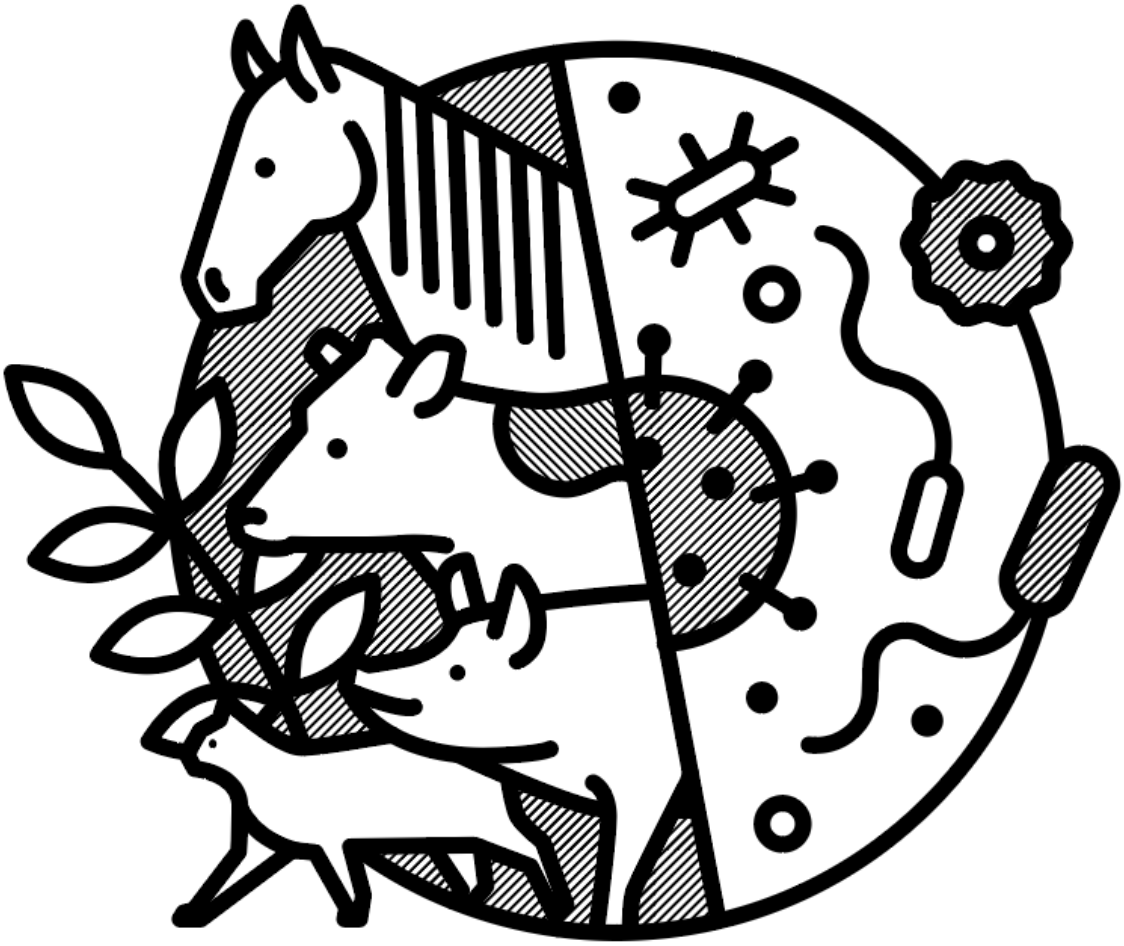
Ministry for Primary Industries
Manatū Ahu Matua

New Zealand Animal and Plant Sectors' Antimicrobial Resistance Implementation Plan

2024-2028



New Zealand Food Safety
Haumaru Kai Aotearoa

Te Kāwanatanga o Aotearoa
New Zealand Government

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Introduction

Imagine a world where common infections and diseases in ourselves, our animals, and our plants were no longer able to be treated. It could mean that common, life-saving surgical procedures and chemotherapies in humans and animals would no longer be safe to perform. Overuse and misuse of antimicrobials can accelerate the emergence of resistant micro-organisms which don't respond to antimicrobial treatment. Thus, preservation of our current therapeutic options remains vital. There are solutions available to help reduce the emergence of antimicrobial resistance (AMR), these are included in the objectives and activities outlined in this document.

Antimicrobials are essential to the health of humans, animals, and plants. The incidence of AMR is increasing around the world, and there are few new antimicrobials, especially antibiotics, being developed. The World Health Organization has identified AMR as an ever-increasing urgent global health risk currently resulting in approximately 1.27 million human deaths annually (Lancet, 2019).

Antimicrobial stewardship (AMS) - the development, promotion, and implementation of activities to ensure the responsible use of antibiotics, needs to be practiced across the human, animal, and plant health sectors, with care taken to protect the environment from contamination with antimicrobials and resistant micro-organisms. Everyone needs to play a role in fighting this serious threat so that almost a century of progress in human and animal health care is not lost. Antimicrobial stewardship will help preserve the efficacy of these drugs now and into the future.

In 2017, New Zealand's Ministry for Primary Industries (MPI) and Ministry of Health (MoH) published a 5-year New Zealand Antimicrobial Resistance Action Plan. A second national action plan is being developed, continuing the objectives set out in the original New Zealand Antimicrobial Resistance Action Plan

New Zealand's Animal and Plant Sectors' Antimicrobial Resistance Implementation Plan aligns with the 5 objectives in the second New Zealand Antimicrobial Resistance Action Plan, providing the animal and plant health sectors' priority activities, desired outcomes, and measurable targets within relevant timeframes.

Fig 1. The 5 objectives of the New Zealand Antimicrobial Resistance Action Plan

MPI will report activities undertaken in the 'New Zealand's Animal and Plant Sectors' Antimicrobial Resistance Implementation Plan' annually. This will allow progress to be monitored and any barriers to achieving our goals to be identified and responded to as they arise. Relevant sectors are encouraged to report their activities undertaken to mitigate AMR risks. Implementing the activities in the plan will rely on availability of resources, capacity, and willingness of industry partners.

While AMR refers to antibacterial, antiviral, antifungal, and antiparasitic medicines, this implementation plan will focus on resistance to antibiotics.

This is a living document and may change as circumstances change or as new information becomes available.

Background

In 2022, a dedicated AMR Team was established within MPI to ensure prioritisation of the activities set out in New Zealand's AMR National Action Plan.

The vision of MPI's AMR Team is that New Zealanders understand the importance of managing antimicrobials as valuable resources that effectively treat infections in humans, animals, and plants. This will be achieved through the following goals:

Increase awareness that antimicrobial use is part of a complex One Health ecosystem that relies on sustainable and responsible use in every sector.

Strengthen the knowledge and understanding of AMR in animal and plant health in Aotearoa New Zealand through governance, surveillance, auditing, evidence-based education, reporting and technical expertise.

Optimise the use of antimicrobials to maintain their efficacy in plants and animals, thereby maintaining trade opportunities and ensuring positive health outcomes for humans, animals and plants in the future.

This AMR implementation plan aligns with the goals of MPI's AMR Team. Each objective aligns with the corresponding objective number from the New Zealand Antimicrobial Resistance Action Plan, e.g., Table 1 "Activities supporting objective 1" links to Objective 1 of the New Zealand Antimicrobial Resistance Action Plan.

The animal sectors included in the implementation plan comprise food and fibre-producing animals, companion animals (including performance animals), zoo animals, laboratory animals and wildlife treated with antibiotics.

The plant sectors covered by this implementation plan include horticultural production of crops for human or animal consumption.

The activities identified in this document are intended to be completed over a 5-year time frame. After this period, a review will be conducted to determine the effectiveness of the activities and will assist in the development of the next 5-year plan.

This document will underpin the second New Zealand Antimicrobial Resistance Action Plan and will provide more detail on the goals and deliverables. It will allow transparent and accurate reporting of activities in the animal and plant sectors. The second New Zealand Antimicrobial Resistance Action Plan will contain higher level goals covering human health, the environment, and animal and plant health.

Objective 1

Awareness and understanding – Improve awareness and understanding of antimicrobial resistance through effective communication, education, and training.

Increasing the understanding of the drivers behind antibiotic use, its impacts, and ways of combatting antimicrobial resistance are all essential to change behaviour. Improved awareness of AMR will complement all objectives in this implementation plan such as supporting improved health literacy, informed decision-making, and judicious antimicrobial prescribing. Findings from the audit and surveillance programmes undertaken as recommendations within the implementation plan, will be used to help inform education and awareness needs.

Activities listed to support Objective 1 contribute to achieving all three of the AMR team goals by:

- Strengthening the knowledge and understanding of AMR in agriculture and horticulture in Aotearoa New Zealand through surveillance, auditing, evidence-based education, reporting and technical expertise.
- Increasing awareness that antimicrobial use is part of a complex One Health ecosystem that relies on sustainable and responsible use in every sector.
- Optimising the use of antimicrobials to maintain their efficacy in plants and animals, thereby maintaining trade opportunities and ensuring positive health outcomes for humans, animals and plants in the future.

Table 1. Activities supporting Objective 1

Activity	Expected Outcomes	Organisation responsible	Deliverables	Timeframe
1. Develop a National AMR Communications Plan for animal and plant sectors.	Communications will be consistent and planned across all sectors giving antimicrobial users and suppliers a better	**Facilitator-** MPI	➢ An AMR communications plan is developed and implemented with all relevant stakeholders.	➢ Annually

Expand communication to new stakeholders, (including expanding the World AMR Awareness Week (WAAW) audience) and develop new communication strategies. Include findings from monitoring, surveillance, antibiotic sales reports, and audit programmes to support the maintenance of best practice AMS.	understanding of AMR, appropriate AMS, and infection prevention and control strategies.	**Contributors-** all AMR Coordination Group (AMRCG) members.	➢ Communications plan reviewed and updated at AMRCG meetings.	➢ Three times annually
			➢ AMRCG contribute to an annual report on activities completed.	➢ Annually
			➢ Communication strategies are reviewed, and new strategies included where applicable.	➢ June 2025, then annually
			➢ World Awareness Week activities are promoted to new and existing audiences.	➢ November annually
2. Engage with animal and plant health stakeholder forums (private and public) to enable stakeholders to exchange information on AMR with consumers.	Effective exchange of AMR activities, ideas and resources between animal and plant health stakeholders, to aid dissemination of information to manufacturers, sellers, prescribers, and users of antibiotics for plant and animal health.	**Facilitator-** MPI **Contributors-** all AMRCG members.	➢ AMRCG meetings.	➢ Three times annually
			➢ MPI, New Zealand Veterinary Association (NZVA) and Veterinary Council of New Zealand (VCNZ) to meet regularly.	➢ At least quarterly
			➢ Engage with horticulture industry to increase AMR awareness.	➢ Annually
3. Create and update resources on antimicrobial use (AMU) and AMR for plant and animal sectors.	Users of antimicrobials have reliable and up-to-date resources to inform appropriate antimicrobial use.	**Facilitator-** MPI **Contributors-** all AMRCG members, veterinary and plant health educators.	➢ MPI and Industry groups develop new resources and make these available through appropriate channels.	➢ As required
			➢ MPI and industry websites are reviewed for appropriate information on AMR for stakeholders and consumers.	➢ Annually

4. Engage young people in AMR and infectious disease conversations at all school levels. Support teachers to access resources on AMR for teaching.	Children and young people will understand AMR and how appropriate use of antimicrobials in animals and plants influences One Health.	**Facilitator-** MPI and MoH **Contributors-** Science Learning Hub, AMRCG	➢ Resources on science learning hub are reviewed and updated if needed.	➢ Annually
			➢ New resources are added when available.	➢ As required
			➢ Promote WAAW to school teachers.	➢ Annually
5. Tertiary level training organisations and continuing professional development (CPD) providers review and update animal and plant microbiology and pharmacology content to ensure appropriate AMR, AMS and infection, prevention, and control content is included.	Awareness of AMR and ways to reduce AMR risks are increased through appropriate training for animal and plant health students and professionals.	**Facilitator-** MPI, VCNZ **Contributors-** NZVA, New Zealand Veterinary Nursing Association, veterinary school, universities, polytechnics including horticultural courses	➢ Massey University veterinary curriculum and course AMR content reviewed and updated as needed.	➢ 2024 review 3rd year course content ➢ 2025 review 4th year course content ➢ 2026 review 5th year course content
			➢ AMR course content and resources are discussed with CPD providers, veterinary, animal and plant health training providers	➢ Annually

Objective 2

Surveillance and research – Strengthen the knowledge and evidence base about antimicrobial resistance through surveillance and research.

Nationally coordinated surveillance of antimicrobial resistance and antimicrobial sales and use, in animals and plants is important to:

- understand the magnitude, distribution and impact of multi-drug resistant micro-organisms and antimicrobial use;
- identify emerging resistance and trends; and
- understand links between antimicrobial use and antimicrobial resistance.

Currently, our national AMR surveillance is stronger in the animal sector than it is in the horticulture sector. Therefore this 5-year implementation plan builds on the existing animal surveillance programmes as well as outlines activities that will incorporate various aspects of plant surveillance into the national AMR surveillance programme.

AMR Surveillance is fundamental to all AMR stewardship, IPC and awareness and training programmes. The following activities support our goal to 'Strengthen the knowledge and understanding of AMR in agriculture and horticulture in Aotearoa New Zealand through governance, surveillance, auditing, evidence-based education, reporting and technical expertise.'

Table 2. Activities supporting Objective 2

Activity	Expected Outcomes	Organisation responsible	Deliverables	Timeframe
1. Create and maintain lists of priority organisms, antimicrobials, and AMR genes for surveillance purposes, in animals and plants.	Surveillance programmes are fit for purpose, current, have a New Zealand context, and are harmonised with global	**Facilitator-** MPI **Contributors-** AMR surveillance contractors	➢ Surveillance priority lists for antimicrobials and organisms reviewed to include international and New Zealand contexts.	➢ Annually
			➢ Plant surveillance priority list for antimicrobials and organisms is created.	➢ By June 2025

	surveillance programmes.		➢ A surveillance priority list for AMR genes in animals and plants created.	➢ By June 2026
			➢ Develop guidelines for the addition and removal of antimicrobials, organisms, and AMR genes from their respective lists in place.	➢ By June 2026
2. Connect the national surveillance systems to global surveillance efforts such as the World Organisation for Animal Health (WOAH) and the Food and Agriculture Organization of the United Nations (FAO), the World Health Organization (WHO) and other international surveillance programmes.	Surveillance programmes are designed and conducted to international standards.	**Facilitator-** MPI **Contributors-** MPI	➢ Participate in Animal Health QUADS Alliance (New Zealand, Australia, Canada, UK, United States) meetings.	➢ At least quarterly
			➢ Antibiotic sales data uploaded to ANIMUSE	➢ Annually
			➢ Animal and plant data provided to MoH for the completion of the Tripartite AMR Country Self-Assessment Survey (TrACSS).	➢ Annually
			➢ CODEX AMR text CXG 94-2021 and other international guidance is monitored for updates.	➢ Annually
			➢ International surveillance organisations are monitored for surveillance data requests.	➢ Quarterly
3.Collect data and report on yearly sales of antibiotics used in animal and plant health.	Manufacturers, suppliers, prescribers, and users, are provided with antibiotic sales data to inform sales trends, approximate use, and to promote AMS.	**Facilitator-** MPI **Contributors-** Registrants	➢ Publish sales report of antibiotics used in animals and plants.	➢ Annually
			➢ Report antimicrobial use calculations consistent with the World Organisation for Animal Health (WOAH) guidelines.	➢ Annually
4. Maintain a regular audit programme for monitoring regulatory control.	AMS and surveillance activities are better understood nationally	**Facilitator-** MPI **Contributors-** MPI	➢ Produce one Location Finding per individual audit.	➢ Within the agreed timeframe.
			➢ Produce final report for initiator.	➢ As per annual audit schedule

			➢ Trends discussed at an AMRCG and relevant sector meetings.	➢ Annually (minimum)
5. Review current methodologies for genetic analysis in AMR surveillance under a national and international context.	New Zealand AMR surveillance programmes in animals and plants are adapting to advancements in surveillance technologies.	**Facilitator-** MPI **Contributors-** AMR surveillance contractors	➢ Provide a report on the review of methodologies for genetic analyses associated with AMR surveillance (2024).	➢ By August 2024
			➢ Recommendations for ongoing genetic analyses in the New Zealand context are incorporated into AMR surveillance programme.	➢ By August 2024
6. Establish/Maintain, ongoing AMR surveillance programmes in animals and plants.	Ongoing AMR surveillance programmes in animals and plants within New Zealand are conducted in harmony with international surveillance programmes and also under a New Zealand context.	**Facilitator-** MPI **Contributors-** AMR surveillance contractors, veterinary diagnostic labs, plant diagnostic labs and or horticulture industry	➢ Review ongoing AMR surveillance contract deliverables to ensure surveillance outcomes are being met.	➢ Annually
			➢ Document objectives for AMR surveillance in slaughtered and live animals, and plants in New Zealand	➢ By August 2024
			➢ Develop an AMR Surveillance Reporting Plan for AMR surveillance in animals and incorporate plant surveillance when it is finalised.	➢ By August 2024
			➢ Report AMR surveillance findings regularly according to the AMR Surveillance Reporting Plan	➢ As per reporting plan
			➢ Investigate and report options to incorporate AMR surveillance data from plants into ongoing AMR surveillance.	➢ By June 2027
			➢ Implement a plant AMR surveillance programme based on investigative report findings.	➢ By June 2028
7.Develop and implement a system to collect	Manufacturers, suppliers, prescribers,	**Facilitator-** MPI	➢ Develop a system to collect antimicrobial use data.	➢ By December 2025

antimicrobial use data in animals and plants	and users are provided with antibiotic use data to inform trends and provide guidance to improve AMS.	**Contributors-** veterinary profession, and horticultural sector	➢ Undertake trial(s) and begin implementation of a use data collection system.	➢ By December 2025
			➢ Publish reports of how antibiotics are used in animals and plants. Initial reporting from the use data trial followed by reporting from the use data system.	➢ Annually from 2025
8. Participate in a feasibility study on how to integrate harmonised human, animal and plant health surveillance data, with respect to methodologies and formats, in preparation for establishing a national centralised platform. Implement findings from feasibility study that are relevant to animal and plant AMR surveillance.	AMR surveillance for human, animal and plant health within New Zealand has adopted a One Health approach.	**Facilitator-** MPI **Contributors-** MoH, MfE, AMRCG	➢ Contribute to an AMR surveillance integration feasibility study	➢ By June 2027
			➢ Feasibility study findings for human, animal and plant AMR surveillance integration reviewed and options for changes to animal and plant surveillance programmes reviewed.	➢ By June 2028
9. Maintain appropriate international standards for laboratory testing methods for antimicrobial susceptibility of pathogens isolated from animals and plants.	AMR data is robust and produced to internationally recognised standards for AMR surveillance	**Facilitator-** MPI **Contributors-** New Zealand National Antimicrobial Susceptibility Testing Committee (NZNAC), veterinary diagnostic laboratories, plant testing laboratories, ESR	➢ MPI to support the NZNAC to include antimicrobial susceptibility testing for animal health laboratories and representatives from the veterinary community by providing contact details for each.	➢ By August 2024
			➢ MPI to ensure regular review of technologies and methodologies via the AMR surveillance programmes contracts	➢ At contract renewals for surveillance programmes
10. Support the retention and building of capacity in animal health laboratories to ensure standard laboratory techniques and	Surveillance programmes are fit-for-purpose and support global harmonisation	**Facilitator-** MPI **Contributors-** AMR surveillance contractors	➢ Surveillance contracts are ongoing and fit-for-purpose. Contract meetings are held to review resource and funding along with contracted deliverables.	➢ Annually

analysis of key organisms and susceptibility testing is according to surveillance objectives.	of surveillance reporting			
11. Conduct a gap analysis to determine areas where new knowledge or activity would enhance the national AMR surveillance programmes. Promote/ conduct research in areas identified where solutions are not currently available.	Surveillance programmes undergo continual improvement	**Facilitator-** MPI **Contributors-** MPI, AMRCG, AMRGG, MfE, MoH, MPI's AMR surveillance contractors	➢ A gap analysis is conducted and gaps in knowledge/activity identified. ➢ Areas where gaps have been identified are prioritised ➢ Foster or fund research into areas identified and prioritised in the gap analysis	➢ By Dec 2025 ➢ By June 2026 ➢ Ongoing from July 2026

Objective 3

Infection prevention and control – Improve infection prevention and control measures across human health, animal health, and in agricultural settings to prevent infection and transmission of micro-organisms.

Preventing infection and controlling transmission of micro-organisms are essential for effectively responding to antimicrobial resistance. Reducing the need for antimicrobials reduces the opportunity for micro-organisms to develop resistance and share resistance genes.

Evidence-based infection prevention and control (IPC) strategies and vaccination programmes are required across all sectors and settings. In veterinary practice, IPC and detection of disease are essential for maintaining biosecurity, the health of farmed livestock and companion animals, and the health of people by preventing zoonotic transmission. This is also true for horticulture, where prevention, appropriate biosecurity practices, and early detection of disease can reduce the need for antimicrobial use.

Objective 3 activities to improve infection prevention and control assist with meeting the goal of optimising the use of antimicrobials to maintain their efficacy in plants and animals, thereby maintaining trade opportunities and ensuring positive health outcomes for humans, animals and plants in the future.

Table 3. Activities supporting Objective 3

Activity	Expected outcomes	Organisation responsible	Deliverables	Timeframe
1. Develop an overarching national policy setting expectations for animal health and horticultural industries to develop best-practice IPC and integrated pest management guidelines, in-line with international best practice.	Animal health and horticultural industries will have clear understanding of expectations for developing IPC best practice guidelines.	**Facilitator-** MPI **Contributors-** all AMRCG members	➢ National policy on IPC guidelines developed for animal and plant health, then reviewed annually.	➢ June 2025, then annual review.
2. Support animal health sectors to review animal husbandry practices (including international review) to ensure IPC guidelines and	Animal health providers and animal carers will have access to best practice guidelines for IPC and	**Facilitator-** AMRCG **Contributors-** All animal health	➢ Sector guidelines are developed or reviewed and updated by relevant sector groups, with updates reported regularly at AMRCG meetings.	➢ Three times annually

practices are up to date, and to investigate alternative preventative strategies and treatment, such as herd health programmes and vaccination.	alternative treatment strategies, to help reduce reliance on antimicrobials and help ensure antimicrobials are used only when needed.	members of AMRCG members	➢ International review of IPC best practices completed by each sector with vulnerabilities and opportunities identified and reported to AMRCG meetings regularly.	➢ Annually
			➢ Alternative disease prevention strategies are investigated and communicated regularly to AMRCG meetings.	➢ Annually
			➢ Animal health sectors review barriers to vaccination and report to AMRCG meetings.	➢ Annually
			➢ Education resources for animal and plant health professionals and producers about alternative treatments are developed by relevant sector groups and shared to stakeholders. An update of education activities will be reported to AMRCG regularly.	➢ Annually
3. Support horticultural sectors to review practices (including international review) to ensure integrated pest management strategies guidelines and practices are up to date, and to investigate alternative preventative strategies and management, such as developing resistant variants and non-antibiotic controls.	Horticultural sectors will have clear understanding of expectations for developing IPC best practice guidelines.	**Facilitator-** MPI **Contributors-** all plant health AMRCG members	➢ Sector guidelines are developed or reviewed and updated by relevant sector groups, with updates reported regularly at AMRCG meetings.	➢ Three times annually
			➢ International review of integrated pest management strategy best practices completed by each sector with vulnerabilities and opportunities identified and reported to AMRCG meetings regularly.	➢ Annually
			➢ Alternative prevention strategies are investigated and communicated regularly to AMRCG meetings.	➢ Annually

			➢ Education resources for plant health professionals and producers about alternative treatments are developed by relevant sector groups and shared to stakeholders. An update of education activities will be reported to AMRCG regularly.	➢ Annually
4. Develop national guidance for managing detections of multi-drug resistant organisms in animals and plants.	Animal health professionals, food processors, and animal carers and the horticultural sector will have guidelines available in the event of a multi-drug resistant organism detection.	**Facilitator-** MPI **Contributors-** all AMRCG members	➢ General guidance for animal and plant sectors developed and published. ➢ To be done in accordance with the AMR food safety risk analysis when completed.	➢ By December 2026
5. Foster the development of new therapeutics to reduce the need for antimicrobial use in animal health.	Facilitate connections between developers and funders.	**Facilitator-** MBIE **Contributors-** MPI, APHANZ, AMRCG	➢ Opportunities to support and help facilitate connections between developers and funders of new therapeutics identified and discussed at AMRCG.	➢ As needed

Objective 4

Antimicrobial stewardship – Maintain and enhance, regulatory controls and professional oversight of antimicrobials to ensure appropriate prescribing, dispensing, use, and disposal to preserve antimicrobials for future use.

Antimicrobial stewardship (AMS) involves the prudent, sustainable, and equitable use of antimicrobials by ensuring they are only used when needed to treat infections. Prudent use, along with the use of practices to prevent infection, will help to conserve the drug's effectiveness and is recognised as a core management tool to slow the development of antimicrobial resistant organisms. AMS programmes also minimise adverse events that are associated with antimicrobial use, including the emergence of AMR, adverse drug reactions, and disruption of the normal microbiome.

AMS programmes covering antibiotic use in animals and plants will maintain trade opportunities and could have significant public health value in preventing the emergence of resistant strains and their spread between humans, animals, plants, and the environment. MPI provides regulatory oversight of antimicrobials used in animal and plant health settings. A qualitative risk assessment approach is used to evaluate antimicrobial resistance as part of the approval process for antimicrobials.

The following activities are in place to support the goal: 'Optimise the use of antimicrobials to maintain their efficacy in plants and animals, thereby maintaining trade opportunities and ensuring positive health outcomes for humans, animals and plants in the future.'

Table 4. Activities supporting Objective 4

Activity	Expected outcomes	Organisation responsible	Deliverables	Timeframe
1. Maintain the regulatory controls and guidance for antimicrobials that sets expectations from the regulator and encourages the animal and plant health sectors to update specific prudent use guidance documents.	Manufacturers, suppliers, prescribers, and users of antimicrobials understand the regulators (MPI & VCNZ) expectations around prudent use.	**Facilitator-** MPI and VCNZ **Contributors-** NZVA, horticultural sectors.	➢ Ensure guidance on information required to register antimicrobials is appropriate for determining the level of regulatory oversight needed.	➢ By Dec 2026
			➢ VCNZ Code of Professional Conduct for Veterinarians antibiotic and restricted veterinary medicine authorisation content is reviewed annually.	➢ Annually

			➢ Review and update the Prudent Use of Antimicrobials on Animal and Plants MPI Directive	➢ Biennially
			➢ Update the Requirements for Authorising Veterinarians Notice to include appropriate justification with antimicrobial authorisations, as well as treatment duration, and timely case review	➢ By Dec 2025
2. Reassess all antibiotics used in animals and plants, according to their importance classification, ensuring controls and labelling align with AMS principles.	Manufacturers, suppliers, prescribers, and users of antibiotics have information on antibiotic product labels and conditions of registration to ensure appropriate AMS.	**Facilitator-** MPI **Contributors-** registrants of trade name products that contain antibiotics as active ingredients.	➢ Classification and review of all antibiotic classes	➢ By December 2024
			➢ Reassessment of tranche 2 - sub-tranches 1-4 ➢ Sub-tranches 5-6	➢ By December 2025 ➢ By 2025/2026
			➢ Reassessment of tranche 3 and 4 antibiotics	➢ To be confirmed
3. Develop a regular monitoring programme for veterinary authorisation of antibiotics and support the veterinary profession to develop mechanisms that provide authorisation benchmarking and feedback on both quality and quantity of antimicrobial authorisations.	Regulators will be informed of appropriateness of regulatory controls and actual use of veterinary antimicrobials. This information can be used to direct AMR education and surveillance.	**Facilitator-** MPI and VCNZ **Contributors-** AMRCG	➢ Investigate who is best suited to run a programme for monitoring authorisation decisions.	➢ By Dec 2025
			➢ Agreement between regulators (MPI and VCNZ) to establish and maintain a monitoring system	➢ By Jul 2025
			➢ Undertake regular monitoring of antimicrobial users to monitor authorisation	➢ By Dec 2025, then annually

Objective 5

Governance, collaboration, and investment – Establish and support clear governance, collaboration, and investment arrangements for a sustainable approach to countering antimicrobial resistance.

The New Zealand Government is committed to tackling antimicrobial resistance and working with all relevant stakeholders to deliver this implementation plan. The ongoing success of this work will require clear governance, partnerships, coordination, leadership, accountability, and appropriate resourcing.

Combatting AMR needs national and international collaboration to promote awareness, surveillance, knowledge sharing and behaviour change. Collaboration will also be essential in developing new antimicrobials and diagnostic approaches, stewardship initiatives and improved infection prevention and control practices.

Activities listed to support the objective of governance, collaboration, and investment contribute to achieving all three of the AMR team goals:

- Increase awareness that antimicrobial use is part of a complex One Health ecosystem that relies on sustainable and responsible use in every sector.
- Strengthen the knowledge and understanding of AMR in animal and plant health in Aotearoa New Zealand through governance, surveillance, auditing, evidence-based education, reporting and technical expertise.
- Optimise the use of antimicrobials to maintain their efficacy in plants and animals, thereby maintaining trade opportunities and ensuring positive health outcomes for humans, animals and plants in the future.

Table 5. Activities supporting Objective 5

Activity	Expected outcomes	Organisation responsible	Deliverables	Timeframe
1. Maintain the current governance structure that helps coordinate efforts to minimise AMR and report on activities regularly.	MPI to continue working with relevant industries and bring stakeholders together by leading, coordinating, planning, and ensuring activities in	**Facilitator-** MPI, AMR Governance Group (AMRGG) **Contributors-** all AMRCG members.	➢ Continue to organise and participate in AMRCG 3 times annually.	➢ Ongoing
			➢ Review effectiveness of AMRCG and make changes where appropriate.	➢ By June 2025

	this plan are being implemented.		➢ Continue to organise and participate in AMRGG 3 times annually.	➢ Ongoing
			➢ MPI to review effectiveness of AMRGG and make changes where appropriate.	➢ By June 2025
			➢ MPI to report annually on activities relating to this plan.	➢ July annually
2. International collaborations and engagement with other governments, regulators, and international partners on antimicrobial resistance across the animal health and agricultural sectors.	Collaboration, information sharing, and alignment of approaches on AMR, AMU and AMS where possible.	**Facilitator-** MPI **Contributors-** international partners	➢ Continue attendance at Quads Alliance meetings.	➢ Ongoing
			➢ Continue attendance at Quins meetings with UK, USA, Canada, and Australian regulators.	➢ Ongoing
			➢ Continue NZ representation with WOAH, the International Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Medicinal Products (VICH), UN Environment Programme (UNEP), and Codex.	➢ Ongoing