTLE AND DEER HERDS LOCATED IN VFA AND VRAS

| VECTOR AREA STATUS | INFECTED HERD PERIOD PREVALENCE PER CENT | | | HERD BREAKDOWN RATE PER 1000 HERDS | | | INFECTED HERD CLEARANCE PER CENT | | |
|---|---|---|---|---|---|---|---|---|---|
| Period | 1992/93 | 2002/03 | 2016/1 | 1992/93 | 2002/03 | 2016/17 | 1992/93 | 2002/03 | 2016/17 |
| VFA | 1.3% | 0.15% | 0.02% | 6.8 | 0.73 | 0.07 | 68% | 83.3% | 30% |
| VRA | 14.9% | 3.8% | 0.67% | 50.3 | 13.21 | 3.06 | 32% | 58.5% | 38% |
| Total | 3.6% | 0.91% | 0.11% | 13.4 | 3.3 | 0.47 | 42% | 61.4% | 36.9% |

For deer, the number of infected herds increased from four to five, with one new infected herd being identified during the year.

The annual infected herd period prevalence (for cattle and deer combined) in 2016/17 was 0.11%. This period prevalence is derived from the total number of infected herds at the start of the year, plus new infected herds identified during the year, divided by the total herds in the country, expressed as a percentage. The annual period prevalence has been less than 0.2% for the last three financial years and as such meets the World Organisation for Animal Health (OIE) standard for being classified as being officially TB free – an important international milestone.

Table 7 shows the large difference vector control has made since 1992/93, when there was minimal possum control and infected possums were still spreading from VRA boundaries. In comparison, by 2002/03 most VRAs had received some possum control and TB possum spread had largely been contained. Widespread possum control since 2011 has resulted in eradication of TB from possums across at least 1.83m hectares, with a consequential decrease in livestock infection caused by contact with infected possums.

## CATTLE

At 30 June 2017, there were 49 infected cattle herds, compared to 39 herds at 30 June 2016. Of these infected herds:

- 83% were located in VRAs
- 78% were located in the South Island
- 73% were dairy or dairy dry herds.

The herd breakdown rate (incidence) for 2016/17 was 4.7 per 10,000 herds, and the herd clearance rate was 40%. The relatively low herd clearance rate impacted on the number of infected herds at 30 June 2017.

Of the 49 herds infected at year-end, 32 herds were newly infected during the year, while 17 were previously infected and remained so at 30 June 2017.

For the 49 herds infected at 30 June 2017, veterinary assessments based on epidemiological investigations identified that:

- 50% of herd infections were linked to TB wild animal sources
- 22% were caused by livestock movement
- 25% involved redetection of residual infection.

Source of infection for new herd TB cases during the year is summarised by VRA status in Table 8.

## **TABLE 8:** SOURCES OF INFECTION FOR CATTLE HERDS NEWLY INFECTED IN THE 12 MONTHS TO 30 JUNE 2017

| | CATTLE INTRODUCED FROM KNOWN INFECTED HERDS | CATTLE INTRODUCED FROM UNIDENTIFIED INFECTED HERDS | RESIDUAL HERD INFECTION | WILD ANIMAL | UNDETERMINED |
|---|---|---|---|---|---|
| Newly infected herds in VRA and VFAs | 2 (6.3%) | 5 (16%) | 8 (25%) | 16 (50%) | 1 (3.1%) |
| Newly infected herds in VRAs only | 1 (3.4%) | 3 (10.3%) | 8 (27.5%) | 16 (55%) | 1 (3.4%) |

Figure 3 shows the fall in infected herd numbers since June 2004 by vector area status (VFA, VRA). The annual number of infected herds is expected to trend down to zero over the next 10 years. Currently this is showing a small spike in numbers, however as the clearance rate increases it is expected these will be quickly controlled.

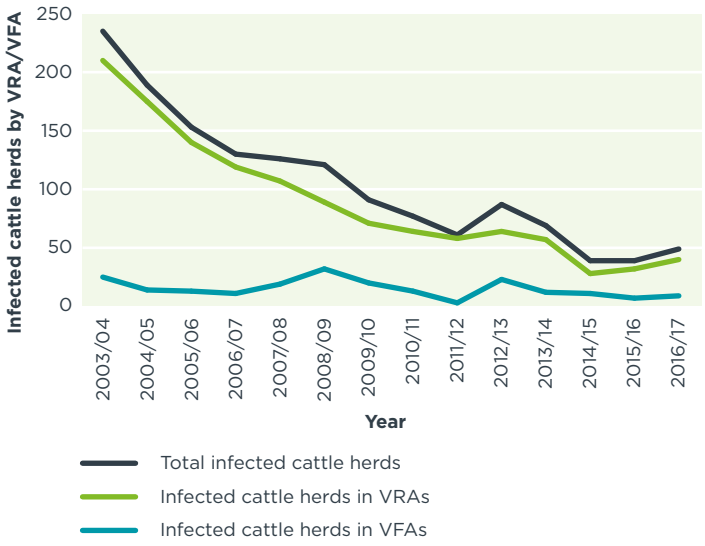
### CATTLE TESTING AND REACTORS

Cattle testing data is summarised in Table 8, which compares the number of TB tests carried out on cattle and the number of reactors to tests in 2015/16 and 2016/17. In the year to 30 June 2017 3.2 million cattle (2.5 million dairy and 0.8 million beef) were tested using the intradermal caudal-fold tuberculin[2] test (primary skin test), compared to 3.7 million in the previous year. The decrease in the number of cattle tested in 2016/17 relative to 2015/16 is in part due to a reduction in herds under annual testing as a consequence of TB being eradicated from possums and in part due to reductions in the number of herds and animals programmed for testing in the triennial and biennial testing areas.

During the year, 6,198 cattle were classed as positive to the primary intradermal (skin) tuberculin test and 258 were slaughtered without further testing. Serial ancillary (blood) tests were administered to 5,817 of the test-positive cattle as follows:

- Standard gamma interferon (Bovigam®) tests were applied to 1,010 cattle, of which 9 per cent tested positive and were declared TB reactors. On slaughter, 5 per cent of these reactors were found to have TB lesions, or *M. bovis* was cultured from lymph nodes following slaughter.
- Special Antigen gamma interferon (Bovigam®) tests were applied to 4,807 cattle, of which 5.6 per cent tested positive and were declared TB reactors. On slaughter, 12 per cent of these TB reactors were found to have TB lesions, or *M. bovis* was cultured from lymph nodes following slaughter.

**FIGURE 3:** TB-INFECTED CATTLE HERDS AT 30 JUNE




2 Prionics Lelystad tuberculin, 3000 IU/dose

## **TABLE 9:** CATTLE TB TEST RESULTS FOR 2015/16 AND 2016/17

| CATTLE TESTING | 2015/16 | 2016/17 |
|---|---|---|
| Primary tuberculin tests on cattle | 3,723,977 | 3,286,773 |
| Cattle positive to primary skin test | 6,011 | 6,198 |
| Primary test-positive cattle slaughtered | 73 | 258 |
| Primary test-positive cattle ancillary serial tested | 5,938 | 5,817 |
| Ancillary serial test-positive cattle | 91 | 418 |
| Ancillary parallel test-positive cattle | 14 | 123 |
| Total cattle reactors slaughtered | 178 (5/100,000 tested) | 799 (24/100,000 tested) |

In addition, ancillary parallel gamma interferon (Bovigam®) tests were performed on 10,773 cattle that tested negative to the primary skin test for TB, but were re-tested as they were within an infected herd. Of these, 123 (1 per cent) tested positive and were slaughtered as TB reactors. On slaughter, 37 (30%) of these TB reactors were found to have gross TB lesions at slaughter. Parallel blood tests were used in acutely, or chronically, infected herds to reduce the time to eradicate infection. Further, the majority of cattle in infected herds are required to pass a parallel Bovigam test following their second clear skin test before they can be cleared of TB. This testing process is used as part of the case management of infected herds by the managing veterinarian.

Figure 4 shows the trend in cattle reactors from 2002/03 to 2016/17. It clearly shows the increases in the number of cattle reactors slaughtered in 2003/04, 2008/09 and 2012/13 and then as predicted, decreasing over time through to through to 2016/17 when a new spike has occurred reflecting the increases in infected herds in the Northern South Island and two breakdowns in the VFA of the North Island, as already noted. The overall downward trend should resume as the prevalence of TB within both livestock and wildlife decreases following the extensive TB management programme now in place.

**FIGURE 4:** CATTLE TB TEST REACTORS SLAUGHTERED PER YEAR

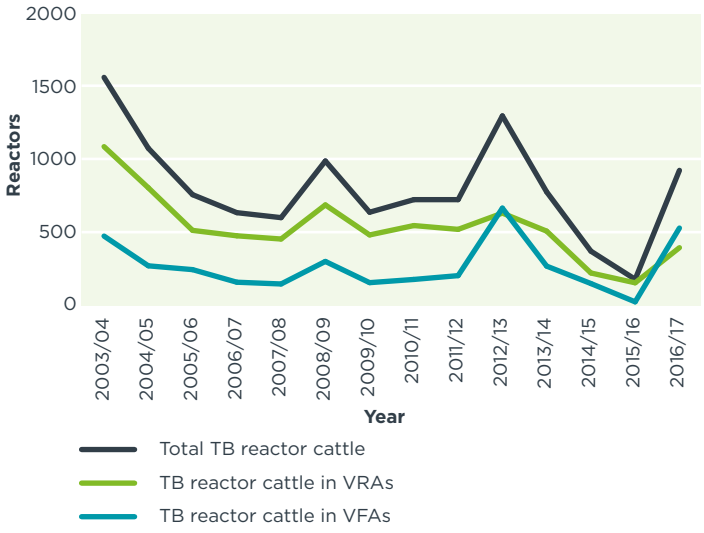



**FIGURE 5:** ANNUAL NUMBER OF TUBERCULOUS CATTLE

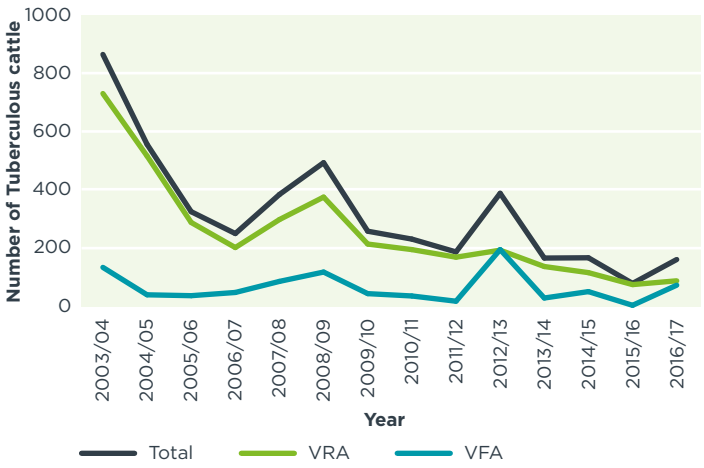


**FIGURE 6:** TB-INFECTED DEER HERDS AT 30 JUNE

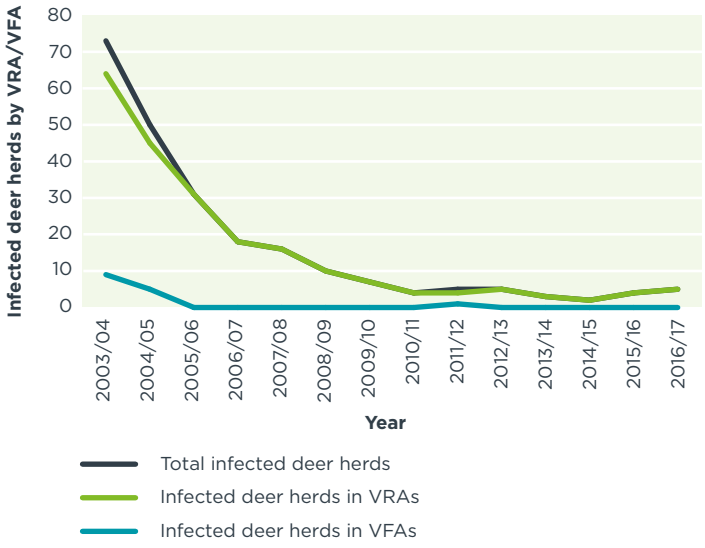



**FIGURE 7:** DEER TB TEST REACTORS SLAUGHTERED PER YEAR

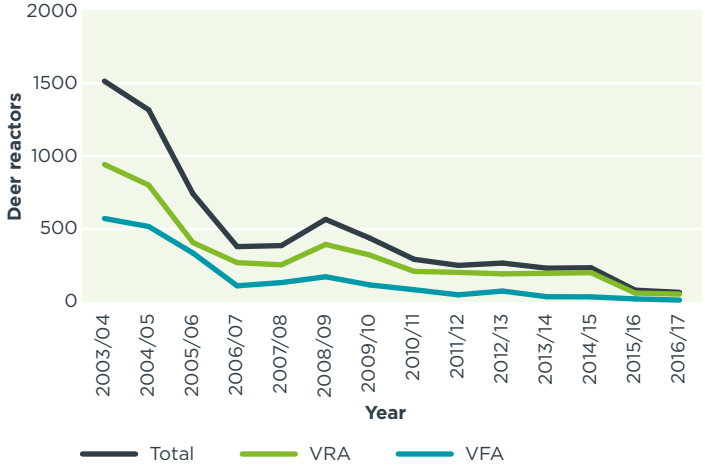
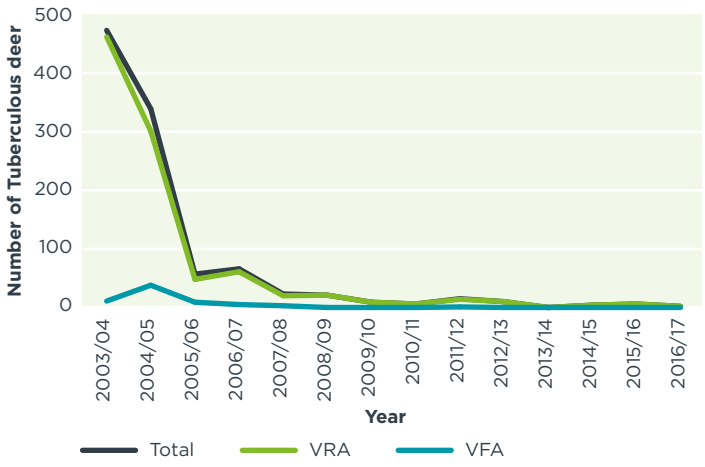



**FIGURE 8:** ANNUAL NUMBER OF TUBERCULOUS DEER




## TUBERCULOUS CATTLE

The number of tuberculous (confirmed infected with TB) cattle includes the total number of cattle (both TB test reactors and cattle found during routine slaughter) with gross TB-like lesions, or otherwise identified as infected following Polymerase Chain Reaction (PCR) assay or culture of *M. bovis* from tissues. During 2016/17, 111 (14%) of the 799 reactors slaughtered showed visible TB lesions or had lesions sampled that were confirmed as being infected with *M. bovis*. Bovine tuberculosis was also identified in a further 50 cattle during routine slaughter (2.1 per 100,000 cattle slaughtered, based on 2.4m cattle slaughtered in 2016/17). Figure 5 illustrates the long-term trend for TB found in cattle from 2003/04 to 2016/17 and shows the overall decline in the number of TB cattle, despite variable spikes in 2003/04, 2008/09, 2012/13 and currently. This mirrors that for reactors (Figure 4).

## INFECTED DEER HERDS

At 30 June 2017, there were 5 infected deer herds (0.2 per cent of the total farmed deer herd population). All infected herds were located in South Island VRAs. Epidemiological investigation indicates the new herd breakdowns were due to contact with infected wildlife.

Figure 6 shows a steep decline in the number of infected deer herds between 2004 and 2010, with numbers since remaining relatively low and stable at between two and five infected herds.

The reduction since 2003/04 is largely due to maintaining low possum densities over large areas of New Zealand. It also reflects a large reduction in the number of deer being farmed. Ferret trapping in TB risk areas, and testing policy changes aimed at clearing infected herds more quickly, also contributed to the decrease early in this period, particularly in the Canterbury and Otago VRAs.

## **TABLE 10:** DEER TB TESTING RESULTS FOR 2015/16 AND 2016/17

| DEER TESTING | 2015/16 | 2016/17 |
|---|---|---|
| Primary tuberculin tests on deer | 206,665 | 175,119 |
| Deer positive to primary mid-cervical test | 735 | 575 |
| Primary test-positive deer slaughtered | 75 | 49 |
| Primary test-positive deer ancillary serial tested | 660 | 526 |
| Ancillary serial test-positive deer | 4 | 8 |
| Ancillary parallel test-positive deer | 0 | 0 |
| Total deer reactors slaughtered | 79 (38/100,000 tested) | 57 (33/100,000 tested) |

### DEER TESTING AND REACTORS

Deer testing data is summarised in Table 10, which compares the number of TB tests performed and the number of reactors to tests in 2015/16 and 2016/17. In the year to 30 June 2017, 175,119 primary mid-cervical intradermal tuberculin tests (skin tests) were performed on deer compared to 206,665 in the previous year.

During the year, 575 deer tested positive to the mid-cervical skin test and 49 of these were slaughtered without further testing. No animals were found with TB lesions. The remaining 526 deer were administered serial ancillary tests including:

- Comparative cervical skin tests on 94 deer, with no positive animals
- ETB or Modified ETB (IgG1 ELISA) tests on 432 deer, of which 8 (1.8 per cent) tested positive and were declared TB reactors. On slaughter, none of the TB reactors were found to have TB lesions or confirmed *M. bovis*.

No ancillary parallel ELISA tests were performed on deer in 2016/17.

Figure 7 shows the trend in deer reactors from 2003/04 to 2016/17 by TB risk status area. Future reactor deer numbers are expected to continue to fluctuate dependent on the number of deer tested in any one year.

### TUBERCULOUS DEER

The number of tuberculous deer includes the total number of deer (including reactors and deer found during routine slaughter) with gross TB-like lesions, or otherwise identified as infected following PCR assay or culture of *M. bovis* from tissues.

During 2016/17, there were no reactors with visible TB lesions, but two deer were found with TB lesions during routine slaughter. Figure 8 shows the trend in number of tuberculous deer between 2003/04 and 2016/17.

# DISEASE CONTROL AREAS AND MOVEMENT ZONING

TB management requires the restriction of livestock movement from infected herds (where in most circumstances, cattle or deer can only move to slaughter) and from movement control areas where the TB risk from wildlife is considered high. Under the TB programme, New Zealand is divided into distinct disease control areas that have specific livestock testing requirements, as follows.

## DISEASE CONTROL AREAS (DCAs)

Areas of New Zealand are categorised into various TB testing regimes based on the risk of infection. These consist of Movement Control Areas (MCAs), Special Testing Areas (STA –annual and STA-biennial) and Surveillance Areas. To find out which testing regime a herd falls under, check the Disease Control Areas (DCA) map at www.tbfree.org.nz or contact TBfree New Zealand. The DCAs are also illustrated in Map 8 shown right.

As TB is progressively reduced or eradicated in each area, the definition and boundary of each specified disease control area (DCA) is reviewed and testing requirements amended in association with residual disease risk. This year's DCA changes that came into effect on 1 March brought in DCA reductions of 2.3 million hectares involving nearly 7400 herds, resulting in 289,000 fewer TB tests for cattle and deer herds each year.

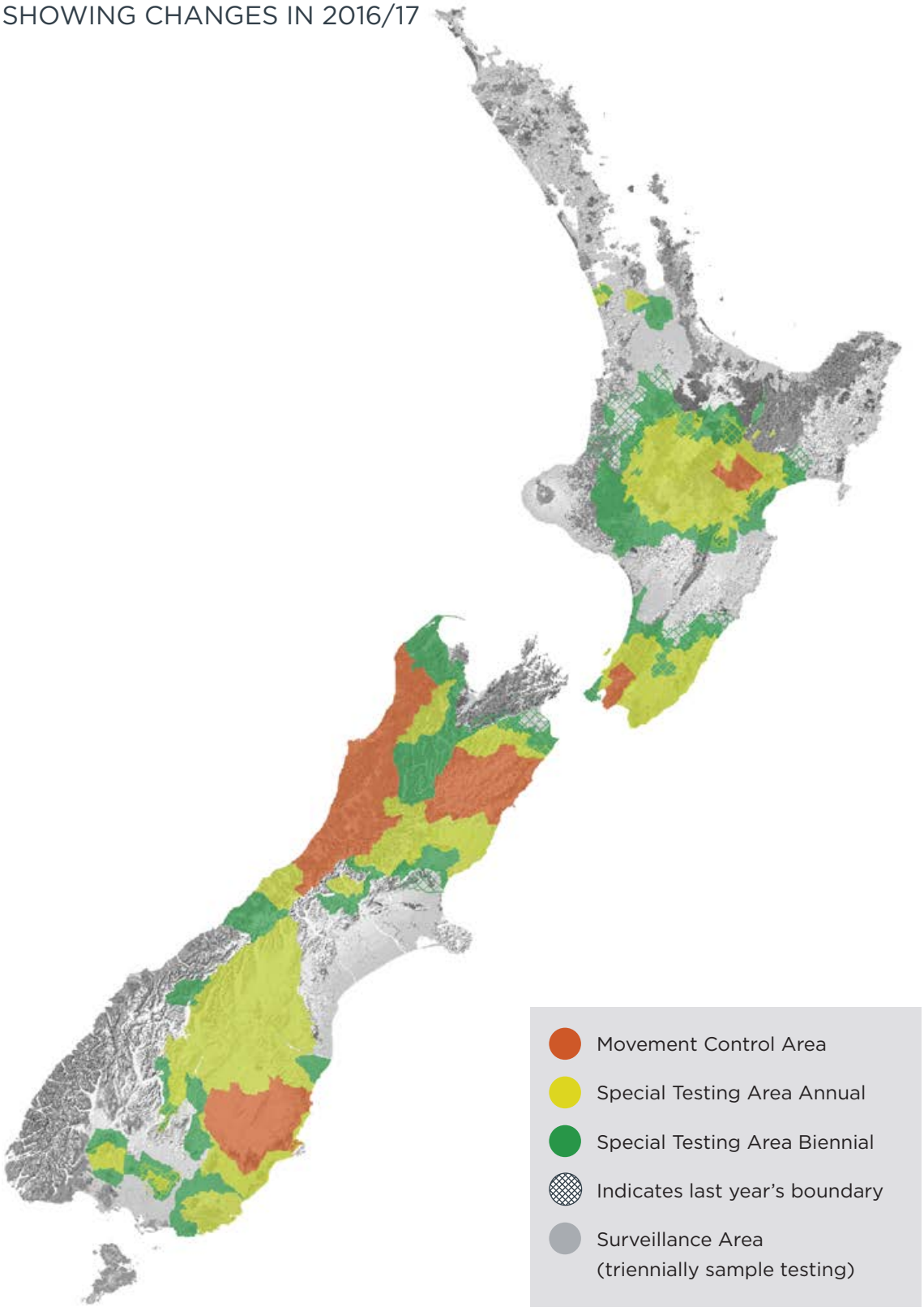
The reduction of wildlife risk associated with the Waikato area and the relative risk for this area compared to other high intensity dairy areas has resulted in a change of status for the Waikato Special Testing Area, which reduced TB testing to triennial for dairy cattle. This aligned dairy testing with that for beef cattle and deer across more than a million hectares and 2410 dairy herds, and reduced the number of individual animal tests required by more than 120,000 per year.

Following identification of TB-infected possums and livestock a new movement control area was established around the Mount Cargill region of Otago, to manage the increased risk associated with movement of cattle and deer. Pest control and surveillance is continuing, and stock must be tested before moving out of the region. This resulted in an additional 10,812 hectares being added to the Otago MCA, affecting 77 herds.

**TABLE 11:** DCAS AND SUMMARY STATISTICS FOR CATTLE AND DEER HERDS COMBINED

| | MCAS | STAS (ANNUAL AND BIENNIAL) | SURVEILLANCE AREAS | NEW ZEALAND |
|---|---|---|---|---|
| Land area | 31172 | 99436 | 136756 | 267364 |
| Total herds at June 2017 | 2470 | 18117 | 49617 | 70204 |
| Infected herds at June 2017 | 38 | 11 | 5 | 54 |
| New infected herds per 1000 herds during 2016/17 | 10 | 0.3 | 0.06 | 0.05 |

**MAP 8:** DISEASE CONTROL AREAS SHOWING CHANGES IN 2016/17



# RESEARCH AND DEVELOPMENT

The national TB Plan has included a significant Research and Development (R&D) programme for more than 20 years. Continuing research is directed at the development and implementation of new tools and processes for vector control, and understanding the ecology of wildlife vectors and TB. We contribute to veterinary science and epidemiology, biology, engineering and environmental science.

The new amended TB Plan has targets that extend to 2040 (TB-freedom in possums) and 2055 (TB eradication from NZ). Achieving these outcomes will require ongoing research and development investment to address OSPRI's needs for improved cost-efficacy in vector control and proof of TB freedom.

Consequently, it is critical that research capability is maintained to support technical programs such as the TB program facilitated by OSPRI. OSPRI plays a key role in investment in research and development for pest management practices and methodologies, which provide benefits beyond the TB eradication programme towards sound science underpinning livestock and wildlife animal health management and disease detection, surveillance, monitoring and control. OSPRI also seeks to build capability by supporting Masters, Post-graduate and Post-doctoral study programmes as part of our research investments.

In 2016/17, some work continued as multi-year projects. These build on the OSPRI R&D Investment Strategy that is currently being progressed with the inputs of internal and external stakeholders. The process to define OSPRI's R&D Investment Strategy identified the need for a range of investments to address operational and technical gaps under the following research themes:

- Active surveillance approaches for Proof-of-Freedom
- Passive surveillance approaches for post-TB assurance
- Improved tools and methods for aerial and ground-based pest control
- Improved mapping technologies to support TB surveillance
- Causes of TB persistence
- New and alternative technologies and tools for vector control
- Disease diagnostics
- Strategic optimisation of surveillance and control techniques and enhanced modelling.

The following sections provide highlights of OSPRI's current research and development activities and projects.

> OSPRI plays a key role in investment in research and development for pest management practices and methodologies, alongside livestock health.

## PROJECT: PROTECTING CATTLE FROM WILDLIFE TB USING BACILLUS CALMETTE–GUÉRIN (BCG) VACCINE

**SUMMARY:** There is global interest in using the BCG vaccine to reduce the risk of livestock becoming infected with Mycobacterium bovis, the bacterium that causes TB. The vaccine interferes with the skin test used to check infection in herds, but there has been strong interest in using BCG in remote areas where the cost of possum control is high relative to the number of cattle at risk.

**OUTCOME:** The research provided the first large-scale demonstration that BCG protects cattle from natural infection from wildlife without undermining annual livestock testing regimes. However, the original impetus for developing a useable vaccine was to reduce the amount of TB in livestock without having to eliminate TB from the local possum population. That possibility has now been made redundant by OSPRI's goal of nationally eradicating TB by 2055. That means there is no point in vaccinating livestock when TB still has to be eradicated from possums.

## PROJECT: ASSESSING HOW CLOSE WE ARE TO TB FREEDOM

**SUMMARY:** This programme of research compared the accuracy of disease managers' estimates of TB freedom against the outcomes of possum surveys.

**OUTCOME:** An exciting inference from this research is that much more of New Zealand is already free of TB in possums than even the experts believe. This knowledge will help managers have greater confidence in moving more quickly to the end-stage of the eradication process, and speed up the progress towards national eradication.

## PROJECT: GETTING TO FREEDOM FASTER – SURVEY-THEN-CONTROL ASSESSED, HAUHUNGAROA 2016

**SUMMARY:** OSPRI's standard approach to eradicating TB from possums has been to reduce possum numbers, and maintain them at very low levels for a decade. Wildlife surveys then assess TB freedom. Because TB is often eliminated more quickly than planned, control can sometimes continue longer than necessary. The 2016 trial of the Survey-then-Control (StC) approach in the Hauhungaroa Range showed that the approach can work at large scale, in dense forest, at an affordable cost, and TB-freedom can be declared sooner than when using the standard approach.

**OUTCOME:** OSPRI now has a means of fast-tracking declaration of TB-freedom, with potential for major savings in surveillance and aerial 1080 control operations required to achieve TB-freedom.

## PROJECT: INCREASING 1080 FREQUENCY FOR FAST TB ERADICATION AND BETTER BIRD PROTECTION

**SUMMARY:** The benefits to conservation, birds and biodiversity from aerial 1080 baiting flow from large reductions in rat predation. But rats breed quickly, so the benefits may be short-lived. This six-year project (2011–2016) assessed whether more frequent 1080 operations (every two or three years rather than five) provide more protection for birds while keeping average possum numbers lower. Research in the Hauhungaroa Range included more than 7000 five-minute bird counts, and 65,000 birds from 41 different species were counted. Native species comprised 92 per cent of all birds counted. There were no major declines attributable to 1080 for any common species or species group, and, overall, more birds were counted in 2016 than in 2011.

**OUTCOME:** Results suggest that frequent 1080 baiting is likely to result in faster eradication of TB and also moderately better overall protection of the native bird community. However, once an area is declared TB-free, there will be challenges in sustaining such frequent control.

## PROJECT: TOWARDS INSTANT ERADICATION OF POSSUM TB BY ACHIEVING 100 PER CENT KILL

**SUMMARY:** If every possum in an area could be killed, TB would be instantly eradicated from possums. Well-implemented aerial 1080 baiting can sometimes achieve near total kills (e.g. 99.6 per cent in the Hauhungaroa Range in 2016). To consistently achieve near-total kills we need to find out why possums sometimes survive, and find new ways to further minimise such survival. This study, on the West Coast, aimed to determine whether the few surviving possums (and rats) still present after a standard aerial 1080 operation could be killed by conducting a second 1080 baiting a few months later.

**OUTCOME:** The findings suggest that using two pre-feeds before a second 1080 bait application using slightly different bait just a few months after the first, is likely to result in extremely low rat densities. For possums, however, the results show that while new recruits to the population were killed, the bait-shy adult survivors were not.

## PROJECT: IMPROVING THE CREDIBILITY OF TB-POSSUM MODEL PREDICTIONS

**SUMMARY:** OSPRI has a robust and objective process for assessing the likelihood that an area is free of TB in wildlife. Typically, possum control is applied for 10 years to reduce numbers to very low levels and break the TB cycle, and the few survivors are surveyed to confirm whether TB has been eradicated. This project aimed to reassess the ways in which TB might be able to persist in low-density possum populations, and find ways of simulating those processes.

**OUTCOME:** The re-assessment identified some potentially important drivers of TB persistence that had been previously underestimated. This is likely to improve confidence in predicted outcomes and, combined with other work, enable OSPRI to move more quickly and confidently to declaring areas free of TB in possums.

## PROJECT: IMPROVED ACCURACY IN POSSUM SURVEILLANCE

**SUMMARY:** Declarations of TB freedom often rely heavily on possum TB surveillance – trapping a sample of possums and checking for TB. A key question in interpreting the survey outcomes (almost always, no TB is found) is whether the sample represents a large part of the possum population or an insignificant fraction. This study aimed to check whether possum trappability and movement patterns were, on average, substantially different between different areas of vegetation and terrain, and whether that affected probabilities of TB freedom.

**OUTCOME:** The results showed widely differing possum home range sizes, with the largest home ranges recorded at the sites with the lowest possum density. However, the widest ranging possums were also less likely to be caught, so the difference from forest possums balanced out. Curiously, this means that although the model uses values based on trappability and movement in forest to calculate its answer which may differ from values in patchy habitats, the answer is more or less correct. The finding removes a previous concern that the 'forest-based' model was biasing the PoF probabilities.

## PROJECT: IDENTIFYING MINIMUM PATCH SIZE (IN PROGRESS)

**SUMMARY:** This project aims to assess the TB persistence risk of small patches of habitat, and whether they should be controlled. The combination of the patch-risk modelling and the cost-benefit analysis will identify which habitat patches should be removed from control programmes or retained but not surveyed, potentially saving several million dollars annually.

## PROJECT: PROOF OF TB FREEDOM IN FERRETS (IN PROGRESS)

**SUMMARY:** Circumstantial evidence suggests that ferrets can independently sustain TB depending on population density and time. This ongoing research aims to determine the intensity of ferret control (if needed) to prevent any significant cycling of TB within the ferret population.

## PROJECT: PROOF OF FREEDOM REFINEMENT AND IMPROVEMENT (IN PROGRESS)

**SUMMARY:** This work is aimed at refining PoF methodology to help inform declarations of TB freedom in Vector Control Zones, the process central to achieve national TB freedom from wildlife by 2040. This project seeks to optimise surveillance activities to ensure eradication at the lowest cost.

# KEY PROJECTS DURING 2016/17

## RISK-BASED TESTING

One of the key changes agreed during the 2015–16 TB Plan review was that livestock TB testing and surveillance would be redesigned for a more targeted risk-based approach. This would combine:

- Continued routine TB testing in those areas that still carried risk to livestock from TB-infected wildlife
- Reduced TB testing in areas determined as having little or no wildlife risk
- Better use of meat plant surveillance to detect TB at slaughter
- Monitoring and identification of TB risk factors for livestock moving into areas with reduced testing, with post-movement tests to be applied according to risk assessment.

The fundamental approach to TB testing for disease surveillance should be that sufficient testing is completed to allow detection of any disease present, with enhanced fundamental monitoring and surveillance, including post-mortem carcass inspection. Allowing for the fact that post-mortem inspection detects around half of the cases identified for TB and TB-related conditions, and noting that disease prevalence is very low in Vector Free Areas, it is apparent that the level of routine testing can be reduced for livestock in specified low-risk areas, provided that ongoing monitoring and surveillance approaches, particularly post-slaughter, support the programme effectively.

Risk-based testing will be introduced through a phased pilot approach for each sector, commencing with deer, that allows for collection of data alongside pre-and post-mortem monitoring and surveillance processes for individual animals. These data would provide the required determination of TB risk, derived from locations of farms and livestock, geographic wildlife infection risk, livestock disease control and movement history, contact with other infected animals, and movement information informed by the NAIT programme.

The combination of these attributes is intended to determine an animal and farm premises risk status and inform the application of post movement test requirements dependent on the location of the animal, premises, related vector risk and the quantum of movements. These parameters and their ongoing assessment, coupled with routine slaughter surveillance and monitoring, will enable routine on-farm TB testing to be reduced.

Over the last year, OSPRI has been examining the effectiveness of pre- and post-mortem surveillance practices to identify TB, with gap analysis to quantify any additional requirements for carcass inspection to support the required surveillance platform for future risk-based testing. The anticipated result is that with enhanced monitoring at slaughter, on-farm testing can then be reduced in specified areas of lower TB risk due to location, livestock movement and disease history, and local wildlife infection risks.

In the first half of 2017, OSPRI has initiated work in gathering meat plant surveillance data, the integration of TB history and herd data for infected farm premises and residual risk premises into the NAIT system. The next step is likely to involve a large trial of pre- and post-mortem TB surveillance and inspection practices. To introduce the new program for risk-based testing, the focus will initially be on the deer sector and their direct consignment to slaughter, applied through a staged implementation of testing changes in conjunction with TB monitoring both on-farm and at pre- and post-mortem verification points. Risk-based testing will then be considered for the other sectors, dairy and beef, in a staged manner through similar Pilot programmes.

## TB TESTING INTEGRATION

In a risk-based post-movement testing regime it is crucial to know the movements of individual animals. This is particularly important for managing the low but real residual infection risks associated with movement of animals from herds which have previously been infected, but have since been cleared for movement. The Disease Management System (DMS) for TB is herd based and cannot cater for individual animal identification or movement recording, but the National Animal Identification and Tracing (NAIT) information system was designed to deliver this capability. Integration of the NAIT information system with TB testing data currently residing in DMS is required to underpin development of an effective risk-based testing programme.

Integration of DMS with the NAIT information system will enable further analytics concerning previous and current herd disease statuses but that can now be applied to individual livestock (including individual animal statuses from multiple locations). This project is in the early stages with a first sequence of releases to apply TB case management notifications to the OSPRI veterinary team. This project will operate in conjunction with the aforementioned pre- and post-mortem surveillance and monitoring project, to support preparation for the move to risk-based testing and to utilise the existing meat processor interface mechanisms. It is anticipated this project will be completed by the first quarter of 2018.

## NAIT REVIEW

The NAIT review was developed to evaluate the NAIT system's progress to date and to explore improvements that would further underpin its stated aims. The review is supported by a Technical User Committee (TUC) and Steering Committee (SC) with an independent chair. The TUC's role is to provide advice, at user and stakeholder organisation level, on technical utilisation of the system on behalf of supply chain end users, advice on practicalities, industry policy interest and priorities, and input on research commissioned for the review. The SC's role is to oversee the review process and consider the TUC's recommendations regarding the future NAIT system and its operation, alongside engagement on legislative, funding and consultation matters.

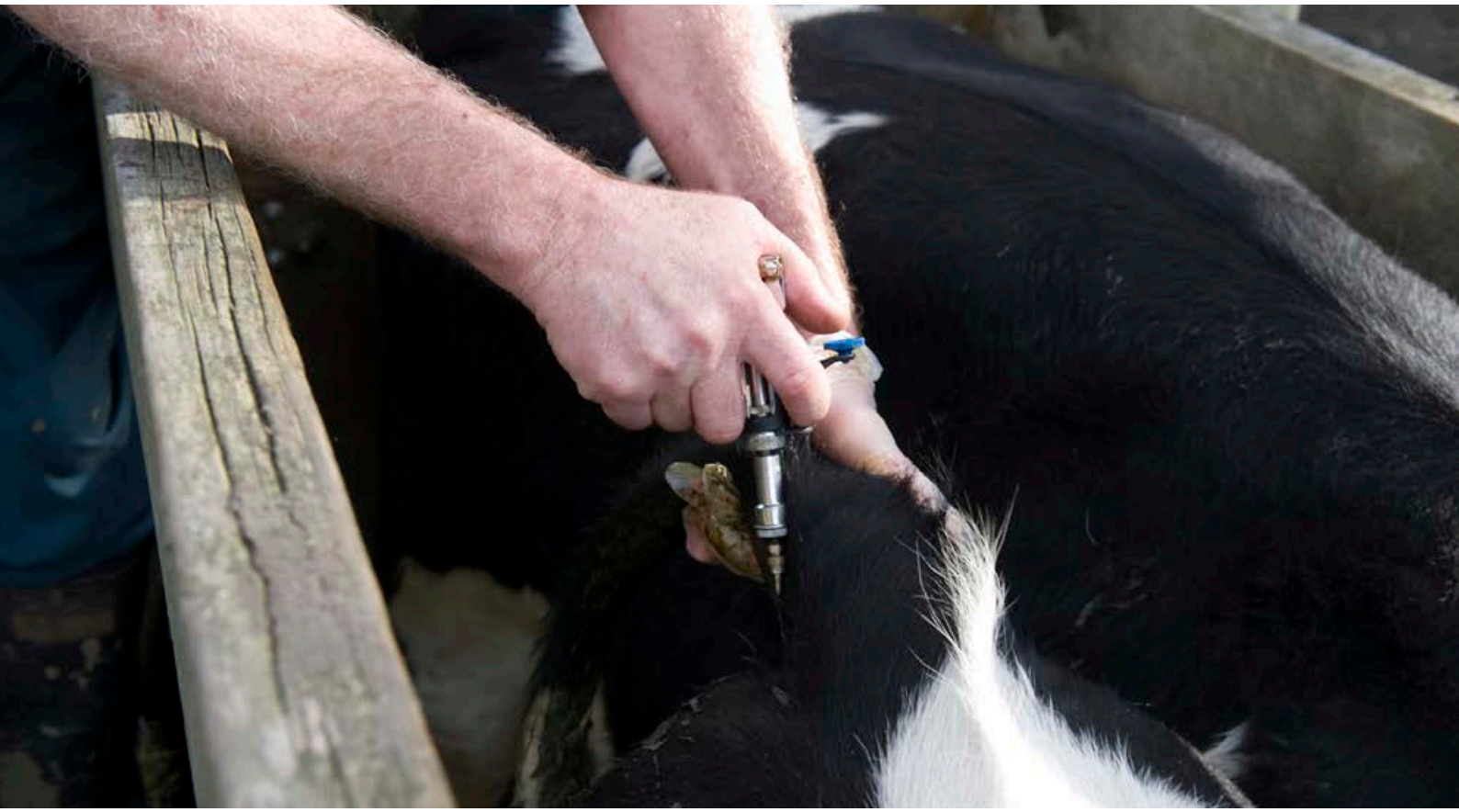
The expected principal output from the TUC is a set of recommendations for the SC to consider relating to potential changes or improvements to the NAIT system to ensure the envisaged benefits for New Zealand in utilising national traceability can be realised. Membership of the TUC includes two SC representatives, technical and policy specialists and users of the NAIT system (e.g. production, processing, sale-yard, transport, market access, traceability systems, etc.).

The TUC has met 11 times since its establishment in August 2016 and the Steering Committee has met 5 times. A range of topics have been discussed including tag identification, numbering and tagging processes, tag retention, animal registration, movement recording, tag technologies, defining the roles of Persons in Charge of Animals (PICAs), Information Providers (IPs), Accredited Entitles (AEs) and other agencies and users interfacing with NAIT, defining needs in terms of compliance, communications, funding and the role of NAIT in animal tracing, disease emergency and food safety response. There have been several commissioned reports to support the review, including an international comparison of livestock traceability systems

world-wide. To date, the TUC has identified 19 draft recommendations to be provided to the Steering Committee (SC) for their consideration – proposed during the last quarter of 2017.

The next steps will involve a series of industry working groups, followed by wider public consultation to engage end users within industry, supply chain and Government, intended to commence in early 2018. This would be followed by subsequent regulatory amendment for key recommendations, alongside OSPRI operational response and consultation for matters that do not require regulatory intervention and are enabled under the current auspices of NAIT Limited.

> The introduction of the risk-based approach is anticipated to be undertaken through a phased pilot approach.



# EXTENSION MATERIAL DEVELOPMENT

In 2016 a decision was taken to establish extension resources for the TB and NAIT programmes that could be integrated with existing industry and Government extension, education and outreach programmes. This included development of resources and tools to promote the outcomes of the TB Plan and its next steps, information for industry on TB testing changes and methods, information for landowners on the TB eradication effort, information for livestock owners on the identification and management of TB, and resources for the general community to support consultation and public meetings.

OSPRI released a series of factsheets, videos and technical articles on this range of topics, many of which are now being used by sector agencies and MPI in their extension programmes and farmer engagement. In preparation for the launch of the new OSPRI website, over 40 factsheets on livestock disease management, testing for TB, pest management, the use of 1080 and other topics were developed.

Saleyard signs and other promotional materials have also been refreshed. The future focus will be on the extension resources required to underpin NAIT, anticipated to be released following the NAIT review. These will involve a series of NAIT notices to inform users, agencies and commercial companies about system level transactions and interface, alongside the broader messaging relating to the role of traceability in supporting product integrity, animal health and food safety. In addition, a series of information notices,

videos and other material will be launched in support of post-mortem surveillance, risk-based testing, on-farm TB identification, and disease and biosecurity management.

## NAIT TRACEABILITY (DISEASE RESPONSE) EXERCISES

The control of animal diseases and pests that threaten biosecurity and the natural environment in New Zealand relies on the co-operation of Government agencies, industry organisations and businesses, communities and individuals in the primary sector. The Ministry for Primary Industries (MPI) is tasked with maximising export opportunities, improving agricultural productivity, ensuring safe food supply, increasing sustainable resource use and protecting New Zealand from biological risks. NAIT is the national livestock identification and traceability programme, capable of tracing livestock location and movement from birth to death, to support disease control, biosecurity, food safety and market access. NAIT provides traceability by recoding livestock movements including those to saleyard and slaughter.

In the event of a disease response, NAIT is able to provide traceback of identified and related farms which identified or infected animals may have moved to or from, alongside any livestock depots, saleyards or processing plants where animals may have interacted. The ability to perform prompt traceback in any disease event is paramount to rapid identification of places and animals of interest, and any related animal cohorts. This enables immediate quantification of the magnitude of any disease outbreak and the likely spread of infection, subject to disease incubation periods and other biological factors. In preparation for any such needs, NAIT and MPI operate a range of preparedness exercises to support future disease response activities.

By identifying known and likely infection sites and related properties, decisions can be made in relation to treatment, quarantine, slaughter and other disease control and response mechanisms. NAIT provides this ability and therefore is an integral component of disease management, response and recovery, alongside cost mitigation in the event of an emergency response effort. Thus NAIT plays a role in directly underpinning not only response efforts, but in medium and longer term recovery arrangements, where farms, other premises and livestock require risk status determination, prioritisation and observation, and may remain under case management for periods of time as industry resumes normal practices after a disease event.

Asides from emergency response activities, NAIT provides capacity for ongoing residue, treatment, contaminant, food safety and disease surveillance and management, through the assignment of status to farms or other premises, and individual animals. One particular example is the ongoing management of the bovine TB programme which relies on herd or farm status and animal identification for TB diagnosis and case management. The future of traceability will be focused on the underpinning of livestock and livestock (or product) residue and contaminant monitoring, national level endemic disease surveillance, and the management of both these aspects for domestic and export market access.

“

The control of animal diseases and pests that threaten biosecurity and the natural environment in New Zealand relies on the cooperation of Government agencies.


10

# COLLABORATIVE INITIATIVES

OSPRI partners with its shareholders and a range of scientific, technical, industry and Government agencies to achieve greater benefits through co-investment and alignment of priorities. Examples include joint research and projects on pest control methodologies, pest control operations, livestock traceability systems development, and emergency animal disease response and management.

The following section highlights key initiatives from the past year.

## DEVELOPMENT OF ONLINE LIVESTOCK TRACEABILITY TOOL

New Zealand's economic and social prosperity depends on its trading reputation and maintaining access to key export markets. Identification and traceability of livestock and livestock products can assist in providing assurance that products can demonstrate food safety standards, are able to be traced to their source or origin, that biosecurity response can be facilitated and that claims relating to the status of animals or animal products can be validated. It was foreseen in 2004 that it is important for New Zealand to have world-recognised animal identification and tracing systems. This desire was driven by growing demands from importing countries and trading partners to better manage disease, to provide evidence that New Zealand livestock and livestock product are free from disease, and to demonstrate that livestock and food production systems meet customer expectations in relation to overall food safety, integrity and quality.

Traceability in New Zealand to underpin animal health and food safety standards for livestock is supported by two key system components:

- Individual animal identification and movement tracing in NAIT, and,
- Consignment – level traceability and animal health and food safety status information via movement declaration and documentation by Animal Status Declaration.

The NAIT system provides individual animal RFID identification and traceability, while consignment-level traceability and animal status information is provided by movement declaration. For the latter purpose, the Animal Status Declaration (ASD) form is mandated under the Animal Products Act 1999. The ASD form is a vital component of the market assurance and eligibility system that supports New Zealand livestock industries and products.

The ASD meets a number of statutory and industry requirements for purposes of a declaration from the supplier that livestock are fit for human consumption. The ASD includes information about animal health, food safety and disease status (including TB testing information) HGP status, withholding periods for specified veterinary treatments, information on any other animal or chemical treatments that may result in residue contamination of food products, and vaccination and ruminant feed (protein) ban details, as well as information on adherence to animal welfare provisions. There were an estimated 1.2 million ASDs created in 2016 for cattle, deer and sheep under the Animal Products Act 1999.

The existing ASD process is paper-based and without a centralised database, however, MPI identified an opportunity for an electronic ASD (eASD) to be produced. With support from MPI, the Red Meat Profit Partnership (RMPP) and OSPRI started work on an initial proof of concept (POC) project in October 2015 and a resulting pilot trial. The trial involved the development of a

The Pilot and eASD product has received positive feedback from livestock suppliers, transporters and meat processors.

software platform to test the feasibility for an electronic form to replace the paper form and associated manual process.

To oversee the POC trial, two key governance processes were established. The first was the eASD Governance Committee that consists of RMPP, MPI and OSPRI. The second is the eASD Stakeholder Reference Group, which is led by MPI, and comprises representation from MPI, Dairy NZ, Beef + Lamb New Zealand, DINZ, Federated Farmers, the Meat Industry Association and the Stock and Station Agents Association.

Key findings from the trial included time savings, user benefits, form accuracy, data quality enhancements, error rate reduction, improved market assurance, ease of reporting, and the ability to collect ASD history by premise, consignment and transaction, amongst other things. The Red Meat Profit Partnership (RMPP) as the investor, and OSPRI as the service provider, in collaboration with the Ministry for Primary Industries (MPI) then continued their partnership to develop an expanded eASD Pilot programme intended to engage a wider array of meat processors and their supply chains.

The eASD pilot trial has been underway for the second half of 2017, with its commencement involving Silver Fern Farms Finegand plant. The Pilot and eASD product has received positive feedback from livestock suppliers, transporters and meat processors (system users).

Since the beginning of the trial in February 2017 a total of 100 farmers registered interest for participating in the trial and 84 of those are now actively using the eASD when sending sheep or cattle to slaughter. In total, 432 eASDs have been created (173 for cattle, 258 for sheep and one deer) which have captured the movements of over 100,000 animals direct from farm to slaughter. Both Android and iOS versions of the eASD application have been made available and have enhanced ease of use and convenience for farmers.

It has now been agreed that the Pilot be extended as phase 1 of implementation to July 2018. The next stage is to engage further participants (farmers, saleyards and additional meat processor enterprises) into the trial with the expectation of ensuring participation by all meat processors by June 2018. Going forward, Greenlea, Alliance, all South Island plants of Silver Fern Farms and Duncan processors are completing their on-boarding to the eASD programme over the coming months.

In May 2017 OSPRI provided the eASD/ASD Business Case (Linkage of Animal Status Declaration with the NAIT system) to RMPP, the eASD reference group (comprising industry and Government) and OSPRI shareholders and investors for consideration. In this business case, the net present value of integrating ASD with NAIT was estimated at over 170% – well worthy of investment – and the distributed benefits included to meat processors (41%) farmers (33%) MPI (11%) OSPRI (10%) stock agents (4%) and sale yards (2%).

The overall quantification of benefits for industry in utilising the eASD in conjunction with NAIT for movement transactions was quantified at $6.2M benefit for the cattle sector, $72K for the deer sector, $2.2M for the sheep sector, meaning a total of $8.5M for farmers. MPI benefits were quantified at $2.7M and meat processor benefit quantified at $10.4M, which well outweighs the investment required for the establishment


of a full eASD and ASD centralised database and programme.

The investment required as per the eASD business case, is estimated by OSPRI to be $2.7m in start-up development costs and an estimated $1.6m ongoing annual operating costs split by the respective beneficiaries of MPI, beef, dairy and deer farmers, meat processors and others. The business case included the potential for other providers to provide an eASD application and engage with eASD/NAIT databases, in the same manner as current NAIT accredited information providers. Costs associated with compliance and manual effort for MPI, meat processors, saleyards and the farming sector almost outweigh the start-up and ongoing costs, at an estimated $2M annually.

Further work in this area will involve engagement on the business case with industry and Government and then making determination on process and timing for options as presented.

# COUNCIL ENGAGEMENT

OSPRI has continued to engage with Regional Councils for the successful implementation of the TBfree programme across the country and to ensure greater awareness about our planned pest control work.

A project was undertaken to examine current Council pest management investment, activity and interest (to identify potential areas of alignment and economies of scale with OSPRI) alongside current national capability and capacity, hectares being managed and the nature of the work e.g. control, eradication, surveillance, monitoring. This work will be used to further consider OSPRI's strategic plan and potential collaborations or projects. A cost benefit analysis is currently being undertaken, comparing Council cost of delivery of pest management in 1–2 selected regions vs OSPRI operational cost vs joint initiatives, and identifying economies of scale or expansion capacity.

In addition, and central to enhancing Council engagement has been the development of the TMA notice initiative (see page 30 for more details) that has enabled OSPRI to significantly improve public awareness about the timing and locations of our pest management work. In the coming year OSPRI will continue to engage with Councils to identify opportunities to work with the Local Government sector on pest and predator control programmes.

## SUPPORTING BATTLE FOR OUR BIRDS CAMPAIGN

During the past year OSPRI continued to support the Department of Conservation (DOC) by helping to deliver their 'Battle for our Birds' (BFOB) pest control programme. OSPRI delivered 11 operations over 390,000ha in support of this. The key objectives of the programme are to:

- Prevent any local extinction of the most vulnerable species
- Minimise predator damage to our most valuable ecosystems
- Improve efficacy and efficiency of pest management to control rodents and mustelids.

Various methods of control are utilised by DOC to control pest numbers for a range of pest species. One of the main tools is aerial distribution of 1080 toxic bait, which is well suited to New Zealand conditions for the control of a range of pests, especially possums, rats and stoats. Initial outcome monitoring showed greatly improved nesting success for iconic species such as kea, kaka and whio in BFOB project areas when compared to areas outside the programme.

This is the second year that OSPRI has supported DOC after being contacted in late 2015 to provide operational expertise to help deliver their campaign. For the coming year, a Master Services Agreement between the two agencies has been signed alongside statements of works for 8 of the highest priority operations. The working relationships between DOC and OSPRI remain very positive as a result of the work completed to date.

## PREDATOR FREE 2050

Predator Free 2050 seeks to rid New Zealand of three of the most damaging introduced predators threatening our natural taonga, our economy and primary sector. Ridding New Zealand of possums, rats and stoats by 2050 is a New Zealand-wide goal requiring new technologies and a coordinated team effort across communities, iwi, and the public and private sectors.

During the year OSPRI has taken an active role in contributing the development of the Predator Free 2050 initiative, by discussing with Predator Free and the Department of Conservation the potential for collaboration in terms of information, training and extension, to operational and systems co-investment and collaboration, and to avoid duplication of effort and resources. OSPRI will continue providing regular information on its operations and planning for purposes of enhancing co-investment, leverage and collaboration with Predator Free 2050 and additionally, will continue to make adjustments to operations for purposes of delivering maximum benefit both to our shareholders and the wider community.

# CORPORATE ACTIVITIES

## HEALTH, SAFETY, SECURITY AND ENVIRONMENT

2016 was the final year of OSPRI's three-year health, safety, security and environment (HSS&E) strategy designed to mitigate risks and ensure that we can achieve our mission without causing harm to people or the environment. The objective of the strategy was to deliver a 25% reduction in workplace recordable injuries, achieved through implementing a zero-harm culture amongst OSPRI staff and contractors.

The target was achieved in 2013 (the year the strategy was implemented), so we aimed for a further 25% reduction over the remaining two years. While maintaining our focus on delivering the strategy, during the year we began work on developing the new OSPRI HSS&E Strategy – 2017–2020.

A summary of key achievements during the year is provided below.

### CONTRACTOR SAFETY DAYS

This year the H&S field days programme was expanded to 10 days – six for wildlife operators and four for TB testers.

This year OSPRI carefully considered the needs of adult learners generally and our target audience specifically. We hoped our engagement approach would create a relaxed environment conducive to adult learning, and provide a relevant, practical and positive experience. Hundreds of workers attended 4–6 short training sessions which included:

- Enhanced first aid equipment
- Critical risks and risk management
- Mental health awareness
- Hazard identification
- Our H&S mobile app.

Overall, 85% of participants indicated they were satisfied with the day, by selecting a very positive or positive response.

### REVIEW OF QUAD BIKE USE

In response to a number of incidents involving quad bikes, OSPRI conducted an in-depth risk reassessment of their use in the field. A result of this, a decision was made to prohibit quad bike use on all OSPRI operations from 1 January 2018.

Moving away from quad bikes will encourage methods and modes of transport that involve less overall risk. This decision was not taken lightly and OSPRI was fully cognisant of the actual and potential impacts.

OSPRI workers use quad-bikes in a different way to most users. Like many farmers, we have innovatively adapted them to purposes for which the design was not originally intended. Unlike farmers, we do not have the ability to control or realistically limit the environment in which we can safely operate.

Pivotal to the decision was the findings of the external review and research, which found that currently available controls could possibly mitigate harm, but with low certainty due to the inherently unstable and error-intolerant nature of the design. The report led to the inescapable conclusion that it is feasible to further mitigate the risk of vehicle operations by using safer modes of transport or work methods, or a combination thereof. It is important to note that whatever substitute design or method is chosen, some risk will remain; vehicle operations are still our number one risk.

The phase-out period is intended to allow managed change, including re-training and graduated operator adjustment to and experience in new methods or modes of transport.

## HEALTH AND WELLBEING

OSPRI recognises there is a link between work-related safety and health, health-related safety risks and general wellbeing. OSPRI implemented a policy to enable a wellbeing programme, to support areas of worker happiness that are not strictly work-related, at least not in the traditional sense.
Each region has an appointed wellbeing champion and a small committee has been formed to drive wellbeing initiatives and events. Our wellbeing programme will focus on the four 'pillars' of wellbeing:

- Physical wellbeing
- Health awareness
- Mental health
- Spiritual and emotional wellbeing.

Wellbeing activities are not only aimed at employees – OSPRI considered the needs of our contractors and also the people we interact with in the wider rural sector. Regional employees have attended 'Good Yarn' workshops presented by our trained internal facilitator; operations contractors attended a discussion session. Both activities were designed to help participants recognise the signs and symptoms of common mental health problems, talk to someone about their mental health and guide a person towards appropriate support, where relevant.

## DEVELOPING HSS&E STRATEGY – 2017–2020

At the beginning of 2017, OSPRI realised the outcomes of the former Health and Safety Strategy. These outcomes included a 25% reduction in our recordable injury rate and the implementation of 19 initiatives, which consisted of over 30 individual improvement activities.

For the first half of 2017, OSPRI commenced the development of its new Health and Safety strategy, intended to provide the framework for Company activities, focus areas and targets for the coming three years. The strategy is intended for launch towards the end of 2017.


Helicopter Services

# MARKETING AND COMMUNICATIONS

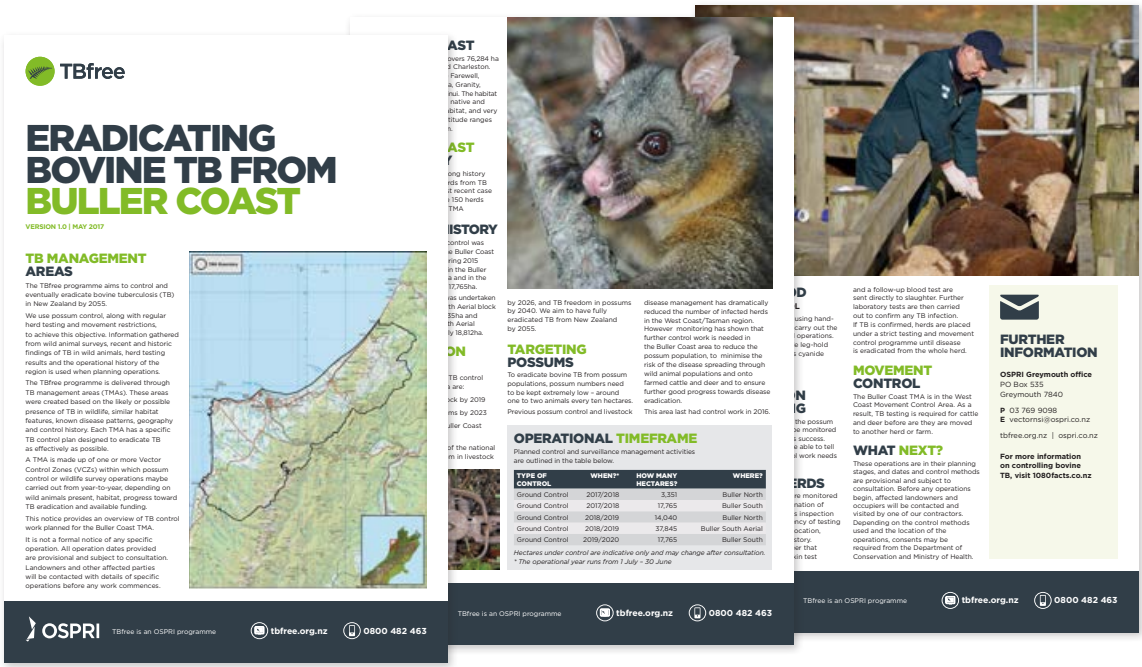
During the year, OSPRI continued to focus on improving communication and engagement across our work, including building greater awareness of the TBfree and NAIT programmes and sharing our knowledge and expertise.

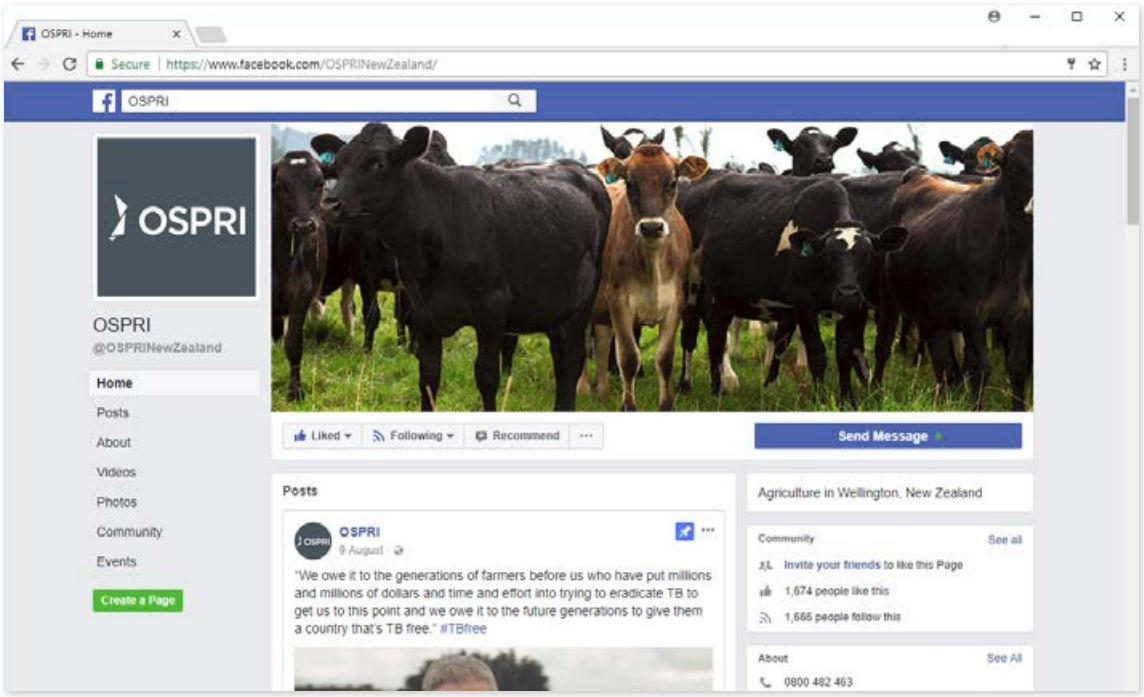
## SUPPORTING OUR TEAMS IN THE FIELD

OSPRI have continued to produce a wide range of information material for dissemination by mail and email or at events, presentations and information evenings. Communications for aerial operations have been developed including over 35 operational specific factsheets and supporting signage. OSPRI have also produced a range of factsheets to help landowners understand the various aspects of the TBfree programme, such as our approach to pest management, the different types of pest control and the role of wildlife surveillance. This has included direct mail, public notices and social media support to promote information sessions.

During the year OSPRI also launched our first TBfree programme national pest operations consultation document. The purpose of the consultation is to support engagement with the community, landowners, land-users and other individuals by providing information about proposed pest control operations for the coming year. 75 submissions were received from a mix of community and interest groups. Submissions covered a broad range of topics, from concerns about dog safety to how and where deer repellent is used.

As outlined on page 30 an important engagement activity has been the development and delivery of the TMA notices. The new approach delivers improved public information and engagement opportunity with landowners and users about the timing and locations of our pest management work specific to their location.






## SOCIAL MEDIA

OSPRI continued to grow its social media presence to increase reach to farmers who are now represented across all media channels. Since last year OSPRI increased Facebook followers by 23% and Twitter followers by 14%. Largely driving this increase is our focus on video. Our best post to date was published this year – featuring a short video 'Eradicating bovine TB from New Zealand' with farmers talking about what a TBfree future means to them and to the next generation of farmers, with a brief analysis of the TBfree programme methods and progress. The video has reached 10,500 people so far, with our shareholders and stakeholders now readily sharing it to boost their own engagement.

While channel proliferation is a current challenge for company communications, OSPRI has found value in focusing on Facebook and Twitter – as our shareholders are strong on these channels, allowing for effective cross-promotion, boosting overall stakeholder engagement.

## OSPRI ENEWS

This year OSPRI continued our direct line of communication with farmers in the form of a fortnightly OSPRI eNews. Over 30 eNews emails were sent during the year to over 70,000 recipients each time – made up of farmers and a wide range of other stakeholders who have signed up to receive the enews.

OSPRINEWS continues to outperform its industry counterparts, being opened on average by 34% compared with 24.7% industry average. Engagement is higher too – at 10% compared with industry average of 2.98%. This depicts a deeply engaged audience that reflects overall commitment to OSPRI's programmes.

## PROMOTING OUR EXPERTISE

To help share OSPRI's capabilities and wide knowledge base the development of an online library of factsheets was initiated. These cover all aspects of OSPRI's programmes and operations, and detail the science and field-research base behind OSPRI's programmes. They support OSPRI's consultation with communities affected by TB management and wildlife control operations.

## COLLABORATING WITH INDUSTRY PARTNERS

During the year OSPRI worked closely with industry partners to leverage off their engagement channels, in particular DairyNZ, Beef + Lamb New Zealand and DOC.

Central to this has been sharing company and programme updates and other collateral through their extension and social media channels.

## NEW OSPRI WEBSITE

Work has continued on developing an integrated website for OSPRI, NAIT and TBfree. Using stakeholder research from previous years, areas for improvement were identified and are being incorporated into the new site structure. The new site will provide a one-stop-shop for NAIT and TBfree programme users and also wider stakeholders and contractors, making it easier for them to access the information they need. The expected launch of the new site will be in October 2017.

# CASE STUDY CONSULTATION IN ACTION: CENTRAL NORTH ISLAND

Communication around sensitive TBfree aerial operations in the North Island demonstrated OSPRI's commitment to consultation with communities affected by its activities. Open public consultation concerning operations in the central North Island exemplify the company's approach.

The 2016 consultation process attracted a large number of submissions about the effects of planned aerial possum control operations on deer hunting, especially in highly-valued sika deer hunting areas on public lands in the central North Island. These submissions made it clear that planned expansion of operations in this area would have major impacts on commercial and recreational hunting.

After carefully considering these submissions, and further meetings and discussions with hunting organisations, OPSRI decided to:

- Continue its current investment in the use of deer-repellent treated 1080 bait across all sika deer habitat on public land, and on other highly valued hunting areas

- Use deer repellent bait across more than 130,000ha of operations on public land in North and South Island high country deer habitat during upcoming operations
- Carry out further trials on the efficacy of repellent for sika deer
- Split the proposed Kaipo operation into two, with one half being deferred for control in 2017
- Defer the proposed Kaweka East operation to 2017 to allow for further consultation
- Re-configure the Kaweka East operation into three blocks to be treated across three years, allowing hunters access to large untreated areas of front and back country during each hunting season
- Change timing of some operations to avoid the roar season and other popular hunting periods.

OSPRI remains committed to broad public consultation through published notifications, information days and meetings with affected parties.

# SUMMARY CONSOLIDATED FINANCIAL STATEMENTS

# GOVERNANCE

The OSPRI Board of Directors (the OSPRI Board) is responsible for and committed to maintaining the highest standards of corporate governance, ensuring transparency and accountability to shareholders and stakeholders.

## NOMINATION AND APPOINTMENT OF DIRECTORS

Procedures for the appointment and removal of directors are governed by the company's constitution.

The major shareholders, DairyNZ Limited and Beef + Lamb New Zealand Limited are each entitled to appoint one director. The Crown currently does not hold shares and therefore is not eligible to appoint a director.

The Stakeholders' Council identifies and nominates candidates to fill up to five director positions for approval by shareholders. The maximum term for which a director may be appointed is three years. A director is eligible for re-appointment or re-election after the expiry of his or her term of appointment.

OSPRI New Zealand Limited has appointed directors to the boards of each of the two subsidiaries, TBfree New Zealand Limited, and National Animal Identification and Tracing (NAIT) Limited.

## DIRECTOR CHANGES

Keith Sutton resigned his Directorship of OSPRI New Zealand Limited from 1 July 2016 and also ceased to be a director of TBfree New Zealand Limited and National Animal Identification and Tracing (NAIT) Limited at that time.

Mike Pohio was appointed as a new director of OSPRI New Zealand Limited by shareholders at the AGM in October 2016, and was appointed as director of TBfree New Zealand Limited and National Animal Identification and Tracing (NAIT) Limited by the OSPRI Board in October 2016.

## BOARD COMMITTEES

The Board has established the following committees to examine proposals and make recommendations.

### AUDIT AND RISK COMMITTEE

The committee consists of at least three board members. Collectively, people appointed to the Audit and Risk Committee need to have:

- financial expertise
- knowledge of governance, assurance, and risk management best practice
- other attributes as deemed appropriate (for example, legal or information technology experience).

The Chair of the committee shall not be the Chair of the OSPRI New Zealand Limited Board. The membership shall be for one year and shall provide for both continuity of membership and contribution of fresh perspectives. The Committee's responsibilities include the following:

- liaison with internal and external auditors
- review of the annual audit plan with the external auditors and their letter of engagement
- approval of the annual internal audit plan, and the terms of reference for each audit
- review of audit findings and monitoring of any consequential actions
- review of six monthly and annual financial statements
- prior clearance of public releases of financial information in reports and to the media;
- review of accounting policies, the adequacy of the internal control structure and associated organisational policies
- advise the Board and recommend and monitor any remedial action plan in respect of any significant non-compliance with policies
- review and monitoring of legislative and statutory compliance processes
- review of the frequency and significance of all transactions between the company and related parties and assessment of their propriety
- recommendations to the Board for the appointment of internal and external auditors and their fees
- review of the independence of the external auditors and the appropriateness of any non-audit services they undertake for OSPRI
- supervision of any special investigations requested by the Board
- oversight of the risk management system for the Company
- review all whistle blowing matters raised and escalate to the full Board.

### HUMAN RESOURCES COMMITTEE

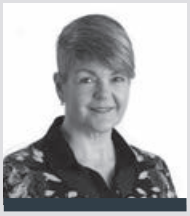
The objective and role of the committee is to assist the Board to fulfil its responsibilities in relation to setting and reviewing policies and standards for employees relating to remuneration and employment practices of OSPRI and its subsidiaries. The committee also oversees the OSPRI Director Mentoring Programme.

## BOARD AND COMMITTEE MEETINGS

The Board normally meets at least 10 times a year and/or whenever necessary to deal with specific matters. The table below documents the directors' board attendance and committee members' attendance at meetings during the year ending 30 June 2017.

| | Board | AR Committee | HR Committee |
|---|---|---|---|
| Jeff Grant | 10 | 4 | 4 |
| Lesley Campbell | 10 | | 4 |
| Barry Harris | 10 | 3 | |
| Deborah Roche | 8 | 5 | |
| Fenton Wilson | 9 | 6 | 4 |
| Mike Pohio (appointed Oct 2016) | 5 | 3 | |

**Jeff Grant**
Chair



**Lesley Campbell**
Director

**Barry Harris**
Director

**Deborah Roche**
Director

**Fenton Wilson**
Director

**Mike Pohio**
Director

The Audit and Risk Committee comprised Ian Marshall (independent Chair), Barry Harris, Fenton Wilson, Deborah Roche, and Mike Pohio (from October 2016).

The Human Resources Committee comprised Lesley Campbell (Chair), Jeff Grant and Fenton Wilson.

The Chairman of the Board is an ex-officio member of all committees of the Board.

# REMUNERATION REPORT

## DIRECTORS' REMUNERATION

### DIRECTORS' FEES

These fees have been applied for the year from 1 July 2016 to 30 June 2017.

| Position | 2016/17 | 2015/16 |
|---|---|---|
| Chairman | $70,000 | $70,000 |
| Director | $35,000 | $35,000 |
| Committee Chair | $4,000 | $4,000 |

### REMUNERATION DETAILS OF DIRECTORS

Details of the total remuneration and the value of other benefits received by each OSPRI director for the 2016/2017 financial year are as follows. Directors' fees exclude GST where appropriate. In addition, Board members are entitled to be reimbursed for costs directly associated with carrying out their duties, including travel costs. Some Board members were remunerated for their time as members on the NAIT Data Access Panel (set up under the National Animal Identification and Tracing (Information System Access Panel) Regulations 2012).

| Director | Position | 2016/17 Fees | 2015/16 Fees |
|---|---|---|---|
| J Grant | Chairman | $70,000 | $70,000 |
| L Campbell[1] | Director | $45,000 | $42,231 |
| B Harris[2] | Director | $41,000 | $39,731 |
| F Wilson | Director | $35,000 | $23,333 |
| M Pohio[3] | Director | $26,952 | - |
| K Sutton[4] | Director | - | $43,731 |
| E Coats[5] | Director | - | $13,167 |
| **Total** | | **$217,952** | **$232,193** |

1 L Campbell is Chair of HR Committee and a member of the NAIT Data Access Panel
2 B Harris is a member of the NAIT Data Access Panel
3 M Pohio is a member of the NAIT Data Access Panel
4 K Sutton was Chair of the A&R Committee and a member of the NAIT Data Access Panel
5 E Coats was a member of the NAIT Data Access Panel

## EMPLOYEE REMUNERATION

The table below shows the number of OSPRI employees who received remuneration and other contracted benefits (including redundancy or termination payments) during FY2017 of at least $100,000.

The remuneration figures analysed include all monetary payments actually paid during the course of FY2017 whether in respect of FY2017 or other periods.

| Remuneration bands | # employees 2016/17 | # employees 2015/16 |
|---|---|---|
| $100,000 – $109,999 | 3 | 9 |
| $110,000 – $119,999 | 5 | 5 |
| $120,000 – $129,999 | 6 | 9 |
| $130,000 – $139,999 | 8 | 4 |
| $140,000 – $149,999 | 3 | 3 |
| $150,000 – $159,999 | 1 | 1 |
| $160,000 – $169,999 | 1 | 3 |
| $170,000 – $179,999 | 1 | 3 |
| $180,000 – $189,999 | 1 | |
| $190,000 – $199,999 | | |
| $200,000 – $209,999 | | |
| $210,000 – $219,999 | | |
| $220,000 – $229,999 | 1 | 1 |
| $230,000 – $239,999 | | 1 |
| $240,000 – $249,999 | | |
| $250,000 – $259,999 | 1 | |
| $260,000 – $269,999 | | |
| $270,000 – $279,999 | | |
| $290,000 – $299,999 | | 1 |
| $330,000 – $339,999 | | 2 |
| $370,000 – $379,999 | 1 | |
| **Total** | **32** | **42** |

## AUDITORS REMUNERATION

KPMG was appointed auditors of OSPRI group. The following amounts were paid to the auditors of OSPRI New Zealand and its subsidiaries during the year.

| Auditor | Work Undertaken | 2016/17 | 2015/16 |
|---|---|---|---|
| KPMG | For Audit Work | $35,000 | $35,000 |
| KPMG | For Other Work | $16,294 | $20,000 |

# STATUTORY DISCLOSURES

## DISCLOSURES OF INTERESTS BY DIRECTORS

The following are particulars of general disclosures of interest by directors holding office as at 30 June 2017, pursuant to section 140(2) of the Companies Act 1993. Each such director will be regarded as interested in all transactions between OSPRI and the disclosed entity.

| **J J Grant** | |
|---|---|
| AgResearch Ltd | Chairman |
| Copper Valley Holdings Limited | Director/Shareholder |
| DNG Holdings Limited | Director/Shareholder |
| Finance Now Limited | Director |
| Lakeland Adventures Wanaka Limited | Director/Shareholder |
| Mid Dome Wilding Pine Trust | Trustee |
| Milford Sound Tourism | Chairman |
| Mt Linton Station | Chairman |
| National Animal Identification and Tracing (NAIT) Limited | Chairman |
| New Zealand Young Farmers | Director |
| Predator Free NZ 2050 | Director |
| SBS Bank | Director |
| TBfree New Zealand Limited | Chairman |
| The Plantations | Partner/Owner |
| Tower Hill Trust | Partner/Trustee |
| Southern Institute of Technology | Board Member |

| **L A Campbell** | |
|---|---|
| Fisheries Advisory Group | Member |
| FishServe Innovations NZ Ltd | Director |
| National Animal Identification and Tracing (NAIT) Limited | Director |
| Seafood Innovations Ltd | Director |
| Seafood Standards Council | Chair |
| TBfree New Zealand Limited | Director |

| **B S Harris** | |
|---|---|
| Agricultural Service Ltd (ASL) | Chairman |
| DairyNZ Ltd | Director |
| Food Innovation Waikato | Chairman |
| National Animal Identification and Tracing (NAIT) Limited | Director |
| New Zealand Food Innovation Network | Director |
| Primary ITO | Director |
| RMF Holdings Limited | Director |
| TBfree New Zealand Limited | Director |
| Waikato River Authority | Member |
| Wintec | Chair |
| WEL Networks Ltd | Director |

| **D J Roche** | |
|---|---|
| Ministry for Primary Industries | DDG Policy and Trade |
| Finroc Limited | Director/Shareholder |
| National Animal Identification and Tracing (NAIT) Limited | Director |
| TBfree New Zealand Limited | Director |

| **F D Wilson** | |
|---|---|
| Hawke's Bay Regional Council | Councillor |
| Hawke's Bay Tourism Board | Director |
| National Animal Identification and Tracing (NAIT) Limited | Director |
| Oruru Land Company Ltd | Shareholder/Director |
| Predator Free New Zealand | Trustee |
| TBfree New Zealand Limited | Director |
| Wairoa Community Development Trust | Chairman |

| **M E Pohio** | |
|---|---|
| BNZ Partners, Waikato Region | Chairman |
| Development Auckland Limited | Director |
| Kiwirail Holdings Limited | Director |
| National Animal Identification and Tracing (NAIT) Limited | Director |
| National Institute of Water & Atmospheric Research Limited | Director |
| NIWA Vessel Management Limited | Director |
| Pohio Family Trust | Trustee |
| TBfree New Zealand Limited | Director |
| Te Atiawa Iwi Holdings Limited | Director |
| Te Atiawa (Taranaki) Holdings Limited | Director |

## INDEMNITY AND INSURANCE

In accordance with section 162 of the Companies Act 1993 and the constitution of the company, OSPRI has continued to indemnify and insure its directors and officers, including directors of subsidiary and associated companies, against potential liability or costs incurred in any proceeding, excluding actions for gross negligence, criminal liability, breach of fiduciary duty or breach of directors' duties.

## SUBSIDIARY COMPANY DIRECTORS

Currently all companies of the group share all directors in common. Directors' fees are paid by OSPRI and directors' costs allocated across the Group.

## SUBSIDIARIES

The Group has the following subsidiaries:

| Name | Holding | Principal Activity | Charity # |
|---|---|---|---|
| National Animal Identification and Tracing (NAIT) Ltd | 100% | Implementing and maintaining the animal identification and tracing scheme | CC47735 |
| TBfree New Zealand Ltd | 100% | Implementation of the National Pest Management Plan for Bovine Tuberculosis | CC49248 |

Neither subsidiary is equity accounted as they are charitable entities. OSPRI will not receive any future tangible financial benefit from either subsidiary nor will OSPRI be entitled to any distributions on winding up.

## STAKEHOLDERS' COUNCIL

The Stakeholder's Council performs the functions required of it by the constitution.

Its obligations are:

- Approve the appointment or election of directors
- Recommend annual board remuneration
- Convey the stakeholders view to the Board
- Review and comment on the groups long term strategies, the annual budget and business plan, the half year and annual reports
- Consult on new funding and business opportunities and other specific projects that warrant consideration of the Board
- Consider and consult on constitution changes.

The Stakeholders' Council representatives during 2016/17 were:

| Stakeholder | Representative |
|---|---|
| Beef + Lamb New Zealand | Andy Fox |
| Dairy Companies Association of New Zealand | Kevin Old |
| DairyNZ | Jim van der Poel (to March 2017) |
| | Ian Brown (from March 2017) |
| Deer Industry New Zealand | Dan Coup |
| Federated Farmers Dairy | Katie Milne |
| Federated Farmers Meat and Fibre | Anders Crofoot (Chairman) |
| Local Government New Zealand | Andrew Robb |
| Meat Industry Association of New Zealand | Tim Ritchie |
| Ministry for Primary Industries | Paul Dansted |
| New Zealand Deer Farmers' Association | Paddy Boyd |
| New Zealand Stock and Station Agents' Association | Terry Cairns (resigned April 2017) |

# SUMMARY CONSOLIDATED FINANCIAL STATEMENTS

*For the year ended 30 June 2017*

## CONSOLIDATED STATEMENT OF COMPREHENSIVE REVENUE AND EXPENSE

*For the year ended 30 June 2017*

| *In thousands of New Zealand Dollars* | 2017 | 2016 |
|---|---|---|
| **Revenue** | | |
| Revenue from non-exchange transactions | 73,181 | 88,437 |
| Revenue from exchange transactions | 7,508 | 440 |
| **Total revenue** | **80,689** | **88,877** |
| **Expenditure** | | |
| NAIT operations | 2,168 | 3,232 |
| Contact centre and compliance | 1,618 | 1,914 |
| Pest control and management | 36,507 | 49,920 |
| Disease management and testing | 13,577 | 14,219 |
| Research | 1,561 | 2,040 |
| Business service support | 11,654 | 9,110 |
| Battle for our Birds | 6,853 | - |
| **Total expenditure** | **73,938** | **80,435** |
| **Surplus before financing costs** | 6,751 | 8,442 |
| Interest income | 308 | 237 |
| **Surplus for the year** | **7,059** | **8,679** |
| | | |
| **Total comprehensive revenue and expense for the year** | **7,059** | **8,679** |

*These are summary Group financial statements. A copy of the full consolidated financial statements are available from OSPRI New Zealand Limited or on our website www.ospri.co.nz. The notes are an integral part of these financial statements.*

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

*For the year ended 30 June 2017*

| *In thousands of New Zealand Dollars* | **Contributed capital** | **Retained earnings** | **Reserves** | **Total equity** |
|---|---|---|---|---|
| **Balance as at 1 July 2015** | - | 5,999 | 12,604 | 18,603 |
| **Changes in equity for 2016** | | | | |
| Total comprehensive revenue and expense for the year | - | 310 | 8,369 | 8,679 |
| Transfers between reserves | - | (955) | 955 | - |
| **Balance as at 30 June 2016** | - | **5,354** | **21,928** | **27,282** |
| **Changes in equity for 2017** | | | | |
| Total comprehensive revenue and expense for the year | - | 7,059 | - | 7,059 |
| **Balance as at 30 June 2017** | **-** | **12,413** | **21,928** | **34,341** |

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## CONSOLIDATED STATEMENT OF FINANCIAL POSITION

*As at 30 June 2017*

| *In thousands of New Zealand Dollars* | 2017 | 2016 |
|---|---|---|
| **Assets** | | |
| Cash and cash equivalents | 31,633 | 21,260 |
| Receivables and other current assets | 4,775 | 5,875 |
| **Current assets** | 36,408 | 27,135 |
| Property, plant and equipment | 734 | 1,035 |
| Intangible assets | 5,581 | 8,982 |
| **Non-current assets** | **6,315** | **10,017** |
| **Total assets** | **42,723** | **37,152** |
| **Liabilities** | | |
| Payables from exchange transactions and other liabilities | 7,598 | 7,720 |
| Employee benefits liability | 764 | 813 |
| Revenue received in advance | 19 | 1,337 |
| **Current liabilities** | **8,381** | **9,870** |
| **Total liabilities** | **8,381** | **9,870** |
| **Equity** | | |
| Retained earnings | 12,414 | 5,354 |
| Reserves | 21,928 | 21,928 |
| **Total equity** | **34,342** | **27,282** |
| **Total equity and liabilities** | **42,723** | **37,152** |

## APPROVAL BY THE DIRECTORS

The Financial Statements were authorised on behalf of the OSPRI Board of Directors on 14 September 2017:

**J J Grant**
Chair of the Board

**M E Pohio**
Director

*These are summary Group financial statements. A copy of the full consolidated financial statements are available from OSPRI New Zealand Limited or on our website www.ospri.co.nz. The notes are an integral part of these financial statements.*

# CONSOLIDATED STATEMENT OF CASH FLOWS

*For the year ended 30 June 2017*

| *In thousands of New Zealand Dollars* | 2017 | 2016 |
|---|---|---|
| **Cash flows from operating activities** | | |
| Revenue from operations | 80,203 | 89,871 |
| Cash paid to employees and suppliers | (70,115) | (79,756) |
| **Net cash from/(used in) operating activities** | **10,088** | **10,115** |
| **Cash flows from investing activities** | | |
| Interest income | 308 | 237 |
| Purchase of property, plant and equipment | (23) | (39) |
| Purchase of intangible assets | - | (1,886) |
| **Net cash from/(used in) investing activities** | **285** | **(1,688)** |
| **Net increase in cash and cash equivalents** | 10,373 | 8,427 |
| Cash and cash equivalents at 1 July | 21,260 | 12,833 |
| **Cash and cash equivalents at 30 June** | **31,633** | **21,260** |

*These are summary Group financial statements. A copy of the full consolidated financial statements are available from OSPRI New Zealand Limited or on our website www.ospri.co.nz. The notes are an integral part of these financial statements.*

# NOTES TO THE FINANCIAL STATEMENTS

## NOTE 1: BASIS OF PREPARATION – SUMMARY STATEMENTS

The summary Group financial statements have been prepared in accordance with, and comply with, New Zealand Generally Accepted Accounting practice ('NZ GAAP') and NZFRS-43 Summary Financial Statements.

## NOTE 2: BASIS OF PREPARATION – FULL STATEMENTS

This summary consolidated financial report does not provide the detail included in the full financial report, which has been prepared in accordance with NZ GAAP and complies with Tier 1 PBE Accounting Standards (Not-For-Profit). The specific disclosures included in the summary consolidated financial report have been extracted from the audited financial statements dated 14 September 2017. The audit opinion expressed was unqualified.

## NOTE 3: ANNUAL REVIEW

The full annual review is available on our website – **www.ospri.co.nz**

## NOTE 4: SEGMENT INFORMATION

The OSPRI Group is organised and reports to its directors on the basis of three functional areas: the Parent, being OSPRI New Zealand Limited ('OSPRI') and both subsidiaries, National Identification and Tracing Limited ('NAIT') and TBFree New Zealand Limited ('TBFree').

Inter-segment allocations - expenses incurred by OSPRI on behalf of its subsidiaries are allocated across the two programmes on a proportional basis. These transfers are accounted for at cost and are eliminated on consolidation. There was no charge for these services (2016: $1 million).

### OPERATING STATEMENT SEGMENT INFORMATION

**2017**

| *In thousands of New Zealand Dollars* | OSPRI | NAIT | TBfree | Elimination of inter-segment transactions | Group |
|---|---|---|---|---|---|
| **Total operating income** | 7,135 | 7,617 | 65,937 | - | 80,689 |
| **Total operating expenditure** | 6,853 | 4,160 | 62,925 | - | 73,938 |
| **Net operating surplus/(deficit) for the year** | 282 | 3,457 | 3,012 | - | 6,751 |
| **Interest income** | - | 111 | 197 | - | 308 |
| **Total comprehensive revenue and expense for the year** | 282 | 3,568 | 3,209 | - | 7,059 |

## OPERATING STATEMENT SEGMENT INFORMATION

### 2016

| *In thousands of New Zealand Dollars* | OSPRI | NAIT | TBfree | Elimination of inter-segment transactions | Group |
|---|---|---|---|---|---|
| **Total operating income** | 1,440 | 7,819 | 80,618 | (1,000) | 88,877 |
| **Total operating expenditure** | 986 | 8,053 | 72,396 | (1,000) | 80,435 |
| **Surplus/(deficit) before financing costs** | 454 | (234) | 8,222 | - | 8,442 |
| **Interest income** | 2 | 89 | 146 | - | 237 |
| **Total comprehensive revenue and expense for the year** | 456 | (145) | 8,368 | - | 8,679 |

## BALANCE SHEET SEGMENT INFORMATION

### 2017

| *In thousands of New Zealand Dollars* | OSPRI | NAIT | TBfree | Elimination of inter-segment transactions | Group |
|---|---|---|---|---|---|
| **Total assets** | 2,788 | 15,251 | 28,919 | (4,235) | 42,723 |
| **Total liabilities** | 2,017 | 1,977 | 8,622 | (4,235) | 8,381 |
| **Total equity** | 771 | 13,274 | 20,297 | - | 34,342 |

### 2016

| *In thousands of New Zealand Dollars* | OSPRI | NAIT | TBfree | Elimination of inter-segment transactions | Group |
|---|---|---|---|---|---|
| **Total assets** | 1,968 | 13,682 | 27,803 | (6,301) | 37,152 |
| **Total liabilities** | 1,479 | 3,976 | 10,716 | (6,301) | 9,870 |
| **Total equity** | 489 | 9,706 | 17,087 | - | 27,282 |

KPMG

# Independent Auditor's Report

To the shareholders of OSPRI New Zealand Limited

**Report on the summary consolidated financial statements**

## Opinion

In our opinion, the accompanying summary consolidated financial statements of OSPRI New Zealand Limited (the company) and its subsidiaries (the group) on pages 2 to 7:

i. Has been correctly derived from the audited group consolidated financial statements for the year ended on that date; and

ii. Is a fair summary of the group consolidated financial statements, in accordance with PBE FRS 43 Summary Financial Statements.

The accompanying summary consolidated financial statements comprises:

— the summary consolidated statement of financial position as at 30 June 2017;

— the summary consolidated statements of revenue and expenses, changes in equity and cash flows for the year then ended; and

— notes, including a summary of significant accounting policies and other explanatory information.

## Basis for opinion

We conducted our audit in accordance with International Standard on Auditing (New Zealand) (ISA (NZ)) 810 (Revised), *Engagements to Report on Summary Financial Statements*.

Our firm has also provided other services to the group in relation to risk management workshops and a review of the new grant funding agreement. These matters have not impaired our independence as auditor of the group. The firm has no other relationship with, or interest in, the group.

## Use of this Independent Auditor's Report

This report is made solely to the shareholders as a body. Our audit work has been undertaken so that we might state to the shareholders those matters we are required to state to them in the Independent Auditor's Report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the shareholders as a body for our audit work, this report, or any of the opinions we have formed.

## Responsibilities of the Directors for the summary Financial Statements

The Directors, on behalf of the group, are responsible for:

— the preparation and fair presentation of the summary financial statements in accordance with PBE FRS 43 Summary Financial Statements; and

— implementing necessary internal control to enable the preparation of a summary set of financial statements that is correctly derived from the audited financial statements.

KPMG

## Auditor's Responsibilities for the summary Financial Statements

Our responsibility is to express an opinion on whether the summary financial statements are consistent, in all material respects, with (or are a fair summary of) the audited financial statements based on our procedures, which were conducted in accordance with International Standard on Auditing (New Zealand) (ISA (NZ)) 810 (Revised), *Engagements to Report on Summary Financial Statements*.

We expressed an unmodified audit opinion on the financial statements in our audit report dated 14 September 2017.

The summary financial statements do not contain all the disclosures required for a full set of financial statements under generally accepted accounting practice in New Zealand. Reading the summary financial statements, therefore, is not a substitute for reading the audited financial statements of the group.

KPMG

KPMG
Wellington

14 September 2017

# DIRECTOR PROFILES

*As at 30 June 2017*

## JEFF GRANT

Jeff farms sheep, beef and deer at Balfour in Southland and has extensive agri-business and rural sector leadership experience. Jeff is also chairman of Milford Sound Tourism, Mount Linton Station, and AgResearch. He is a director of Predator Free New Zealand 2050, SBS Bank, Finance Now, New Zealand Young Farmers, and Southern Institute of Technology; and a former chairman of the New Zealand Meat Board, Meat and Wool New Zealand, and the Primary Industry Council. He has also served as a Member of Parliament.

## LESLEY CAMPBELL

Lesley has more than 20 years' experience in the primary production sector. She brings vast experience in working with Government agencies and ministers, and an ability to lead change and manage diverse and complex industry stakeholder interests. Lesley is currently the Chief Executive of Commercial Fisheries Services Limited (FishServe) and is also a director of Seafood Innovations Limited, FINNZ, a subsidiary consulting company of FishServe, and Chair of the Seafood Standards Council. Lesley's areas of expertise include strategic and business planning, budgeting, cost recovery processes, policy development and preparation of legislation, and converting legislation into operational systems.

## BARRY HARRIS

Barry is a company director with extensive governance and executive experience. Barry has held a number of chief executive roles, including with Environment Waikato, Greater Wellington Regional Council and Hamilton City Council. He was also a senior executive with Fonterra for five years. Barry is currently chairman of Agricultural Service Limited, and Wintec; and director of DairyNZ, NZ Food Innovation Network, Primary ITO and WEL Networks. Previous boards have included CentrePort; RD1; International Nutritionals; Hamilton Riverside Hotels; and Local Authority Shared Services. Barry has a Master of Agricultural Science (Honours) and lives in Hamilton.

## DEBORAH ROCHE

Deborah joined the Ministry for Primary Industries (MPI) as the Deputy Director-General Policy and Trade in February 2013. Before joining MPI, Deborah was seconded to the Department of the Prime Minister and Cabinet for 18 months, where she was the advisor on State Services, Better Public Services, defence, sport and recreation, and a member of the Officials' Committee on Economic Growth and Infrastructure. Prior to this, Deborah spent over 15 years in various roles in health. She holds an MSc (London School of Economics), MAppSc (University of South Australia), CertTT (Waikato Polytechnic), and a DipPhys (Auckland Institute of Technology).

## FENTON WILSON

Fenton is a Councillor of Hawke's Bay Regional Council, and has represented the Wairoa constituency since 2009. Born in Waipukurau and educated in Frasertown, Wairoa and Hastings, Fenton has worked most of his life in the Wairoa district. He farms a 235ha sheep and beef property with his wife Sue and is Chairman of the Wairoa Community Development Trust, a trustee of Predator Free New Zealand and a director of Hawke's Bay Tourism.

## MIKE POHIO

Mike is a Hamilton-based director. Mike currently holds directorships on the boards of Panuku Development Auckland, Kiwirail, NIWA and Te Atiawa Iwi Holdings. He is also Chairman of BNZ Partners, Waikato Region. His executive career includes CEO of Tainui Group Holdings for eight years and senior executive roles for companies including Port of Tauranga, Fonterra, NZ Dairy Group and Elders Pastoral. His governance background includes six years as a shareholder and director of NZL Group Ltd, seven years on the Transpower Board and a Ministerial appointment to the University of Waikato Council. Mike holds an MBA from IMD, Lausanne and an FCA from the Chartered Accountants Australia & New Zealand.

# OSPRI LEADERSHIP TEAM

## MICHELLE EDGE

Chief Executive

## STU HUTCHINGS

Group Manager, Programme Design and Partnerships

## MATTHEW HALL

Chief Operating Officer

## KEVIN CREWS

Head of Programme (Disease Management)

## BARIS KAVALALI

Head of Programme (Traceability)

## SUZANNE RIDDLE

Head of HR and Administration

## GREG GRANT

Head of Finance

## ORASS LATIF

Head of ICT Services