ANIMAL HEALTH IN
AUSTRALIA

System Report

SECOND
EDITION

animalhealth
AUSTRALIA

Preferred citation

Animal Health Australia (2026). *Animal Health in Australia System Report,* Second Edition, Animal Health Australia, Canberra, Australia.

Acknowledgments

The *Animal Health in Australia System Report* draws together information provided by the Australian Government Department of Agriculture, Fisheries and Forestry, state and territory government agencies and Animal Health Australia's industry members.

Animal Health Australia would like to acknowledge the efforts of all contributors to this report, including industry, the National Animal Health Information Program Advisory Committee, and the organisations and individuals who contributed images.

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ISBN 978-1-876714-02-4
Technical editing: SuperScript Writing & Editing
Design: Animal Health Australia
Printer: Bytes N' Colours

Contact information

For publication rights, reproduction enquiries, suggestions, or recommendations, please contact:

General Manager
Emergency Preparedness and Surveillance
Animal Health Australia
A: PO Box 998 Dickson ACT 2602
T: 02 6232 5522
E: aha@animalhealthaustralia.com.au

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Australian Chief Veterinary Officer Dr Beth Cookson

Foreword

Welcome to the second edition of the *Animal Health in Australia System Report*.

Animal Health in Australia (AHiA) is a summary that showcases some of Australia's key animal health achievements, disease investigations and surveillance activities. It describes current frameworks, policies and programs within our animal health system. The AHiA publication consists of 2 complementary reports: the *AHiA System Report* and the *AHiA Annual Report*.

Australia has a proud and steadfast commitment to biosecurity, which is reflected in our outstanding reputation as a producer of safe and healthy animals and animal products.

Our favourable animal health status is underpinned by strong partnerships between governments, industries, producers and the public. It is the result of extensive activities across the biosecurity continuum – that is, pre-border, at the border, and post-border – that collectively make up our animal health system.

The *AHiA System Report* describes Australia's animal health system, including the governance, surveillance, emergency management and animal welfare frameworks that support our unique animal health status. The report is only updated when significant changes have occurred to the system. This second edition represents the first update since AHiA evolved into a 2-report publication in 2021. Updated features include expanded coverage of Australia's biosecurity measures, a new section on the export controls that support the country's reputation for reliable agricultural exports, and a reorganised structure for easier reading.

Published annually, the *AHiA Annual Report* focuses on animal health matters and developments during the year. It includes a summary of activities that have contributed to strengthening Australia's animal health system, relevant new policies and notable animal disease incidents.

All AHiA reports are publicly available online via the Animal Health Australia website.

I extend my sincere thanks to everyone who has contributed to this report and who supports Australia's animal health system more broadly. Your expertise and commitment support the continued strength and effectiveness of Australia's animal health system, and our way of life.

Dr Beth Cookson
Australian Chief Veterinary Officer

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Australia's animal health services

This chapter introduces the key government and industry organisations that work together to protect and promote animal health across Australia. It outlines the mechanisms that enable these organisations to collaborate effectively and ensure a nationally coordinated approach to animal health. This chapter also explores Australia's role globally through its active involvement with the World Organisation for Animal Health. Finally, it provides an overview of the veterinary workforce in Australia, and the role of government and private veterinarians in the national animal health system.

1.1 Understanding Australia's animal health system

Australia's animal health system includes all government agencies, industry organisations, companies, universities and individuals involved in the livestock production chain and animal health. Effective national surveillance and control of animal diseases in Australia relies on this integrated system and cooperative partnerships among all stakeholders.

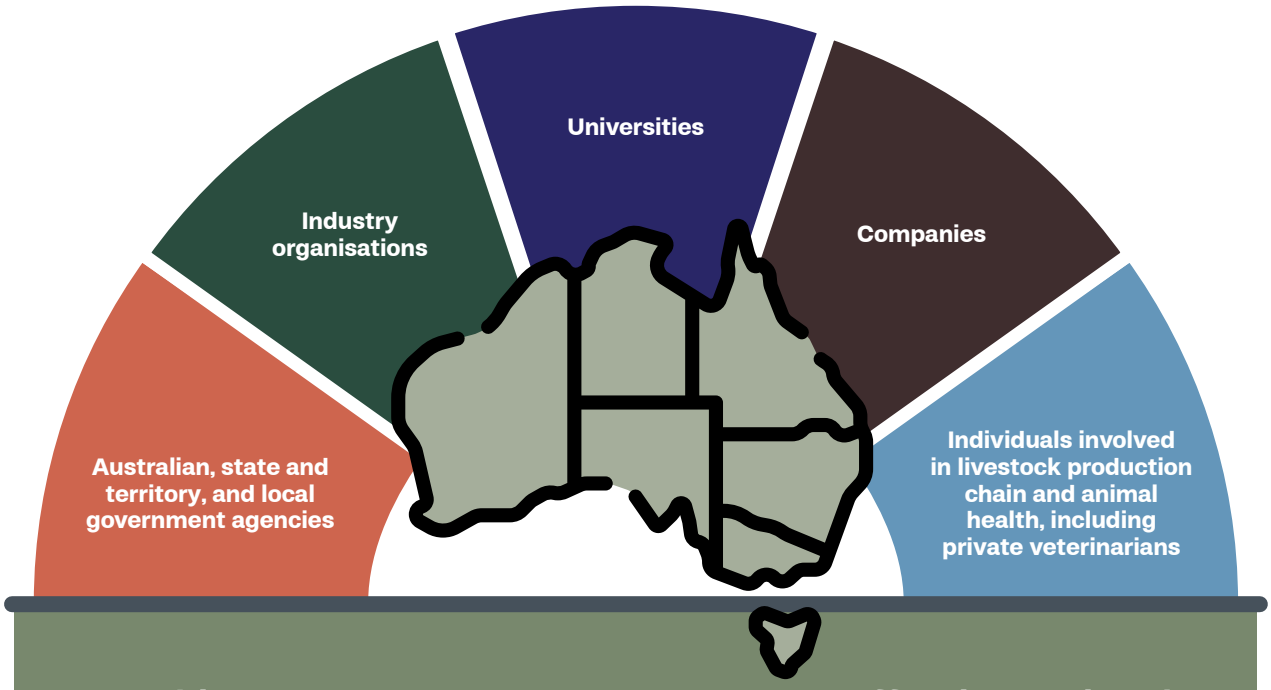
Australia is a federation of 6 states and 2 self-governing territories, with powers divided between the Australian Government and state and territory governments under the Constitution.[1]

The Australian Government, through the Department of Agriculture, Fisheries and Forestry, advises on and coordinates animal health policy at a national level, including during emergency animal disease response activities. It is responsible for international animal health matters, including border biosecurity and import controls, export certification and trade, as well as disease reporting to the World Organisation for Animal Health.

Under the Australian Constitution, state and territory governments are responsible for animal health matters within their boundaries (jurisdictions). Their responsibilities include disease surveillance and control, emergency preparedness and response, chemical residue monitoring in animal products, livestock identification and traceability, and animal welfare.

Local governments have responsibility for some areas of domestic animal control and management of invasive plant and animal species within their local government area. This includes providing feedback to state and territory governments on relevant animal health legislation, as well as promoting and maintaining responsible animal ownership within the community.

Although the systems for animal health management differ among jurisdictions, consultative committees ensure Australian, state and territory, and local governments work together to serve the overall interest of Australia. See Section 1.5 for further information about the committees and groups that ensure coordination and harmonisation of national animal health issues.



1 aph.gov.au/constitution

Australian governments work closely with stakeholders, including livestock industries, to determine national animal health priorities. The livestock industries participate in policy development, support targeted animal health activities and play a key role in emergency responses. Central to this collaboration is Animal Health Australia (AHA) – a trusted, independent organisation that brings together governments and industry to help coordinate national efforts in animal health and biosecurity. See Section 1.8 for more information about AHA.

Government agencies responsible for animal health and agriculture maintain links with agencies responsible for human health and the environment as part of a One Health approach. This is particularly important for managing zoonoses (diseases that are transmissible between animals and humans) and combatting antimicrobial resistance (see Chapter 7 for more information).

1.2 Australia's competent authority: Department of Agriculture, Fisheries and Forestry

Organisational structure

Under the Australian Constitution, the Australian Government is responsible for international animal health matters, including disease reporting, border and import controls, export certification and trade negotiation. It also provides national coordination of emergency animal disease (EAD) response activities, and coordinates and provides advice on national policy on animal health and welfare. In some circumstances, it provides financial assistance for national animal disease control programs. The Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) administers all these activities in animal health and welfare. It works to deliver effective, risk-based services across the biosecurity continuum, whether onshore, at the border, or offshore.

DAFF is organised into divisions to support work across a very broad range of agricultural, biosecurity, fisheries and forestry management activities. The department is staffed with personnel trained, appropriately qualified and competent in their roles. An organisational chart is available on the DAFF website.[2]

While many areas within DAFF contribute to Australia's animal health and welfare, and veterinary public health, the following divisions hold key responsibilities for delivering and maintaining the core functions of the animal health system:

- Office of the Australian Chief Veterinary Officer
- Biosecurity Animal Division
- Exports and Veterinary Services Division
- Plant and Live Animal Exports, Welfare and Regulation Division.

In addition, the Inspector-General of Biosecurity is an independent statutory officer responsible for reviewing the performance of functions and powers by biosecurity officials in DAFF.

Office of the Australian Chief Veterinary Officer

The Australian Chief Veterinary Officer is the primary representative of and adviser to the Australian Government on matters relating to the maintenance and improvement of Australia's animal health status and its supporting systems. The Australian Chief Veterinary Officer provides leadership and strategic direction on policy issues relating to animal health in Australia, and is also Australia's international reference point and World Organisation for Animal Health (WOAH) Delegate for animal health and welfare. More information about WOAH and Australia's role in WOAH can be found in Section 1.6.

The Office of the Australian Chief Veterinary Officer is a team of scientists and policymakers that assists the Australian Chief Veterinary Officer in delivering key priorities, including:

- providing strategic analysis, advocacy and stewardship to enhance Australia's collective animal health systems and services
- representing Australia's animal health status and systems at international forums and influencing international policy and standards
- engaging in collaborative efforts with neighbouring countries to strengthen regional animal health and biosecurity

2 agriculture.gov.au/about/who-we-are/structure

- working to strengthen animal, human and ecosystem health through nationally coordinated One Health action, including addressing antimicrobial resistance.

Biosecurity Animal Division

The Biosecurity Animal Division works with Australian industries, governments and the community to strengthen Australia's terrestrial animal, marine and aquatic disease prevention, preparedness and response capabilities. The division is responsible for conducting risk assessments, developing policy, and regulating the import of animals and animal products into Australia. It also oversees marine biosecurity, including biofouling and ballast water management, and conducts its activities in accordance with the *Biosecurity Act 2015* (Cth). The division's work includes maintaining and enhancing trade and market access for live animals and reproductive material. A focus remains on protecting Australia's terrestrial animal, marine and aquatic health, along with the environment and economy.

The division also has a key role in mobilising resources and working with jurisdictions and partners to strengthen national readiness and support coordinated responses to emerging EAD risks. An example is the establishment of the High Pathogenicity Avian Influenza (HPAI) Preparedness Taskforce in 2024 – a cross-agency initiative established to strengthen the national approach to H5 HPAI preparedness activities using a One Health approach.

For further insight into the role and responsibilities of the head of the division, refer to IN THE SPOTLIGHT: Dr Brant Smith.

Exports and Veterinary Services Division

The Exports and Veterinary Services Division regulates the export of agricultural goods and food, and ensures imported food complies with Australian standards to protect public health and safety. Operating under the *Export Control Act 2020* (Cth) and the *Imported Food Control Act 1992* (Cth), the division balances complex domestic and international requirements across commodities and markets. It delivers critical programs such as the National Residue Survey, demonstrating how Australian industry meets chemical residue requirements of export markets. With a focus on continuous improvement, the division works closely with industry to streamline regulation in line with national performance expectations, ensuring Australia's regulatory settings facilitate trade while safeguarding market access.

Beyond setting and maintaining regulatory systems, the division leads technical negotiations to grow and diversify global markets for Australian exporters, representing Australia in bilateral, multilateral and international food standards forums. This includes hosting and chairing the Codex Committee on Food Import and Export Inspection and Certification Systems, which develops global standards for national food control systems.

Plant and Live Animal Exports, Welfare and Regulation Division

The Plant and Live Animal Exports, Welfare and Regulation Division ensures the integrity and sustainability of Australia's livestock industry. Key responsibilities include ensuring Australia's export legislative framework remains fit for purpose and that DAFF meets regulatory obligations; developing and reviewing animal welfare standards for live animal export; collaborating with states and territories to review domestic animal welfare; and regulating live animal exports through licensing, registration and accreditation of industry participants and assessment and approval of applications to export live animals and reproductive material.

The division works with industry and jurisdictions to ensure Australia's livestock industry operates with high animal welfare standards and strong regulatory oversight. Together, they support a cohesive framework that safeguards animal welfare while facilitating a sustainable and well-regulated live export industry.

Mechanism for review of biosecurity programs: Inspector-General of Biosecurity

Statutorily appointed by the Minister for Agriculture, Fisheries and Forestry, the Inspector-General of Biosecurity (Inspector-General) independently reviews the Director

of Biosecurity's performance of functions and exercise of powers. The Director of Biosecurity is the Secretary of DAFF.

The Inspector-General's mission is to enhance the integrity of Australia's biosecurity system by independently evaluating and verifying the performance of the department's biosecurity programs, principally pre-border and border programs. The Inspector-General's review reports make recommendations that serve as a catalyst for biosecurity system improvements and provide an assurance framework for stakeholders. This helps the department maintain contemporary settings, and remain accountable and ready for emerging threats while safeguarding Australia's agriculture, environment, economy and exports.

The Inspector-General publishes an annual review program, and – through publication of review reports – demonstrates that Australia's biosecurity system is credible, responsive and subject to independent oversight. Operating independently from DAFF, the Inspector-General's reviews often identify specific risks, gaps or weaknesses in preventative biosecurity measures (such as screening, risk assessments and import processes). This impartial scrutiny of biosecurity performance ensures that Australia's biosecurity system remains robust and reassures stakeholders that reviews are not influenced by internal departmental interests or politics.

Furthermore, independent, evidence-based review reports on the performance of Australia's biosecurity system clearly showcase to stakeholders what is working, what is not and where improvements are needed. Transparency is further enhanced by highlighting internal processes that may otherwise remain hidden from external view.

The Inspector-General remains independent of the Director of Biosecurity and may consider the minister's request for a review and seek immediate action from the Director of Biosecurity to protect or enhance the integrity of Australia's biosecurity system. The *Biosecurity Act 2015* (Cth) and Biosecurity Regulation 2016 (Cth) define the Inspector-General's role, authority and independent powers of review.

Since the position of the Inspector-General of Biosecurity was established in July 2009, 6 Inspectors-General to date have completed several reviews related to animal biosecurity. The Inspector-General's review program, details on their role and responsibilities, and review reports published to date are available on their website.[3]

Staff and offices

As at 2025, DAFF employs more than 6,000 staff in offices, airports, mail centres, shipping ports, laboratories and abattoirs across Australian capital cities, regional centres and rural communities. The department's national office is in Canberra. National office details and other office contacts can be found on the department's website.[4]

Funding

DAFF is allocated budgetary resources each financial year. The annual departmental budget is presented in the Portfolio Budget Statements, which provide information to Parliament on the proposed allocation of departmental resources in the following financial year. In these proposals, performance results and budgeted expenses for the previous financial year are detailed, as are performance criteria for objectives for the coming financial years, and the department's future strategic direction.

The Australian Government has implemented a sustainable funding model that provides permanent, ongoing funding for biosecurity. The model provides funding certainty to maintain current biosecurity activities, including regulatory and surveillance activities at the border, post-entry quarantine, policy and technical functions, and programs such as the Indigenous Ranger Biosecurity Program.

More details on biosecurity funding and the sustainable funding model are available on DAFF's website and in the annual Biosecurity Funding and Expenditure Report published by the department.[5]

3 igb.gov.au

4 agriculture.gov.au/about/contact/our-offices

5 agriculture.gov.au/biosecurity-trade/policy/sustainable-biosecurity-funding

IN THE SPOTLIGHT

Real-world examples showing how individual roles support the animal health system.

Dr Brant Smith

First Assistant Secretary, Biosecurity Animal Division | Department of Agriculture, Fisheries and Forestry

Dr Brant Smith is the First Assistant Secretary of the Biosecurity Animal Division within the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF). In this role, he oversees the division that is responsible for:

- developing biosecurity import policy, providing scientific risk advice and for the regulation of safe importation of animals and animal products (including aquatic animals)
- gaining, maintaining and expanding trade and market access for live animals and their genetic materials
- providing policy and technical advice on marine pest biosecurity
- strengthening Australia's disease prevention, preparedness and response capability.

See Section 1.2 for more information on DAFF's Biosecurity Animal Division.

As the head of division, Dr Smith also provides national leadership on preparedness for, and response to, emergency animal diseases (EADs), ensuring a coordinated approach across governments and stakeholders. This includes preparedness activities for priority threats such as lumpy skin disease, foot-and-mouth disease and high pathogenicity avian influenza (HPAI), as well as involvement in outbreak responses where national coordination and support are required. This has included involvement in the H7 HPAI outbreaks responses that occurred in Victoria, New South Wales and the Australian Capital Territory in 2024, and the H7 HPAI response in Victoria in 2025.

As part of his role, Dr Smith has led the Australian Government HPAI Preparedness Taskforce – a cross-government initiative that was established to coordinate national activity to enhance Australia's preparedness and response capability for H5 HPAI. The taskforce is jointly led by DAFF; the Department of Climate Change, Energy, the Environment and Water; the Department of Health, Disability and Ageing; and the National Emergency Management Agency. This collaboration exemplifies a whole-of-government and One Health approach to managing cross-sectoral disease threats.

Dr Smith holds a Bachelor of Veterinary Science and a Master of Veterinary Public Health and Management, both from the University of Sydney. His academic background, combined with more than 20 years of experience across the private and public sectors (including large animal veterinary practice and senior executive roles in government), underpins his leadership in complex biosecurity and disease preparedness initiatives.

EAD preparedness remains a top priority for Dr Smith, and DAFF, as Australia continues to enhance its animal health systems in the face of evolving global animal biosecurity threats.

1.3 State and territory animal health services

Animal health responsibilities

State and territory animal health services work to protect livestock producers and the broader community by supporting high-quality biosecurity systems that safeguard the economy, the environment and public health. This is achieved through a combination of legislation, policy and standards development, and service delivery, including the network of animal health laboratories. See Section 1.4 for more information on state and territory legislation relevant to animal health. Further information about animal health laboratories is provided in Chapter 3.

Animal health policy and services within states and territories are delivered by government-appointed or government-accredited personnel – such as district veterinarians, regional veterinary officers and local biosecurity officers – who implement relevant legislation and provide extension services to industry and the community. Each jurisdiction appoints a Chief Veterinary Officer who has the necessary statutory powers to deliver and oversee state and territory animal health responsibilities.

Key responsibilities of these personnel include:

- surveillance, investigation, control and reporting of terrestrial and aquatic diseases, including EADs
- preparedness activities for responding to EADs
- contributing to the control of specified endemic livestock diseases in partnership with relevant livestock industries
- monitoring and ensuring compliance with animal identification systems and National Vendor Declarations
- regulating livestock movement to maintain biosecurity
- responding to chemical incidents in livestock products to safeguard public health
- promoting best practices in livestock management
- monitoring feral and native wildlife for emerging or exotic diseases
- educating producers, industry bodies and service providers on legislative obligations, biosecurity, animal welfare, market assurance programs and technological developments.

Protecting human health from diseases and pests of animals is a key role of state and territory animal health personnel. They work closely with government public health counterparts in a joint approach to zoonoses such as Australian bat lyssavirus, Hendra virus, infections with avian influenza, Japanese encephalitis virus, melioidosis and salmonellosis. See Section 7.2 for details on Australia's collaborative One Health approach to managing zoonotic and foodborne diseases.

Strong coordination mechanisms ensure effective collaboration between the Australian Government and state and territory governments. Intergovernmental committees, such as the Animal Health Committee (AHC) and National Biosecurity Committee (NBC), provide a structured platform for cooperation and development of science-based and nationally consistent policy.

All state and territory Chief Veterinary Officers are members of AHC, which plays a pivotal role in aligning strategies and harmonising efforts across jurisdictions. AHC enables all levels of government to work together in the national interest.

See Section 1.5 for more information about AHC, NBC and Australia's other mechanisms for national coordination of animal health.

Relevant state and territory departments

Table 1.1 provides the name and website information of state and territory government departments that provide animal health services.

1.4 Animal health legislation

Federal legislation

The Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) administers the *Biosecurity Act 2015* (jointly with the Australian Government Department of Health, Disability and Ageing), the *Export Control Act 2020*, the *Imported Food Control Act 1992* and a range of other legislation to protect Australia's animal, plant, human health and environment status and to maintain market access for Australian food and other agricultural exports.

To prevent the entry of unwanted pests and diseases, DAFF regulates the importation of animals and animal products into Australian territory under the Biosecurity Act and its subordinate legislation. The Biosecurity Act provides the legislative framework for managing diseases and pests that may cause harm to human, animal or plant health, or the environment. It gives effect to Australia's international rights and obligations and includes provisions for Australia's Biosecurity Import Risk Analysis (BIRA) or related processes for establishing import conditions. See Chapter 2 for more on BIRA and import risk analyses.

The Biosecurity Act also explains how risks associated with people and goods entering Australian territory are managed and provides mechanisms for addressing non-compliance. In addition, it provides for biosecurity emergency powers that can be used by the Australian Government if necessary.

Food entering Australia is also subject to the Imported Food Control Act, administered by DAFF, to address food safety. This provides for the inspection and control of imported food using a risk-based border inspection program. See Chapter 2 for further details on food regulation and safety in Australia.

The Export Control Act, Export Control Rules 2021 and associated legislation provide the legal framework for how agricultural exports are certified, inspected and approved. See Chapter 2 for an overview of Australia's export controls.

Further information on the legislation administered by DAFF is available on the department's website.[6]

Table 1.1 State and territory departments providing animal health services

State / territory	Department	Website
Australian Capital Territory	City and Environment Directorate	**act.gov.au/environment**
New South Wales	Department of Primary Industries and Regional Development	**dpird.nsw.gov.au**
Northern Territory	Department of Agriculture and Fisheries	**daf.nt.gov.au**
Queensland	Department of Primary Industries	**dpi.qld.gov.au**
South Australia	Department of Primary Industries and Regions	**pir.sa.gov.au**
Tasmania	Department of Natural Resources and Environment	**nre.tas.gov.au**
Victoria	Department of Energy, Environment and Climate Action	**deeca.vic.gov.au**
Western Australia	Department of Primary Industries and Regional Development	**dpird.wa.gov.au**

6 agriculture.gov.au/biosecurity-trade/policy/legislation

State and territory legislation

State and territory governments develop, enact and administer legislation covering:

- surveillance, control, investigation and reporting of animal diseases, including emergency animal diseases (EADs)
- management of chemical residues and contaminants in livestock
- animal welfare
- livestock identification and traceability
- enforcement of animal health, welfare and biosecurity legislation, including monitoring, investigations and applying penalties for breaches.

Each state and territory has its own legislation relating to animal health. The following Acts specifically underpin the management of EADs within their respective jurisdictions, including provisions for mandatory reporting and powers to control EAD outbreaks in both domestic and wild animals:

- Australian Capital Territory: *Biosecurity Act 2023*[7]
- New South Wales: *Biosecurity Act 2015*[8]
- Northern Territory: *Livestock Act 2008*[9]
- Queensland: *Biosecurity Act 2014*[10]
- South Australia: *Livestock Act 1997*[11,12]
- Tasmania: *Biosecurity Act 2019*[13]
- Victoria: *Livestock Disease Control Act 1994*[14]
- Western Australia: *Exotic Diseases of Animals Act 1993*.[15]

7 legislation.act.gov.au/a/2023-50

8 legislation.nsw.gov.au/view/whole/html/inforce/current/act-2015-024

9 legislation.nt.gov.au/Legislation/LIVESTOCK-ACT-2008

10 legislation.qld.gov.au/view/html/inforce/current/act-2014-007

11 legislation.sa.gov.au/lz?path=%2FC%2FA%2FLivestock%20Act%201997

12 This Act will be repealed by the *Biosecurity Act 2025*

13 legislation.tas.gov.au/view/html/inforce/current/act-2019-022

14 legislation.vic.gov.au/in-force/acts/livestock-disease-control-act-1994/085

15 legislation.wa.gov.au/legislation/statutes.nsf/law_a261.html

1.5 Committees and groups supporting coordinated national animal health management

National animal health management committees

Consultative committees ensure that all components of the animal[16] health system work together to serve the interests of Australia.[17]

The committees advise and support senior national ministerial and departmental forums: the Agriculture Ministers' Meeting (AMM) and the Agriculture Senior Officials' Committee (AGSOC). Figure 1.1 illustrates the structure of the governmental animal health management committees in Australia.

Agriculture Ministers' Meeting

AMM membership comprises Australian, state and territory government ministers with responsibility for primary industries and is chaired by the Australian Government minister responsible for agriculture.

AMM has formally endorsed the National Biosecurity Strategy (NBS) and provides national leadership to advance its implementation. See Section 1.7 for more about the NBS.

Agriculture Senior Officials' Committee

AGSOC comprises all department heads and Chief Executive Officers of Australian, state and territory government agencies responsible for primary industries policy issues. AGSOC is a forum for agency heads to coordinate, cooperate and collaborate on matters affecting Australia's primary production sectors.

National Biosecurity Committee

The National Biosecurity Committee (NBC) provides strategic leadership in managing national approaches for emerging and ongoing biosecurity matters. It provides oversight of the biosecurity system, including identifying strategic opportunities, threats and risks to the effective functioning of the national biosecurity system.

16 Both terrestrial and aquatic animals

17 agriculture.gov.au/agriculture-land/animal/health/committees

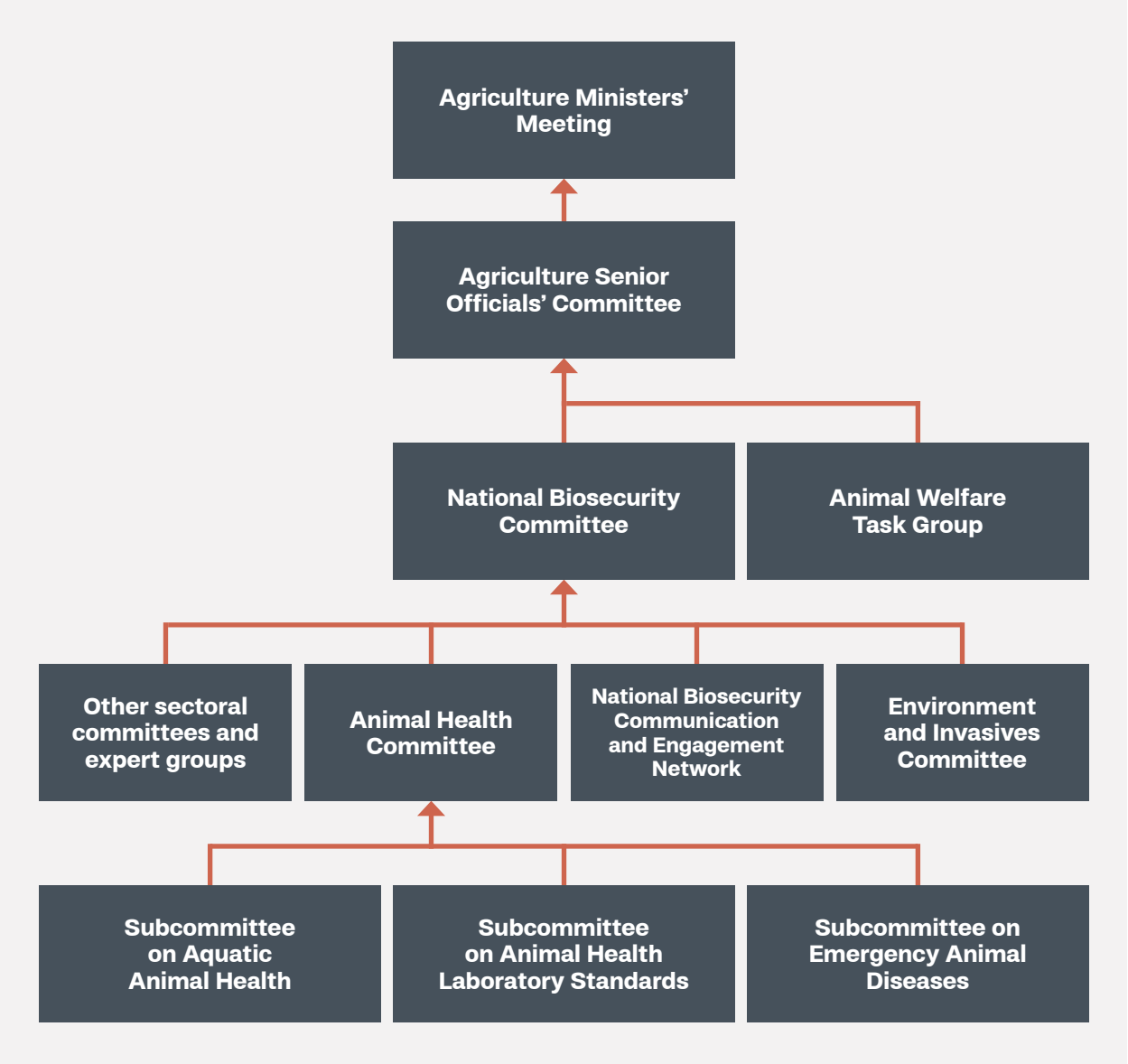


Figure 1.1 Key national government animal health management committees in Australia

NBC is formally established under the Intergovernmental Agreement on Biosecurity and is the body authorised by agriculture ministers to oversee the implementation of NBS and implement appropriate governance arrangements. See Section 1.7 for more about the Intergovernmental Agreement on Biosecurity and NBS.

NBC membership comprises senior officials from the Australian, state and territory, and New Zealand governments, with Animal Health Australia (AHA) and Plant Health Australia (PHA) included as observers.

NBC has several sectoral committees, including the National Biosecurity Communication and Engagement Network (NBCEN), the Animal Health Committee (AHC) and Environment and Invasives Committee (EIC). See further subsections in this chapter for more information about AHC, EIC and NBCEN.

Information about NBC members, other sectoral committees and NBC communiqués (records of key issues discussed at NBC meetings) can be found on the NBC webpage.[18]

Animal Health Committee

AHC delivers strategic policy, technical, and regulatory advice and national leadership on animal health and biosecurity matters. It is responsible for delivering on national priority reform areas and overseeing the development and implementation of animal health strategies

18 agriculture.gov.au/biosecurity-trade/policy/partnerships/nbc

and standards. AHC is a sectoral committee of the NBC.

AHC's principal objective is to maintain or improve animal health outcomes and manage animal biosecurity risks. AHC also facilitates trade through national leadership, strategic direction and collaboration with stakeholders.

AHC members include the Australian Chief Veterinary Officer and Chief Veterinary Officers of the Australian states and territories, along with representatives from the Australian Centre for Disease Preparedness (ACDP) and the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF). Observers include representatives from AHA, Wildlife Health Australia (WHA), and the New Zealand Ministry for Primary Industries.

AHC co-chairs consist of a permanent chair – the Australian Chief Veterinary Officer – and a rotating co-chair. The co-chair position rotates annually among the Chief Veterinary Officers of the states and territories, ensuring a diverse leadership.

AHC regularly engages with national terrestrial and aquatic industry members and veterinary services to ensure a collaborative approach to national animal health. As part of this engagement, AHC holds combined stakeholder sessions through the year that are integrated into the face-to-face meetings and several sector-specific sessions. These sessions provide an opportunity for animal health stakeholders to meet directly with AHC members to build strong relationships and ensure collective understanding of the strategic priorities for the national animal health system.

AHC has 3 subcommittees:

- Subcommittee on Aquatic Animal Health (see Chapter 5 for details)
- Subcommittee on Animal Health Laboratory Standards (see Chapter 3 for details)
- Subcommittee on Emergency Animal Diseases (SCEAD).

SCEAD provides contemporary and nationally consistent operational policy and procedures to AHC for managing emergency animal diseases (EADs). Its work supports national preparedness and response coordination across jurisdictions.

SCEAD membership includes representatives from the Australian, state and territory governments, the ACDP and AHA, with specialist expertise drawn from public health, animal welfare, wildlife health, environment and industry sectors as needed.

More information about AHC can be found on its webpage.[19] AHC publishes the *AHC Communiqué* with information on topics considered at face-to-face meetings. A new communiqué is developed after each face-to-face meeting. These are also available online.[20]

Environment and Invasives Committee

The Environment and Invasives Committee (EIC) provides national policy leadership and advice to NBC on managing emerging and established invasive species and environmental biosecurity. It specifically advises on the identification, prevention, detection, response and management of exotic, emerging and established invasive plant, vertebrate and invertebrate species and diseases that adversely impact the environment, economy and community. EIC engages with stakeholders and works with other NBC sectoral committees to provide consistent and consolidated advice on invasive species and environmental biosecurity.

The Chair of EIC must be a member of EIC and will rotate every 2 years. Membership includes one member representing the Australian Government and each state and territory government. To ensure coverage of both general biosecurity and environmental biosecurity, membership may comprise up to 2 officials from relevant agencies. Observers include representatives from Animal Health Australia (AHA), Plant Health Australia (PHA), Wildlife Health Australia (WHA), Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), Centre for Invasive Species Solutions (CISS), and Commonwealth Scientific and Industrial Research Organisation (CSIRO). A full list of members and observers can be found on EIC's webpage.[21]

19 agriculture.gov.au/agriculture-land/animal/health/committees/ahc

20 agriculture.gov.au/agriculture-land/animal/health/committees/communique

21 agriculture.gov.au/biosecurity-trade/pests-diseases-weeds/pest-animals-and-weeds/eic

Animal Welfare Task Group

The Animal Welfare Task Group develops national animal welfare policies in areas referred to it by AGSOC and AMM. The group includes officials from the Australian, state and territory governments, with New Zealand as an observer. The task group oversees the development and review of Australian Animal Welfare Standards and Guidelines for farm animals. The standards and guidelines are developed based on science and evidence, are underpinned by targeted stakeholder and public consultation, and are supported by regulatory impact analysis. See Chapter 6 for more information about the Australian Animal Welfare Standards and Guidelines for farm animals.

Committees and groups ensuring a coordinated emergency animal disease response

A nationally coordinated response to EAD outbreaks relies on a well-connected network of committees and groups that facilitate collaboration between governments, industry and other key stakeholders. These bodies play a critical role in decision-making, communication, and implementation of response activities, ensuring that efforts are harmonised across jurisdictions. The following section outlines the key groups involved in this coordination. To find out how these committees work to ensure a nationally coordinated response during an EAD event, see Section 1.7.

Consultative Committee on Emergency Animal Diseases

The Consultative Committee on Emergency Animal Diseases (CCEAD) is Australia's national technical coordinating body convened during EAD events affecting terrestrial species.[22]

CCEAD coordinates and makes decisions on the national technical response by animal health authorities to EAD incidents of animal health, public health or trade significance.

When cost sharing for the EAD response is sought or agreed under Emergency Animal Disease Response Agreement (EADRA) or the National Management Agreement – H5 High Pathogenicity Avian Influenza in Wildlife,

22 agriculture.gov.au/agriculture-land/animal/health/committees/ccead

CCEAD provides technical advice to the National Management Group (NMG) established for that incident. See Chapter 2 for further information about CCEAD's role during an EAD response.

CCEAD consists of the Australian and state and territory Chief Veterinary Officers; one representative from ACDP; representatives from DAFF nominated by the Australian Chief Veterinary Officer; one representative nominated by each of the affected industries; and AHA and one representative from an unaffected industry as observers.

The Aquatic Consultative Committee on Emergency Animal Diseases (Aquatic CCEAD) coordinates the national technical response to aquatic animal disease emergencies. Information about the Aquatic CCEAD can be found in Chapter 5.

National Management Group

NMG makes decisions on whether to support nationally cost-shared eradication programs through arrangements set out in the Emergency

Animal Disease Response Agreement,[23] the Emergency Plant Pest Response Deed, the National Environmental Biosecurity Response Agreement[24] or the National Management Agreement – H5 High Pathogenicity Avian Influenza in Wildlife.[25] NMG, under EADRA, consists of senior officials of the Australian, state and territory governments responsible for agriculture/biosecurity, the president (or equivalent) of each affected industry organisation, and AHA (as an observer).

National Biosecurity Communication and Engagement Network

NBCEN produces nationally consistent public information in response to emergency pest and disease outbreaks that affect Australia's livestock and plant industries.[26] Members consist of communication managers from the Australian, state and territory government agencies responsible for biosecurity, as well as from ACDP,

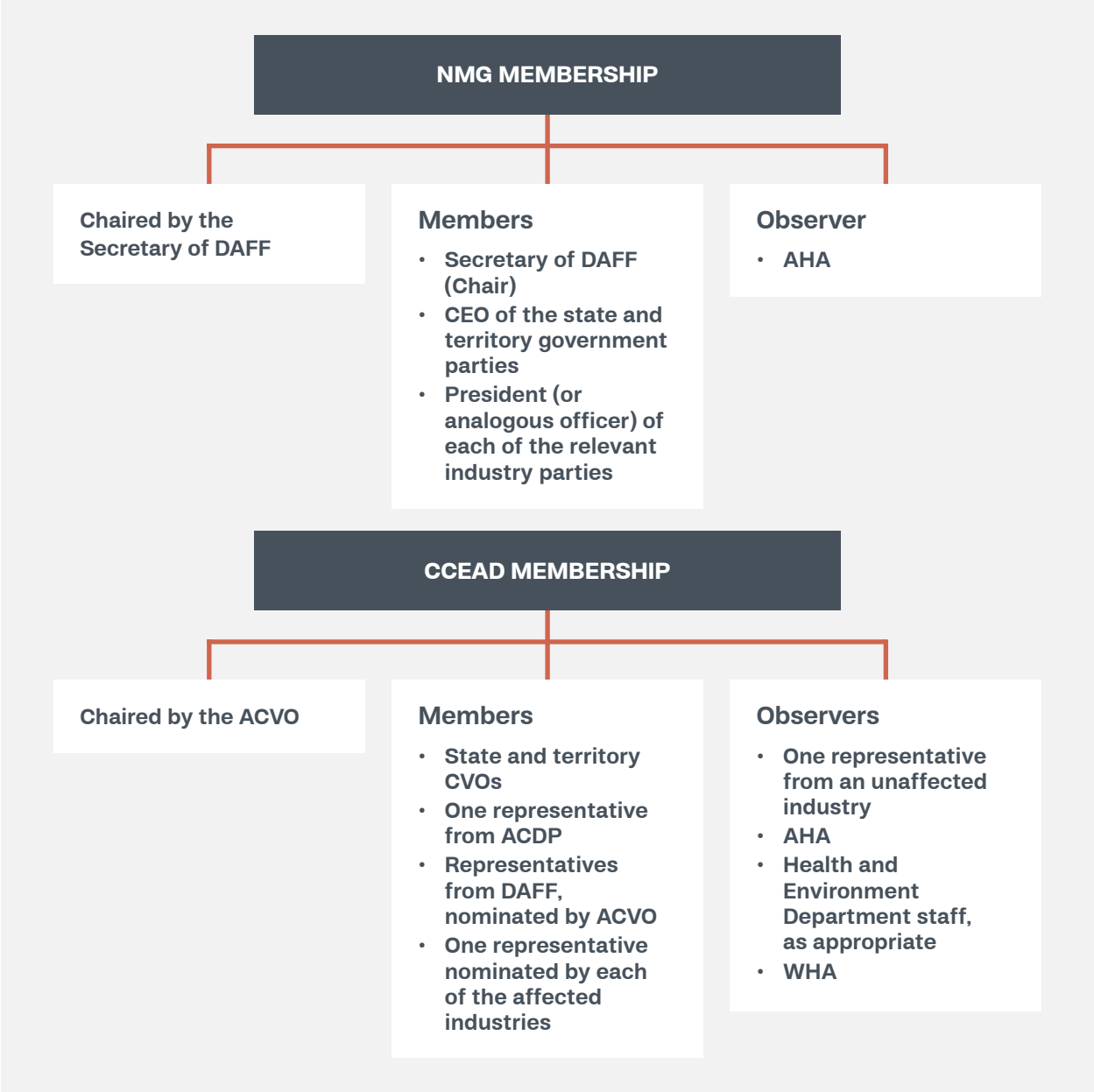


Figure 1.2 Membership of the Consultative Committee on Emergency Animal Diseases and the National Management Group, as per the Emergency Animal Disease Response Agreement

ACDP: Australian Centre for Disease Preparedness; ACVO: Australian Chief Veterinary Officer; AHA: Animal Health Australia; CCEAD: Consultative Committee on Emergency Animal Diseases; CEO: Chief Executive Officer; CVO: Chief Veterinary Officer; DAFF: Australian Government Department of Agriculture, Fisheries and Forestry; NMG: National Management Group; WHA: Wildlife Health Australia.

23 animalhealthaustralia.com.au/eadra

24 agriculture.gov.au/biosecurity-trade/policy/emergency/nebra

25 agriculture.gov.au/biosecurity-trade/policy/emergency/h5-hpai-nma

26 outbreak.gov.au/our-role/response-outbreak/national-biosecurity-communication-engagement-network

WHA, AHA and PHA. NBCEN supports consultative committees and NMG during biosecurity incidents. It also coordinates communication and engagement activities that support pest and disease prevention and preparedness.

1.6 Australia and the World Organisation for Animal Health

Australia is an active Member of the World Organisation for Animal Health (WOAH), an intergovernmental organisation founded in 1924 as the Office International des Epizooties (OIE). It currently has 183 Members.

WOAH's objectives are to:

- ensure transparency in the global animal disease situation
- collect, analyse and disseminate veterinary scientific information
- provide expertise and encourage international solidarity in the control of animal diseases
- safeguard world trade by publishing health standards for international trade in animals and animal products, within its mandate under the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures
- improve the legal framework and resources of national Veterinary Services
- provide a better guarantee of the safety of food of animal origin and to promote animal welfare through a science-based approach.

The Australian Chief Veterinary Officer is Australia's Delegate to WOAH. The Office of the Australian Chief Veterinary Officer within DAFF leads and coordinates Australia's contributions to WOAH, drawing on the expertise of other government departments and agencies, industry bodies and other experts on the issues under consideration. Find out more about the Office of the Australian Chief Veterinary Officer in Section 1.2.

International standard setting

Twice a year, new or revised international standards, including those pertaining to trade in animals and animal products, are circulated to WOAH Members for comment. Australia actively contributes to this consultation process to promote science-based standards that achieve their purpose without imposing an unjustified burden on Australian producers. To develop a national position, the Office of the Australian Chief Veterinary Officer coordinates national consultation with various stakeholders. WOAH Delegates come together annually in May for the General Session of the World Assembly of Delegates. During this week-long event, new and updated standards are considered and voted on for endorsement. This event also provides an important forum to discuss global animal health matters of priority.

Disease reporting

As part of WOAH's aim for transparency on the global animal disease situation, each Member has obligations to report on the occurrence of WOAH-listed diseases in their territory. This reporting is undertaken by the Office of the Australian Chief Veterinary Officer with assistance from relevant jurisdictions and technical experts. Any new detections of a WOAH-listed disease previously absent from a country's territory must be reported within 24 hours of confirmation. Six-monthly and annual reporting also occurs to maintain an accurate representation of the animal disease situation. This information is provided to WOAH through its World Animal Health Information System, which is accessible by the public through the WOAH website.[27]

Regional engagement

Five Regional Commissions have been established by WOAH in the regions of Africa, the Americas, Asia and the Pacific, Europe and the Middle East to allow Members to better collaborate on specific regional issues. Each region hosts its own Regional Conference biennially. Australia is a member of the Regional Commission for Asia and the Pacific.

The Australian Chief Veterinary Officer – the Australian Delegate to WOAH – is serving as the Secretary-General of the Bureau of the Regional Commission for Asia and the Pacific[28] from 2024 to 2027. In this role, the Delegate assists the commission to identify regional animal health priorities and encourage better coordination among members.

27 woah.org/en/what-we-do/animal-health-and-welfare/disease-data-collection/world-animal-health-information-system

28 rr-asia.woah.org/en/regional-commission

1.7 National animal health frameworks and strategies

Intergovernmental Agreement on Biosecurity

The current version of the Intergovernmental Agreement on Biosecurity (IGAB) commenced in 2019 and is an agreement between all Australian governments to strengthen Australia's biosecurity system. The agreement defines the roles and responsibilities of governments and outlines the priority areas for collaboration to minimise the impact of pests and diseases on Australia's economy, environment and community. As such, IGAB is an important component of Australia's national biosecurity system.

IGAB also establishes the National Biosecurity Committee (NBC). NBC provides advice to the Agriculture Senior Officials' Committee (AGSOC) on national biosecurity issues and progresses the implementation of IGAB. AGSOC reports to ministers responsible for primary industries. See Section 1.5 for further information about NBC and AGSOC.

Independent reviews

IGAB requires that within 5 years of commencement, and every 5 years afterwards (or earlier if considered necessary), an independent review of the implementation and effectiveness of IGAB is to take place.

The most recent review was conducted in 2024, led by Dr Michele Allan AO. The review is complete, and the final report is now available on the 2024 Intergovernmental Agreement on Biosecurity Review webpage.[29] Updates on implementing the recommendations will be provided on the IGAB webpage as they become available.

National Biosecurity Strategy

Biosecurity risks are growing and increasing in complexity, driven by factors such as climate change, unpredictable trade and travel patterns, and changes in land use. The National Biosecurity Strategy (NBS), endorsed by all agricultural ministers and released on 9 August 2022, provides a 10-year roadmap to guide the evolution of Australia's biosecurity system to ensure it remains strong. NBS is underpinned by IGAB and complements existing national frameworks.

The NBS Implementation Plan, released on 8 February 2024, supports the rollout of the strategy from now until 2032. It outlines governance arrangements to guide delivery, informs future planning work over the 10-year life of the strategy, and contributes to the development of subsequent national action plans. The implementation plan also reinforces the vision of a connected, resilient and shared national biosecurity system. This work reflects the collaboration of a range of stakeholders from across our biosecurity system – Australian, state and territory governments; industry; environmental groups; First Nations stakeholders; and research organisations – who are passionate about, and committed to, strengthening Australia's biosecurity system.

The first NBS Action Plan was released following endorsement by agriculture ministers in late 2024. The action plan outlines 52 activities to implement the national strategy. Delivery of these activities is a shared responsibility across government and stakeholders, ensuring coordinated action to strengthen Australia's biosecurity system. Subsequent action plans will be developed over the life of the strategy, guided by the implementation plan and informed by progress reporting and stakeholder collaboration.

More information about NBS, the NBS Implementation Plan and the NBS Action Plan can be found on the NBS webpage.[30]

NBC is the body authorised by agriculture ministers to oversee the implementation of NBS and implement appropriate governance arrangements. See Section 1.5 for further information on NBC.

The NBS Implementation Committee supports and provides strategic advice to NBC regarding NBS implementation. It brings together representatives from a cross-section of biosecurity stakeholders, including governments; plant, animal and aquatic industries; farmers; unions; businesses; environmental organisations; First Nations stakeholders; research organisations; and the logistics and supply chain sector.

29 agriculture.gov.au/biosecurity-trade/policy/partnerships/nbc/intergovernmental-agreement-on-biosecurity/igabreview/2024-intergov-agreement-biosec-review

30 biosecurity.gov.au/about/national-biosecurity-committee/nbs

Other national animal health strategies and plans

NBS is both informed by and supportive of existing biosecurity strategies, plans and policies developed by biosecurity stakeholders across the system – including Australian, state and territory, and local governments, as well as industry and sectoral groups. A wide range of biosecurity strategies and frameworks have been established at all levels of government and industry, and this reflects the collaborative nature of Australia's biosecurity system.

The following sections highlight 2 key national-level, jointly developed industry–government plans, which have been created and endorsed through extensive consultation involving Australian, state and territory governments, industry bodies and non-government stakeholders such as research institutions.

While the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) acts as the secretariat and coordinator for these plans, responsibility for their implementation is shared among the stakeholders listed above.

Animalplan 2022 to 2027

Animalplan 2022 to 2027 (Animalplan) is Australia's first national action plan focused on production animal health. It brings together key themes from more than 30 existing strategies, action plans and frameworks – including NBS. It was developed through collaboration between governments, industry organisations, animal health experts and other stakeholders.

Activities were prioritised and included in Animalplan if they:

- addressed a gap or opportunity in the national animal health system
- strengthened national collaboration between industries and governments.

Animalplan was endorsed by the Animal Health Australia (AHA) Industry Forum, NBC, AGSOC and the Agriculture Ministers' Meeting (AMM). See Section 1.5 for further information on NBC, AGSOC and AMM.

Animalplan is a framework of agreed priorities with 7 national objectives:

- improve Australia's preparedness and ability to respond to emergency animal diseases
- improve Australia's surveillance and diagnostic capacity for animal pests and diseases
- improve the adoption and implementation of biosecurity practices throughout the terrestrial animal industry supply chain
- manage the risk of antimicrobial resistance
- improve animal welfare outcomes relevant to emergency scenarios
- implement industry sustainability frameworks and plans
- improve the integrity of animal health systems.

Animalplan also connects and supports the delivery of other national animal health plans, including the:

- National Animal Health Surveillance Plan[31]
- National Animal Health Diagnostics Business Plan[32]
- National Lumpy Skin Disease Action Plan[33]
- Australia's Animal Sector Antimicrobial Resistance Action Plan 2023 to 2028.[34]

Implementation, governance and funding for Animalplan activities

Implementation of Animalplan activities is a shared responsibility between government, industry and non-government organisations. The Animalplan Steering Committee, with representation from these stakeholders, prioritises, champions and oversees the implementation of Animalplan activities, and provide updates to the Animal Health Committee, AHA Members' Forum and NBC.

The Animalplan Steering Committee's role is to:

- help refine project proposals to improve the return on investments
- support project leads to identify linkages and funding opportunities, and ensure projects align with industry and government strategic priorities
- monitor and report on project progress and make recommendations.

Animalplan does not have specific funding available; however, it does provide an agreed

31 agriculture.gov.au/agriculture-land/animal/health/surveillance-diagnostics

32 agriculture.gov.au/agriculture-land/animal/health/laboratories/national-animal-health-diagnostics-business-plan

33 agriculture.gov.au/biosecurity-trade/pests-diseases-weeds/animal/lumpy-skin-disease/national-action-plan

34 agriculture.gov.au/agriculture-land/animal/health/amr/animal-sector-plan

framework to promote alignment of project objectives and national coordination. Promoting a project through Animalplan increases its visibility, allows stakeholders to become aware of and improve on previous research, links activities to avoid duplication of effort across different industries or governments, and encourages more cost-effective return on investments made across our animal health system.

Find out about existing activities or learn more about Animalplan on the Animalplan webpage.[35]

AQUAPLAN 2022–2027

AQUAPLAN 2022–2027 (AQUAPLAN) is the fourth national strategic plan for aquatic animal health in Australia. It outlines a shared vision for governments and aquatic animal industry stakeholders to guide investment and strengthen the national aquatic animal health management system. See Chapter 5 for detailed information about AQUAPLAN.

Catalysing Australia's Biosecurity

Catalysing Australia's Biosecurity (CAB)[36] was launched in 2024 and is a major collaborative initiative led by DAFF and the Commonwealth Scientific and Industrial Research Organisation. CAB work will span animal, plant and environmental biosecurity work, including research and innovation from offshore to on-farm. Its goal is to improve long-term national biosecurity outcomes by delivering innovative technologies, digital systems and capabilities that transform performance. Collaborating with all Australian biosecurity stakeholders will be critical to achieve this goal. This includes state and territory governments, private sector and industry, non-government organisations, universities, research institutes and community members. To learn more about collaboration opportunities, please contact CAB at CatalysingAustraliasBiosecurity@aff.gov.au.

1.8 Government–industry engagement and collaboration

Australian governments work closely with livestock industries, supporting consultation and collaboration to advance national animal health priorities. The livestock industries participate in policy development, support targeted animal health activities and have a key role in emergency animal disease (EAD) responses.

Collaboration with industry strengthens government animal health services and contributes to high-quality policy decisions. It also leads to joint government–industry activities to support awareness and improvement of biosecurity and welfare.

In addition to the mechanisms outlined below, there are also mechanisms for active collaboration and consultation between government and industry for EAD response planning and coordination, which are outlined in Section 1.5.

Animal Health Australia

Animal Health Australia (AHA) is the trusted and independent national animal health body in Australia, bringing together government and industry to deliver animal health and biosecurity. Established in 1996, AHA's members include the Australian, state and territory governments; major terrestrial livestock[37] industries; and other animal health organisations and service providers.

Through the coordination and management of national projects, AHA works in partnership with its members and other stakeholders to enhance preparedness for EADs and to improve animal health, strengthen biosecurity, enhance market access and foster the resilience and integrity of the Australian animal health system.

The strength of AHA is the ability of its members, both government and industry, to work together to deliver a world-class system for managing livestock biosecurity risks to help Australia maintain its coveted animal health status.

AHA continues to improve national animal health policy and agricultural prosperity through the following 4 strategic priorities:

- Strengthen Australia's capability to detect and respond to EAD incidents.
- Mitigate the risks and impacts of disease to

35 agriculture.gov.au/agriculture-land/animal/health/animal-plan

36 agriculture.gov.au/biosecurity-trade/policy/catalysing-australias-biosecurity

37 For AHA definitional purposes, livestock are animals kept for use or profit, including any class of cattle, sheep, goats, pigs, horses (including mules and donkeys), poultry, emus, ostriches, alpaca, deer, camels, buffalo and farmed aquatic species

maintain animal health and product integrity.

- Facilitate collaborative approaches to improve animal health and biosecurity outcomes.
- Drive AHA's overall effectiveness through robust governance and optimised business processes.

SAFEMEAT

SAFEMEAT[38] is a partnership between peak meat industry bodies[39] and the Australian and state and territory governments. SAFEMEAT provides policy input to, and oversees the performance of, the livestock traceability and integrity systems for red meat, for the purpose of food safety, biosecurity and market access.

SAFEMEAT contributes to design of:

- targeted residue-monitoring programs for the export red meat industry to be undertaken by the National Residue Survey
- the Livestock Production Assurance Program
- the National Livestock Identification System, the database for tracking of live cattle, sheep, goats and pigs
- National Vendor Declarations for recording food safety status of cattle, sheep, goats and pigs that are being traded
- strategies for managing the food safety implications of animals affected by disease, contaminants or chemical residues.

Other national animal health bodies and programs

Wildlife Health Australia

Wildlife Health Australia (WHA) is a national body that advances wildlife health for a healthier future for all. WHA works with multidisciplinary experts to build Australia's understanding of wildlife health, including diseases, emerging risks and their drivers. WHA coordinates wildlife health surveillance programs across Australia, supporting Australia's animal health industries, human health, biodiversity, trade and tourism.

Australia's World Organisation for Animal Health (WOAH) Focal Point for Wildlife sits within WHA and provides support to Australia's WOAH Delegate.

WHA's activities include:

- managing the national wildlife disease surveillance program and database
- facilitating investigations of disease incidents and emerging wildlife health issues
- participating in the development of national and regional strategies for wildlife health and emergency preparedness, surveillance, management and response
- advancing education and training in wildlife health.

WHA also provides resources on wildlife health and biosecurity for a range of audiences, including biosecurity, wildlife disease management and response guidelines;[40] fact sheets;[41] surveillance reports;[42] and information on specific disease incidents or threats; for example, H5 high pathogenicity avian influenza.[43]

To find out more about the origins of WHA and its role in harmonising wildlife health management across Australia, see the case study on the next page.

Research and Development Corporations

There are 15 Rural Industries Research and Development Corporations (RDCs) in Australia, including 6 plant-based, 7 animal-based, one aquatic-based and one cross-sectoral organisation (AgriFutures). RDCs drive industry improvements through making strategic investments in priority research, development and extension with a mixture of farmer levies and Australian Government funding. A summary of these RDCs is in Appendix A to this report.

38 safemeat.com.au

39 Cattle Australia (CA), Sheep Producers Australia (SPA), Goat Industry Council of Australia (GICA), Australian Lot Feeders' Association (ALFA), Australian Meat Industry Council (AMIC), Australian Livestock Exporters' Council (ALEC), Australian Pork Limited (APL) and Australian Dairy Farmers Ltd (ADF)

40 wildlifehealthaustralia.com.au/Resource-Centre/Biosecurity-Management

41 wildlifehealthaustralia.com.au/Resource-Centre/Fact-Sheets

42 wildlifehealthaustralia.com.au/Resource-Centre/Surveillance-Reports

43 wildlifehealthaustralia.com.au/Resource-Centre/H5-bird-flu

CASE STUDY

Wildlife Health Australia

The establishment of Wildlife Health Australia

The health of Australia's wildlife, people, livestock and environment are all fundamentally linked. In the 1990s, mass mortalities in wild fauna and emerging diseases of wildlife in Australia demonstrated the growing importance of wildlife disease as a threat to biodiversity, human health, agriculture, aquaculture and trade. Following a national workshop in 1999, a steering committee was formed to review Australia's wildlife disease preparedness and to develop a proposal for a way forward. Wide consultation with a diverse range of industry, government and community representatives from agriculture, health and environment sectors across the country identified the need for improved national coordination of surveillance and diagnostic information.

Addressing a critical gap in Australia's animal health system

Wild and feral animal surveillance was once seen as uncoordinated, mostly passive or opportunistic. The conservation value of wildlife and the increasing commercial value of wildlife for tourism and game meat also highlighted the need for national coordination of wildlife health surveillance and information management systems. The preferred model was the precursor to Wildlife Health Australia, the Australian Wildlife Health Network (AWHN): a simple structure that made it easy for a wide range of government and private organisations with wildlife and wildlife health interests to engage and participate. The network was set up as an unincorporated organisation hosted by an existing nationally renowned body, with a coordinator, database and website as its core. Other functions included development of wildlife management protocols, coordination of information in an emergency, advancing education and training, and prioritising and promoting surveillance and research activities.

Wildlife Health Australia's role in harmonising wildlife health management in Australia

Since then, AWHN has grown into Wildlife Health Australia (WHA), a public company limited by guarantee, and Australia's national body for advancing wildlife health for a healthier future for all. WHA now works alongside Animal Health Australia and Plant Health Australia as a central part of Australia's biosecurity arrangements, supporting and acting as a bridge between both government and non-government agencies and organisations that require information and expertise on wildlife health.

Guided by its Strategic Framework 2025–2050,[44] which sets out a bold vision for 'healthy wildlife, healthy planet', WHA is working under its key areas of focus to embed One Health, amplify the needs of wildlife, bolster resilience, and create and share knowledge. This means that coordinating and harmonising the approach to wildlife health management across Australia using a systems-based approach remains fundamental work of WHA.

44 wildlifehealthaustralia.com.au/About-Us/Who-We-Are

In addition to administering the wildlife component of the national animal health surveillance system, which draws intelligence from more than 75,000 cases annually that are seen through its partners, WHA supports focus groups. These groups bring together representatives from over 120 government and non-government organisations across agriculture, human health and the environment to address issues of mutual concern. The ongoing engagement of these partners represents more than 20 years of investment in strong, mutually productive, trust-based relationships. This approach generates an enabling environment for One Health action by facilitating cross-sector collaboration in wildlife health investigations. These efforts are essential to mitigating the risk of disease transmission to wildlife, livestock and humans. By strengthening this framework, Australia can safeguard public health, protect biodiversity, maintain agricultural productivity and uphold trade integrity, thereby delivering significant economic benefits.

With the support of its stakeholders, WHA has been designated as a Collaborating Centre for Wildlife Health Risk Management by the World Organisation for Animal Health. This achievement, made possible through collaboration with the Australian Centre for Disease Preparedness, positions WHA to contribute to wildlife health not only within Australia, but also across the region and globally. WHA also works with First Nations peoples to listen to and elevate their voices in wildlife health; undertakes activities in all Australian states and territories, including the Australian Antarctic Territory; and works with organisations in 20 countries within Asia and the Pacific. Examples of the work of WHA are presented in Chapters 2, 3 and 7 of this report.

The health status of our wildlife can also provide indicators of environmental health where other factors are at play, such as the presence of toxins or chemical contamination. WHA's work in maintaining the national wildlife disease surveillance program is vital to protect human health, agriculture, the environment and biodiversity.

By creating and sharing knowledge through national surveillance and reporting, WHA helps to strengthen resilient systems and inform credible, evidence-based prevention, preparedness and response programs for government and non-government agencies alike.

It is predicted that risks relating to wildlife health will only increase as human population growth and expanding land use bring people, wildlife, and domestic and production animals into closer contact. As a national initiative of the Australian Government and all state and territory governments, WHA is well placed to facilitate the trust-based relationships, both nationally and internationally, that will be required to meet these challenges, guided by a strategic framework with a long-term focus on One Health, systems thinking and collaboration.

Wildlife Health Australia

Milestones 2002–2025

2002
- Australian Wildlife Health Network (AWHN) is established
- AWHN builds foundational networks: government partners, zoos, universities and vets

2003–07
- Early version of Wildlife Health database (later eWHIS) launched
- Bat Health Focus Group established
- National Avian Influenza Wild Bird Surveillance Program begins

2013
- AWHN begins operating as Wildlife Health Australia (WHA)

2010–15
- Fact Sheets lead appointed
- Establishment of surveillance programs:
  - zoo-based surveillance
  - sentinel clinic surveillance
  - university-based surveillance

2016–20
- WHA expands national surveillance projects
- WildPLAN launched

2022
- WHA Emergencies Program established

2023
- WHA becomes a World Organisation for Animal Health Collaborating Centre for Wildlife Health Risk Management, extending its influence into Asia and the Pacific
- Capacity Building Program established
- 'Reflect' Reconciliation Action Plan launched

2024
- WHA transitions from an incorporated association to a company limited by guarantee

2025
- Strategic Framework 2025–2050 launched

1.9 Veterinary workforce

Veterinary education and registration

Veterinary education institutions

Australia has 7 fully accredited veterinary schools: Charles Sturt University, James Cook University, Murdoch University, Adelaide University (formerly the University of Adelaide), the University of Melbourne, the University of Queensland and the University of Sydney. An eighth school (Southern Cross University) commenced in March 2026 and welcomed its first cohort of veterinary students. The school will be assessed for full accreditation in the final year of this initial cohort. All Australian veterinary courses include strong programs in the health of companion animals, horses, farmed livestock and wildlife, as well as in animal welfare, biosecurity, epidemiology and public health. The veterinary schools also provide research, continuing education and postgraduate training relevant to Australia's livestock industries.

Every 7 years, the Veterinary Schools Accreditation Advisory Committee (VSAAC) appoints a site-visit team comprising practitioners, academics and Australasian Veterinary Boards Council (AVBC) accreditation staff. The team conducts a comprehensive review and submits its report to VSAAC. VSAAC then endorses a recommendation, and AVBC makes the final accreditation decision for each school.

The site-visit team audits each established veterinary school in Australia against the AVBC Accreditation Standards, which are structured across 4 domains and 15 themes covering governance and quality enhancement, the learning environment, curriculum and assessment, and staff and student support. The current standards took effect on 1 January 2024.

As well as being responsible for accreditation, AVBC advises on standards for veterinary registration in Australia and New Zealand, and on registration of veterinary specialists. It also assesses the skills of veterinarians who wish

to migrate to Australia and administers the Australasian Veterinary Examination to recognise the skills of overseas-qualified veterinarians.

Universities, agricultural colleges and other registered training organisations in the Australian vocational education and training sector provide pathways for veterinary nurses, animal technologists, farm managers and others involved in animal care. Students can study full-time, combine part-time training with work, or begin their training while still at school. A key strength of the system is active involvement of industry groups and employers in offering training opportunities and work experience. All training aligns with national competency standards and vocational qualifications in the Australian Qualifications Framework, which are agreed upon by industry, professional organisations and jurisdictions.

Veterinary registration

Every Australian state and territory has its own veterinary statutory body (VSB) responsible for regulating the veterinary profession to protect animal health and community confidence.

VSBs register veterinarians (and veterinary paraprofessionals in certain jurisdictions), establish and enforce educational, professional and ethical standards, oversee continuing education and ongoing competency, and manage complaints and disciplinary processes. They define scopes of practice, ensure training aligns with agreed competencies, and operate independently of political or commercial influence.

At the time of publication, Australia has close to 17,000 registered veterinarians,[45] most of whom work in clinical practice, including servicing livestock. Table 1.2 provides numbers of registered veterinarians by state and territory across Australia.

State and territory legislation governs the registration of veterinarians, assesses domestic and foreign veterinary qualifications for eligibility, licenses veterinary hospitals, and defines which therapeutic agents and invasive procedures are restricted to veterinarians. The legislation enables the investigation of complaints, enforcement of disciplinary procedures, setting of continuing professional development standards, and evaluation and registration of veterinarians as specialists.

The National Recognition of Veterinary Registration (NRVR)[46] allows veterinarians to move and practise across state borders. NRVR in Australia applies in all jurisdictions, except the Northern Territory, where Automatic Mutual Recognition has applied since 1 July 2021. Jurisdictions have adopted NRVR by

Table 1.2 Registered veterinarians in Australia in 2025

Registered veterinarians	Number of personnel
Australian Capital Territory	308
New South Wales	4,824
Northern Territory	157
Queensland	4,231
South Australia	1,024
Tasmania	458
Victoria	4,104
Western Australia	1,991
Total	**17,097**

45 Data on registered veterinarians is collected by jurisdictional veterinary boards during their respective registration cycles

46 avbc.asn.au/for-veterinarians/veterinary-registration-in-australia-and-new-zealand/working-across-jurisdictions

including clauses in their veterinary practice laws to the effect that a person who holds an interstate right to practise is deemed to be registered under the relevant law. Freedom of movement of veterinarians is useful for those responding to national crises or working for national animal enterprises.

Role of veterinarians in Australia's animal health system

Government veterinarians include Australian, state and territory employees working on technical animal health or veterinary public health policy or programs, and on-plant and regional veterinarians working at export-registered abattoirs, providing regulatory oversight and performing various verification tasks, including ante-mortem inspection and post-mortem verification. Accredited veterinarians, while not government employees, also play a critical role in ensuring the health and welfare of livestock prior to and during export. Beyond clinical and government roles, registered veterinarians are also employed in laboratories and academic institutions, and in industry roles.

Private veterinary practitioners play a vital role in communities. They provide livestock owners with expert advice on animal health, welfare and productivity, and they diagnose and treat disease. Beyond farm and performance animals, they care for pets and wildlife and play a role in protecting public health by managing and advising on diseases that can spread from animals to people. Veterinarians are also central to programs that detect and respond to significant animal disease incidents across Australia.

The ability to recognise and diagnose livestock diseases is a fundamental part of veterinary education in Australia and a requirement for registration as a veterinarian. All veterinary practitioners must be able to recognise the potential presence of an emergency animal disease (EAD) and understand the procedures to trigger an immediate response.

To maintain this awareness, state and territory authorities conduct awareness programs on notifiable and exotic animal diseases for private veterinarians, particularly those involved in livestock industries.

Each year, veterinarians across Australia have access to a wide range of conferences and training programs to support their continuing professional development. These include major events such as the Australian Veterinary Association Annual Conference and the Australian and New Zealand College of Veterinary Scientists Science Week, as well as a variety of online and in-person courses offered by state and territory authorities and their partner organisations.

The Accreditation Program for Australian Veterinarians is a national initiative managed by Animal Health Australia[47,48] designed to integrate private veterinary practitioners into Australia's national animal health system, enhancing the country's international standing in animal health capability. The program accredits non-government veterinarians to participate in government and industry animal disease control programs and contribute to export inspection and certification.

Nationally consistent conditions are in place to support effective and efficient engagement of private veterinarians in EAD responses. These arrangements allow private veterinarians to be directly engaged by state or territory governments as temporary or casual government employees, or as contractors at a nationally agreed remuneration rate. A policy was developed to assist private veterinarians and jurisdictions to implement the arrangement. The policy outlines the mechanism for engagement, either as temporary or casual government employees, or as contractors, depending on the operational need of the response, as well as provides details on remuneration. Private veterinarians can register their interest by emailing relevant state or territory contact points provided on the Australian Government Department of Agriculture, Fisheries and Forestry website.[49]

A range of veterinary paraprofessionals and other technical personnel, including veterinary nurses, animal health officers and technicians, meat inspectors, biosecurity officers and stock inspectors, support Australia's animal health system, including during EAD responses.

47 animalhealthaustralia.com.au/accreditation-program-for-australian-veterinarians

48 Management of the Accreditation Program for Australian Veterinarians will be transitioned to DAFF as of 30 June 2026.

49 agriculture.gov.au/agriculture-land/animal/health/engagement-of-private-veterinarians

CHAPTER 2

Animal health management and operations

This chapter explores the key components that maintain Australia's favourable animal health status. It covers the national animal disease reporting system, the arrangements in place for preparing for and responding to emergency animal diseases, and the layered biosecurity measures in place offshore, at our borders and within the country. The chapter also explains how Australia regulates veterinary medicines and ensures the safety of animal feed and food products. It outlines the controls in place that underpin Australia's reputation as a trusted global supplier of animals and animal products, and details the processes in place to ensure that these controls meet the import requirements of other countries.

2.1 Notifiable animal diseases

National List of Notifiable Animal Diseases

The National List of Notifiable Animal Diseases of Terrestrial Animals[50] and Australia's National List of Reportable Diseases of Aquatic Animals[51] facilitate disease reporting and control.

Occurrences of diseases in these lists must be reported to government authorities to ensure that incidents involving unusual animal mortality or sickness and diseases of public health significance are investigated.

The national lists of notifiable animal diseases reflect diseases that are listed in the Emergency Animal Disease Response Agreement (EADRA; see Section 2.4); diseases that are exotic to Australia and listed by the World Organisation for Animal Health (WOAH); zoonotic diseases that have public health significance; endemic diseases of national significance; and diseases where national disease notification is a requirement for export certification. The lists are reviewed regularly by the Animal Health Committee (see Chapter 1).

Each state and territory also has a list of notifiable diseases. These lists include all diseases on the national list as well as others that are of particular importance to individual states or territories.

Reporting requirements

Under state and territory legislation, all jurisdictions require that any suspicion of a notifiable disease must be reported to the relevant agricultural authority. This can be achieved by contacting a local veterinarian, relevant state or territory department for agriculture, or through calling the Emergency Animal Disease Hotline (1800 675 888). The Emergency Animal Disease Hotline is available nationwide for reporting pests and diseases affecting livestock, wildlife, birds and aquatic animals. The hotline is available 24 hours a day, 7 days a week, with government duty veterinarians providing expert advice and support.

State and territory governments also have obligations under EADRA (see Section 2.4) to maintain programs that promote reporting of any confirmed or reasonably suspected emergency animal disease (EAD) to the government of the affected jurisdiction within 24 hours. This obligation applies to members of the public, veterinarians and laboratories.

If an EAD is confirmed or reasonably suspected, the Chief Veterinary Officer of the affected state or territory must also formally notify the Australian Chief Veterinary Officer – Chair of the Consultative Committee on Emergency Animal Diseases (see Chapter 1) – within 24 hours of becoming aware.

2.2 Australia's biosecurity measures

Regulatory framework

Biosecurity has played a critical role in reducing risk and shaping our nation to become one of the few countries to remain free from many of the world's most invasive pests and diseases.

While our status as an island nation has been a key factor in maintaining this position, several other factors, including growth in trade volumes and transboundary disease threats, are putting pressure on the system. The *Biosecurity Act 2015* (Cth) provides the legislative framework for managing diseases and pests that may cause harm to human, animal or plant health or the environment. It explains how risks associated with people and goods entering Australian territory are managed and provides mechanisms for addressing non-compliance. In addition, it provides for biosecurity emergency powers that can be used by the Australian Government if necessary.

To protect Australia, we apply biosecurity measures offshore, at the border and onshore.

Offshore biosecurity measures

Regional collaboration

A significant amount of Australia's biosecurity risk is managed offshore. Offshore activities and international cooperation are incredibly important to strengthen regional biosecurity, through collaboration and capacity building with neighbouring countries. This includes sharing information on emerging biosecurity threats,

50 agriculture.gov.au/biosecurity-trade/pests-diseases-weeds/animal/notifiable

51 agriculture.gov.au/agriculture-land/animal/aquatic/reporting/reportable-diseases

strengthening biosecurity systems, and building capacity to prevent the spread of pests and diseases in the region.

Australia collaborates with neighbouring countries, including Indonesia, Timor-Leste and Papua New Guinea, through longstanding partnerships that focus on mutual animal health priorities. Australia's offshore efforts focus on building biosecurity system capability, including animal health workforce training, rapid risk assessments, disease surveillance, laboratory capacity building, and access to quality vaccines.

Offshore risk is also addressed by negotiating import conditions with trading partners and actively participating in the activities of international organisations such as the World Organisation for Animal Health (WOAH). See Chapter 1 for more information on Australia's engagement with WOAH.

Border biosecurity measures

Import risk analyses

As a member of the World Trade Organization, Australia is obliged to consider import requests from trading partners. In doing so, Australia considers the level of protection necessary to maintain a level of protection that is appropriate to prevent pests and diseases establishing in the country. This is referred to as the Appropriate Level of Protection (ALOP). The ALOP is defined as providing a high level of protection for human, animal and plant health, aimed at reducing risk to a very low level, but not to zero.

Before animals, plants or related products can be imported into Australia, a biosecurity risk assessment is conducted by the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) to determine whether the goods are safe to import. In many cases, this assessment takes the form of an import risk analysis. Import risk analyses help prevent the entry, establishment and spread of pests and diseases. These analyses may also be initiated in response to new information, such as emerging risks or technological developments.

Import risk analyses evaluate whether the biosecurity risks associated with a good can be effectively managed to meet Australia's ALOP. If the risks cannot be managed, trade is not permitted. If they can be managed, specific import conditions may be required. Australia's import conditions are published in the Biosecurity Import Conditions (BICON) database.[52]

The import risk analysis process follows a formal, internationally consistent methodology and uses a range of assessment tools, including a risk estimation matrix. Key factors considered in an import risk analysis include:

- the pest or disease status in the exporting country and in Australia
- the likelihood of pests or diseases entering Australia with the imported product
- the likelihood of establishment or spread of pests or diseases within Australia
- the potential consequences if establishment occurs.

In some cases, a Biosecurity Import Risk Analysis (BIRA) is conducted. This occurs when no established risk management measures exist, or when existing measures may not be suitable due to differences in the product's characteristics – such as variations in processing or handling – that could affect the associated pest or disease risk. A BIRA includes additional steps to a standard import risk analysis, such as:

- appointment of a scientific advisory group (independent scientific experts)
- publication of an issues paper, draft report and provisional report
- an opportunity for stakeholders to request a review by the Inspector-General of Biosecurity.

These steps are prescribed under the *Biosecurity Act 2015* (Cth) and the Biosecurity Regulations 2016 (Cth). The *Biosecurity Import Risk Analysis Guidelines 2016* provide further information on how the risk analysis process is conducted; the guidelines are available on the DAFF website.[53]

Other ways that DAFF manages biosecurity risks of imported live animals, animal products and biological goods include:

- auditing at the systems level or facilities in exporting countries to verify sourcing, processing and traceability systems

52 agriculture.gov.au/biosecurity-trade/import/online-services/bicon

53 agriculture.gov.au/biosecurity-trade/policy/risk-analysis/guidelines

- assessing import applications to determine whether risks can be mitigated through manufacturing processes, testing, treatment or usage restrictions
- liaising with international authorities
- issuing import permits when conditions are met
- undertaking inspection and verification programs
- suspending, revoking or amending import permits in response to changing biosecurity risks, such as emergency animal disease (EAD) outbreaks in exporting countries.

Post-entry quarantine requirements

In some cases, imported animals must undertake a period of quarantine upon arrival in Australia. This process enables animal health to be monitored for signs of diseases of biosecurity concern.

Most imported animals complete their quarantine requirements at the Australian Government's Post Entry Quarantine (PEQ) facility. The facility accommodates a diverse range of species including dogs, cats, horses, alpacas, ruminants, hatching eggs of poultry, live birds and invertebrates (including bees).

In most cases, imported dogs and cats must spend the required post-entry quarantine period at the PEQ facility. Cats and dogs are housed in climate-controlled enclosures within this facility, are fed quality food, and are provided with enrichment such as toys and activities designed to reduce stress and promote natural behaviours. Regular updates on their health and wellbeing are provided to owners during their stay.

The Australian Government also has approved arrangements in place with some industry partners who provide their own post-arrival quarantine facilities with equivalent quarantine arrangements to the PEQ facility. At the time of this report's development, these facilities are for horses, hatching eggs of poultry, some zoo animals, laboratory animals and ornamental fish. To enter an approved arrangement, and maintain approved status, facilities must demonstrate proof to DAFF that quarantine requirements can be met.

Racehorses in full training for an upcoming event may complete their quarantine requirements at facilities under an approved arrangement. Following release from quarantine (biosecurity control) by a DAFF veterinary officer, horses are considered to have the same health status as Australian horses and may be transported anywhere within Australia, subject to any state or territory requirements for entry.

Checks at the border

Border control activities focus on managing potential biosecurity threats at airports, seaports and mail centres. Officers from the Australian Government screen, inspect and clear millions of mail parcels, cargo containers, plants, animals and travellers using x-ray machines and detector dogs. Australian government veterinarians and scientists also support activities at the border, providing technical advice to help biosecurity officers manage biosecurity risks appropriately.

Detector dogs

DAFF detector dogs make an invaluable contribution to Australia's biosecurity system, helping to protect Australia from exotic pests and diseases. Detector dog teams are deployed across a variety of locations, including international passenger terminals, seaports and mail facilities.

A biosecurity detector dog can find up to 9,000 biosecurity risk items during their working career. They are trained to detect 9 target odour groups, which translates to more than 200 biosecurity risk commodities. These include:

- fresh fruit
- fresh vegetables
- fresh plant material
- seeds
- eggs
- dairy
- meat
- brown marmorated stink bugs
- queen bees.

The detector dogs' mobility and versatility enable them to operate effectively across a wide range of settings, making them an invaluable frontline detection capability. Combined with other biosecurity strategies and detection tools such as x-ray machines, detector dogs form a key part of Australia's strong biosecurity system.

Onshore biosecurity measures

Onshore activities are collaborative and include surveillance and monitoring, along with activities and programs to support emergency preparedness and management of emerging diseases.

National surveillance programs and on-farm biosecurity and quality assurance programs enable early detection of exotic pests or diseases. They also provide assurance of Australia's ongoing freedom from significant animal diseases, supporting both domestic confidence and access to international export markets. These programs include the Northern Australia Quarantine Strategy, the National Arbovirus Monitoring Program, the Transmissible Spongiform Encephalopathies Freedom Assurance Project, and several surveillance programs focused on native and introduced wildlife managed by Wildlife Health Australia.

The National Livestock Identification System for animal identification and traceability also supports Australia's capacity to respond quickly to an EAD outbreak.

Further details on Australia's surveillance system are provided in Chapter 3, while information on animal identification and traceability systems, and on-farm biosecurity and quality assurance programs can be found in Chapter 4.

Management of biological risk materials may continue after importation, if required, to mitigate biosecurity risks. This includes regulatory mechanisms such as approved arrangements with industry and research organisations to ensure the safe handling, use and containment of biological risk materials.[54]

2.3 Australia's export controls

Regulatory framework

Efficient regulation of exports is the cornerstone of Australia's reputation as a source of high-quality agricultural products. The Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) regulates the export of agricultural goods, ensuring they meet the requirements of importing countries.

The department's responsibilities and powers are defined in the *Export Control Act 2020* (Cth), Export Control Rules and associated legislation. Together, these provide the legal framework for how agricultural exports are approved, inspected and certified. Export services are funded through a system of fees and charges applied to exporters.

Certain commodities are classified as 'prescribed goods' under the legislation. These include:

- milk and milk products
- eggs and egg products
- fish and fish products
- live animals
- meat and meat products
- poultry meat and products
- rabbit and ratite meat and products
- wild game meat and products
- wood and woodchips
- organic goods
- plants and plant products.

Each type of prescribed good is regulated under its own specific Export Control Rules (e.g. Export Control [Meat and Meat Products] Rules 2021),

54 agriculture.gov.au/biosecurity-trade/import/arrival/arrangements/biological

which outline the detailed requirements for export eligibility and certification.

Reflecting a risk-based approach to regulation, non-prescribed goods – such as animal by-products, pet food, honey, processed foods and wool – are not subject to the same mandatory controls under Australian export laws. In addition, some low-risk animal by-products may be exempt from export controls altogether, such as fish oil for manufacturing or pharmaceutical use, and fish meal for pet food. However, when an importing country requires certification, DAFF will become actively involved to provide the necessary documentation and assurance of compliance.

This regulatory framework ensures that Australia continues to meet the expectations of international markets while supporting the competitiveness and integrity of its agricultural exports.

Manual of Importing Country Requirements

Exporting agricultural products from Australia often involves meeting specific requirements set by individual trading partners. These requirements can vary significantly between countries and may include additional conditions for the approval of export establishments.

To support exporters, DAFF maintains the Manual of Importing Country Requirements (Micor)[55] – a comprehensive online resource that outlines the import conditions imposed by overseas markets for Australian agricultural goods. Micor is regularly updated as DAFF becomes aware of changes to importing country regulations.

While Micor serves as a valuable guide, it is not legally binding. Exporters are responsible for verifying the current import requirements directly with their overseas customers or the relevant authorities in the destination country.

Exporting animal products

Approving, registering and monitoring export establishments

All prescribed animal products for which export certification is required must be inspected in a registered establishment. An establishment is the physical premises or fishing vessel that contains these goods. To be registered, an establishment must be appropriately constructed and equipped, and operate in an effective and hygienic manner.

The purpose of registering an establishment is to:

- ensure that the facilities are fit for purpose for the preparation and inspection of prescribed goods for export
- ensure that appropriate hygiene and pest control measures are maintained
- enable effective sanctions if an establishment fails to meet the required standards, such as suspension or revocation of registration or suspension of export operations at an establishment.

DAFF conducts audits of export operations carried out in registered establishments to make sure they meet export legal requirements.

How a registered establishment will meet its export legal requirements is documented in an arrangement. This becomes an approved arrangement after DAFF approves it. An approved arrangement is required for establishments (including fishing vessels) involved in the export of dairy, egg, fish and meat products.

An approved arrangement is a documented food safety management system, which describes how an establishment manages biosecurity, food safety and traceability. It must document how the registered establishment complies with export legislation and importing country requirements.

Establishments seeking to become export registered must be audited by DAFF as part of the registration process. DAFF may also conduct follow-up audits to assess the first full run of an establishment's processes before handing responsibility for scheduled audits to state and territory regulatory authorities, under agreed service delivery arrangements. This does not apply to multi-commodity stores that are registered for meat as well as other products; these sites will always be audited by DAFF. Division of responsibilities for scheduled audits of export-registered dairy, egg and fish establishments for each state and territory can be found on the DAFF website.[56]

55 agriculture.gov.au/biosecurity-trade/export/micor

56 agriculture.gov.au/biosecurity-trade/export/from-australia/documentation-registration-licensing/audit-arrangements

Approved auditors can also perform ongoing monitoring and auditing of registered establishments involved in the preparation or storage and loading of fish, egg, dairy and meat products for export as food. An approved auditor is a person trained and approved by DAFF. The register of approved auditors can be found on the DAFF website.[57]

Some importing countries require additional establishment listing, meaning they maintain a formal list of approved facilities eligible to export to their market. In certain cases, approval of an establishment may depend on a successful audit conducted by officials from the importing country. DAFF facilitates these audits by hosting international delegations and coordinating inspections of Australian establishments seeking market access.

Australian Export Meat Inspection System

The Australian Export Meat Inspection System (AEMIS)[58] is an integrated set of controls specified and verified by the Australian Government that ensure the safety, suitability and integrity of Australian meat and meat products. With a full-time presence, departmental On-Plant Veterinarians (OPVs) are responsible for ante-mortem inspection and for verifying post-mortem inspection and processor hygiene practices at export-registered establishments. Post-mortem inspection is delivered by departmental officials called Food Safety Meat Assessors (FSMAs), or by non-departmental Australian Government Authorised Officers (AAOs), who are subject to ongoing performance verification against national standards.

Licensing

Exporters of meat and meat products must also apply to DAFF for a licence to export meat. Licensed meat exporters must be accredited by AUS-MEAT, the meat industry standards body.

Export documentation requirements

Export documentation verifies that the commodity meets Australian standards, legislated export requirements and the requirements of the importing country.

An export permit is mandatory for all prescribed goods exported from Australia. The main function of an export permit is to verify that export legislative requirements have been met and to verify compliance with importing country requirements.

An exporter must also apply for a government certificate. A government certificate is an official document issued by DAFF containing details about the product being exported and confirming that the product meets importing country requirements. The government certificate is endorsed by either a veterinary officer or authorised officer, depending on importing country requirements.

Australian exports are free of many pests and diseases, because of our unique island geography, and all food exported from Australia meets rigorous, science-based regulatory standards. Importers can be assured they are buying quality Australian produce that meets all Australian standards and importing country requirements.

National Residue Survey

The National Residue Survey (NRS)[59] is delivered by DAFF and monitors residues in Australian agricultural products through both random and targeted testing programs. Among other activities, the NRS ensures that participating industries satisfy Australian export certification and importing country requirements. See Section 2.7 for further information about the NRS.

Exporting live animals

Livestock

Australia exports livestock by sea and air all over the world. Livestock animals exported from Australia include sheep, goats, cattle, deer, buffalo and camelids.

The livestock export industry provides over $1.6 billion to the Australian economy annually. Many rural and regional communities rely on the trade to provide valuable income and employment to their region.

Australia enforces high standards for the export of livestock. These standards reflect the values of our livestock export industry and the Australian community. This includes regulation to enforce

57 agriculture.gov.au/biosecurity-trade/export/from-australia/approved-auditors/registerofapprovedauditors

58 agriculture.gov.au/biosecurity-trade/export/controlled-goods/meat/elmer-3/meat-inspection-aemis-package

59 agriculture.gov.au/agriculture-land/farm-food-drought/food/nrs

our strict Australian legislative and animal welfare requirements, and ensuring compliance with importing country requirements.

To export livestock, exporters must have:

- a livestock export licence
- an approved Exporter Supply Chain Assurance System (ESCAS) for export of livestock for human consumption (known as feeder or slaughter livestock)
- an approved arrangement and an approved export program, or an exemption from these requirements as a small and infrequent exporter.

ESCAS[60] is a regulatory requirement for exporters of feeder or slaughter livestock from Australia. ESCAS requires exporters to have arrangements in place for the humane handling and slaughter of livestock in the importing country. Australia is the only country in the world with this kind of regulatory system.

An approved arrangement outlines each step in the preparation of livestock for export. It also describes the governance arrangements of the business. The approved arrangement describes how exported livestock will meet:

- the Australian Standards for the Export of Livestock[61]
- importing country requirements
- other relevant Australian, state and territory legislation.

Livestock exporters with an approved arrangement must also have an approved export program, which describes the activities that an Australian Government–accredited veterinarian (AAV)[62] must perform.

The AAV ensures:

- animals are prepared as per importing country requirements and the Australian Standards for the Export of Livestock
- the health and welfare of the livestock are maintained during the export voyage or journey.

60 agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/livestock/exporters/escas

61 agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/livestock/australian-standards-livestock

62 agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/livestock/accredited-veterinarian

For certain voyages, independent observers,[63] who are trained DAFF staff, accompany voyages of livestock exported by sea. Observers play an assurance role within Australia's livestock export regulatory system. They do not take an active role in animal management during the voyage; rather they monitor, review and/or audit exporter arrangements on board livestock export vessels.

Their focus is to verify and report on the:

- implementation of individual exporter arrangements, including the exporter's approved arrangement and approved export program
- activities undertaken by the on-board AAV or accredited stockperson
- exporter's effectiveness in managing animal health and welfare, including meeting the Australian Standards for the Export of Livestock.

A summary of the observer's key observations is published on the DAFF website.[64]

DAFF also reports to Parliament every 6 months about livestock mortalities on every sea voyage. Reports are compiled from information provided

63 agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/livestock/exporters/independent-observers

64 agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/livestock/regulatory-framework/independent-observer-reports

to the department by the ships' masters, as required by the Marine Orders Part 43 under subsection 425(1AA) of the *Navigation Act 1912* (Cth). A summary of information in the reports to Parliament can be found on the DAFF website.[65]

Australia is committed to maintaining a strong and efficient regulatory framework for livestock exports. As the regulator, DAFF is committed to continuous improvement and has several live animal export reform activities in progress. More information about the live animal export reforms is available on the DAFF website.[66]

Companion animals and horses

Each country has its own health requirements for importing animals. These can be complex and can change with limited notice.

Exporters are required to submit a Notice of Intention to Export Live Animals (Other Than Livestock) to DAFF. A pre-export appointment with the relevant departmental regional office is booked at the same time.

Leading up to the pre-export appointment, animals must be prepared under the supervision of a registered veterinarian. Depending on importing country requirements, this preparation may include:

- pre-export isolation
- health testing and treatments
- veterinary examinations
- preparation of documentation for the export permit and a health certificate.

The documentation needed for an export permit and a health certificate may include:

- import permits and accredited translations where required
- laboratory reports
- vaccination certificates
- treatment, testing, isolation and examination declarations.

Within 72 hours of export, or a period set by the importing country, a final health and welfare examination must be conducted by a registered veterinarian. A Declaration of Pre-Export Veterinary Health and Welfare Inspection for Live Animals (Other Than Livestock) must be completed at this time.

Following this, a certifying veterinary officer from DAFF will assess the documentation to determine whether an animal is eligible for export. This assessment is conducted during the pre-export appointment at the relevant departmental regional office. Pet transport companies often attend this appointment on the owner's behalf.

An export permit and health certificate will be issued by the certifying veterinary officer when they are satisfied the animal has been prepared in line with the importing country's requirements and with Australian export legislation.

Role of private veterinarians in live animal exports

Registered veterinarians can prepare animals other than livestock for export. This includes dogs, cats, mice, poultry and horses.

Veterinarians must be an AAV[67] to prepare livestock for export (see under 'Livestock' earlier in this section for further information).

2.4 Emergency animal disease preparedness and response

Core components

An emergency animal disease (EAD) is one that does not occur in endemic form in Australia, a variant of an endemic disease, a serious infectious disease of unknown or uncertain cause, or a severe outbreak of a known endemic disease, and considered to be of national significance with serious social or trade implications.

In the event of an EAD incident of national significance, a formal coordinated response mechanism is activated. This response brings together government officers, livestock producers, industry representatives, private veterinary practitioners and emergency services personnel to help eradicate or control the disease.

65 agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/live-animal-export-statistics/reports-to-parliament

66 agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/livestock/reform

67 agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/livestock/accredited-veterinarian

Australia's EAD preparedness and response arrangements are well established and have consistently demonstrated their effectiveness and efficiency in managing outbreaks. Examples include the successful eradication of virulent Newcastle disease, equine influenza and high pathogenicity avian influenza in poultry. See the end of this section for a detailed timeline of eradicated EADs in Australia.

The core components of these arrangements – outlined in this section – work together to ensure a unified response. Clearly defined roles and responsibilities enable all parties to act swiftly and confidently during an EAD event.

Emergency Animal Disease Response Agreement

The Australian Government, state and territory governments, livestock industries (currently 14 industries) and Animal Health Australia (AHA) are all signatories to the Emergency Animal Disease Response Agreement (EADRA), more formally known as the Government and Livestock Industry Cost Sharing Deed in Respect of Emergency Animal Disease Response. This legal agreement (a world first) establishes arrangements for the early detection of and rapid response to over 60 EADs. It provides a mechanism for sharing eligible costs for EAD responses, and allows all affected government and industry parties to have a role in the decision-making process. In this way, the agreement reduces uncertainty over management and funding arrangements for responses to EAD incidents, facilitating rapid and effective responses.

EADRA establishes basic operating principles and guidelines, and defines roles and responsibilities of the parties involved. It provides for formal consultation and dispute resolution between government and industry on resource allocation, funding, training, risk management and ongoing biosecurity arrangements.

Signatories to EADRA are committed to:

- minimising the risk of EAD incursions by developing and implementing biosecurity strategies and plans for their jurisdictions or industries
- maintaining capabilities for early detection and effective response
- maintaining capacity to respond to EADs by developing, delivering and participating in training so that adequate numbers of trained personnel are available to perform the functions specified in the Australian Veterinary Emergency Plan (AUSVETPLAN)
- participating in decision-making relating to EAD responses, through representation on the Consultative Committee on Emergency Animal Diseases (CCEAD) and the National Management Group (NMG) established for each EAD incident
- sharing eligible response costs of EAD incidents using pre-agreed formulas.

AHA manages EADRA on behalf of signatories, and oversees regular variations and amendments so it remains relevant, flexible and functional. EADRA is also formally reviewed every 5 years, with the next formal review scheduled for 2027. The current version of EADRA is on the AHA website.[68]

Australian Veterinary Emergency Plan

Each disease listed in EADRA has a corresponding AUSVETPLAN response strategy or response policy brief outlining an agreed approach for managing an outbreak. AUSVETPLAN comprises nationally agreed resources that guide decision-making in response to EADs. It outlines Australia's preferred approach to responding to EADs of national significance, providing flexibility to address individual incidents in the different contexts that exist across Australia.

AHA manages AUSVETPLAN on behalf of its members, and supports continuous improvement to reflect changes in understanding of EADs and management of EAD responses.

AUSVETPLAN manuals can be downloaded from the AHA website.[69]

Australian Aquatic Veterinary Emergency Plan

The Australian Aquatic Veterinary Emergency Plan (AQUAVETPLAN) is a series of technical response plans that describe the proposed Australian approach to an aquatic EAD. For further details on AQUAVETPLAN and Australia's preparedness for aquatic EADs, refer to Chapter 5.

68 animalhealthaustralia.com.au/eadra

69 animalhealthaustralia.com.au/ausvetplan

Consultative committees

In the event of an EAD outbreak, national coordination is led by CCEAD and the NMG.

CCEAD, chaired by the Australian Chief Veterinary Officer, brings together government, laboratory and industry representatives to provide technical advice and coordinate response efforts. See Chapter 1 for more information about CCEAD.

The NMG, comprising senior government and industry leaders, makes decisions on cost-shared eradication programs under EADRA for each EAD response. See Chapter 1 for more information about the NMG.

National Biosecurity Communication and Engagement Network

The National Biosecurity Communication and Engagement Network (NBCEN) coordinates consistent public messaging during biosecurity emergencies. It supports national response efforts by bringing together communication leads from government and partner organisations. See Chapter 1 for more detail on NBCEN.

Nationally Agreed Standard Operating Procedures

Nationally Agreed Standard Operating Procedures (NASOPs) provide guidance to response personnel undertaking operational tasks in biosecurity emergencies. NASOPs aid jurisdictions to develop local procedures and work instructions.

The Animal Health Committee (see Chapter 1) oversees the development and maintenance of NASOPs for tasks common across biosecurity emergency responses (such as briefings and handovers) and for tasks focused on EADs (such as personal decontamination and sample collection).

What happens in an emergency animal disease response?

Operational responsibility for the response to an EAD lies with the government of the jurisdiction affected by the incident. However, a wide range of government, industry and other key stakeholders work together for successful outcomes to EAD responses. Figure 2.1 outlines the national EAD response process.

Generally, the government department of agriculture or primary industries from the affected jurisdictions will manage the response to an EAD incident. Pre-existing emergency management and whole-of-government arrangements allow these departments to draw on resources and expertise from other agencies, including state and territory emergency services, public safety services and other government departments, as needed.

Each affected jurisdiction develops an EAD response plan (EADRP), which outlines the objectives and overall approach for the response to the incident. The EADRP is expected to align with the disease response approach in AUSVETPLAN (as AUSVETPLAN is nationally agreed) and should consider the epidemiology and context of the incident in applying such guidance.

As already outlined, Australia uses consultative committees and management groups to achieve national coordination of EAD responses and support outcomes in the national interest. These committees and groups also have a role in invoking cost sharing of the response under EADRA.

CCEAD (see Chapter 1) provides technical review of the EADRP and has responsibility for national technical coordination of the response. When cost sharing for the response is sought under EADRA, CCEAD provides technical advice to the NMG (see Chapter 1) established for that incident. The NMG receives technical advice and considers policy and financial issues associated with the proposed EADRP. The NMG's agreement to the EADRP is an undertaking to share eligible costs under EADRA. The specific responsibilities of CCEAD and the NMG in a cost-shared EAD response are documented more fully in EADRA.[70]

The Chief Veterinary Officer of each affected jurisdiction oversees implementation of disease control measures agreed to in their EADRP, ensuring compliance with relevant legislation. To support this, each affected jurisdiction will use, or develop as necessary, a range of detailed incident action plans, operating procedures and work instructions. Each jurisdiction may also establish response coordination and control centres, based on the structures outlined in the Australasian Inter-service Incident Management System or

70 animalhealthaustralia.com.au/eadra

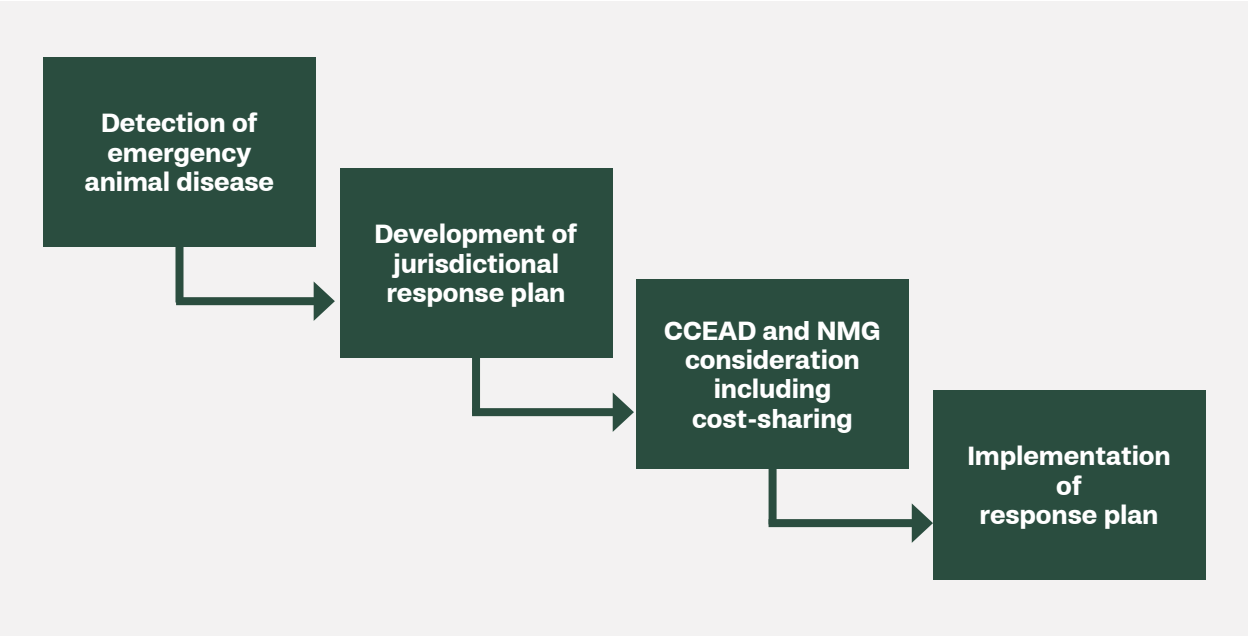


Figure 2.1 The Australian emergency animal disease response process

CCEAD: Consultative Committee on Emergency Animal Diseases; NMG: National Management Group.

the Biosecurity Incident Management System,[71] which are contextualised to EAD responses in the AUSVETPLAN control centres management manuals.[72]

State and territory Chief Veterinary Officers make ongoing decisions on follow-up disease control measures in consultation with CCEAD and, when applicable, the NMG, based on epidemiological assessment of the incident.

Stand-down of a response occurs when the response objective (e.g. disease control or eradication) has been met; when meeting the response objective is no longer considered feasible, cost-effective or beneficial; or when the NMG formally declares the response over.

Information about current emergency responses is provided on the national pest and diseases outbreak website.[73]

Under its reporting obligations to the World Organisation for Animal Health (WOAH), Australia also notifies WOAH of outbreaks of WOAH-listed diseases. See Chapter 1 for further information about Australia's disease reporting obligations to WOAH.

Other mechanisms supporting national coordination and alignment

Australian Government Biosecurity and Agricultural Response Plan

In addition to the national arrangements outlined above for responding to an EAD outbreak, the Australian Government Biosecurity and Agricultural Response Plan (AUSBIOAGPLAN) is the Australian Government's national plan to respond to domestic biosecurity crises under the Australian Government Crisis Management Framework (AGCMF).

AUSBIOAGPLAN outlines crisis coordination arrangements between Australian Government agencies during biosecurity incidents impacting animal or plant health, the environment or the economy. AUSBIOAGPLAN is published on the Department of Agriculture, Fisheries and Forestry (DAFF) website.[74]

AUSBIOAGPLAN is designed to be read in conjunction with the AGCMF. The AGCMF outlines the roles and responsibilities of the Australian Government in preparing for, responding to and recovering from crises. It is the Australian Government's capstone policy framing Australia's national crisis management arrangements.[75] The

71 agriculture.gov.au/biosecurity-trade/policy/partnerships/nbc/nbepeg/bims

72 animalhealthaustralia.com.au/ausvetplan

73 outbreak.gov.au

74 agriculture.gov.au/biosecurity-trade/policy/emergency

75 pmc.gov.au/resources/australian-government-crisis-management-framework-agcmf/preparedness

AGCMF ensures effective collaboration across government agencies during response activities. This coordination is particularly critical for an EAD response that may require involvement from government agencies responsible for environmental management and human health, especially in the case of zoonotic diseases.

National Emergency Management Agency

The National Emergency Management Agency (NEMA)[76] is the central coordination point for domestic whole-of-government incident management. NEMA leads Australia's disaster and emergency management efforts by providing informed strategic oversight and guidance, and ensures a constant connection with local communities.

NEMA manages the Australian Government Crisis and Recovery Committee and the National Coordination Mechanism who take the necessary steps to ensure whole-of-government decision-making is timely, accurate and coordinated.

See the case study at the end of Section 2.4 for further insight into how NEMA supports national coordination and alignment during crises, including examples of initiatives that assist farmers and producers in recovering and building resilience following an emergency.

Human resources

Australia maintains a robust biosecurity workforce with biosecurity officers and government veterinarians employed across federal, state and territory governments. These personnel are located in capital cities, regional centres and rural communities, ensuring that resources can be rapidly redirected to an EAD response if required. Additionally, Australia has a National Biosecurity Response Team (NBRT) of almost 70 trained and experienced personnel that can be accessed by a jurisdiction's biosecurity agency when responding to a biosecurity incident. The team is cross-sectoral and could be deployed to an animal, plant, aquatic or environmental biosecurity incident response.

If Australia requires additional resources during an EAD response, the International Animal Health Emergency Reserve (IAHER) arrangement provides access to additional human resources from other countries.

In the event of a major EAD outbreak in Australia, there may be a significant demand for information access. The Australian Government through Services Australia can stand up a separate call centre dedicated to the provision of national information to the public, which will be supported by the outbreak.gov.au[77] website.

National Biosecurity Response Team

NBRT[78] is an important component of Australia's biosecurity preparedness and response framework.

The NBRT program's efforts align with priorities from the National Biosecurity Strategy (see Chapter 1), particularly those associated with government developing a national strategy for workforce capacity and training.

The NBRT program fosters strong partnerships and collaboration to strengthen national biosecurity preparedness and response capabilities; builds, maintains and provides access to a skilled national workforce; and provides a continuous learning culture across jurisdictions to improve and modernise biosecurity preparedness and response arrangements.

International Animal Health Emergency Reserve

Australia is a signatory to the IAHER arrangement, along with Canada, Ireland, New Zealand, the United Kingdom and the United States of America. The arrangement permits signatory countries to share personnel and resources during an EAD outbreak. Activation of the IAHER arrangement can help support an EAD response if additional resources are required. The arrangement also allows Australian personnel to receive valuable practical response experience, which strengthens our response capacity.

Emergency animal disease response funding

Cost sharing

Funding arrangements for EAD responses are addressed through EADRA, which sets out a cost-sharing arrangement between the Australian and state or territory governments and industry.

76 nema.gov.au

77 outbreak.gov.au

78 nbrt.animalhealthaustralia.com.au

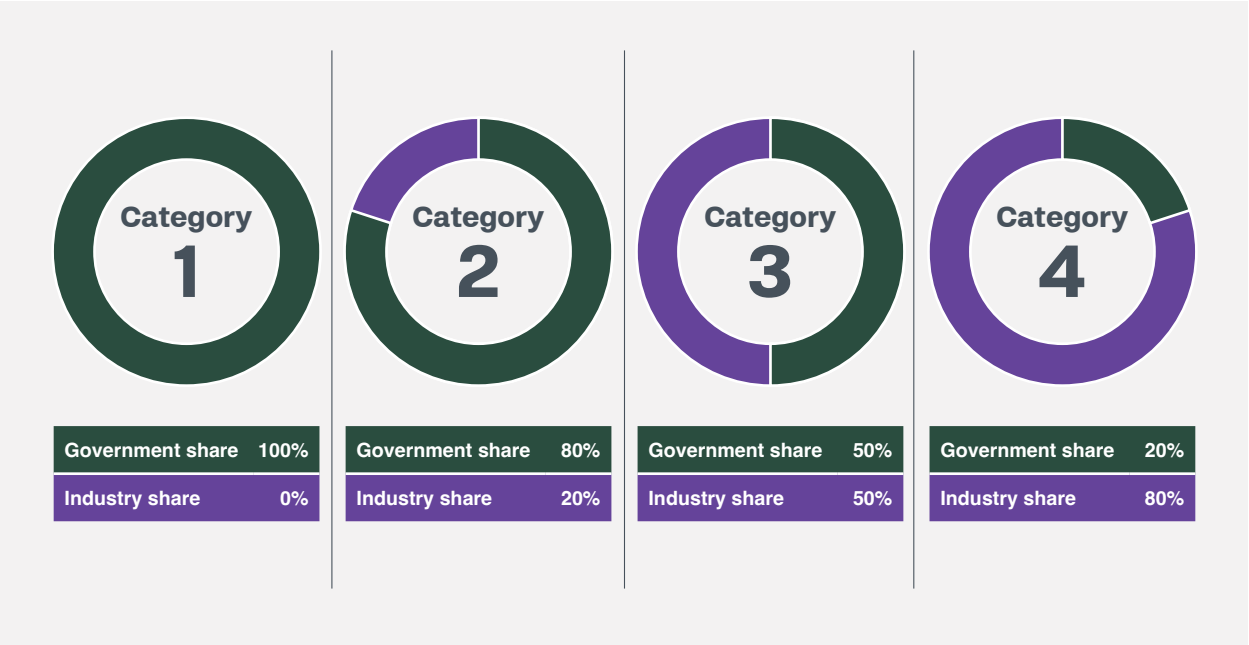


Figure 2.2 Cost-sharing arrangements between government and affected industries

Source: Animal Health Australia (animalhealthaustralia.com.au/eadra/eadra-cost-sharing)

Cost sharing is a key principle of EADRA, ensuring that governments and affected industries fairly share the financial burden of responding to an outbreak. The goal is to ensure that those who benefit from the eradication or containment of a disease contribute equitably to the cost of the response.

Cost sharing is activated when the NMG (see Chapter 1) approves an EADRP developed by the affected state or territory and endorsed by CCEAD (see Chapter 1).

The EADRP for a response clearly identifies what activities will be delivered under the plan and the associated expenses that the state or territory is seeking to cost share. Eligible activities and associated costs include additional staffing costs, laboratory testing, logistics, essential equipment, and compensation for destroyed livestock or property. The proportion of costs shared depends on the disease category – for example, for Category 2 diseases like foot-and-mouth disease, governments cover 80% and industry 20%.

Disease categorisation is determined by an expert panel. Categories are based on the impact of the disease on industry versus the impact on wider affected parties (public impacts). Figure 2.2 illustrates the disease categories and corresponding cost-sharing arrangements.

Compensation

Compensation is intended to enable owners of animals that die from an EAD or are ordered for destruction because of an EAD response to recover and restock their animals, once approved by state or territory agricultural departments. Compensation costs may be eligible for cost sharing under EADRA if they are part of an approved EADRP. Compensation is managed under state and territory legislation.

Wildlife management

The Wildlife Health Australia (WHA) Emergencies Program[79] was established in 2022 as part of a 4-year Australian Government–funded One Health surveillance initiative. The extension of the One Health surveillance initiative in June 2025 resulted in WHA receiving a further $7 million to support activities across all programs. The Emergencies Program aims to protect native wildlife and ecosystems, and enhance prevention, detection and response to emerging disease threats. The goal of the WHA Emergencies Program is to work with others to safeguard the health, welfare and biodiversity of Australian wildlife in all emergencies using a collaborative One Health approach.

79 wildlifehealthaustralia.com.au/Our-Work/Emergencies

The Emergencies Program works across all hazards as a key strategic partner in prevention and preparedness activities for wildlife in emergencies. The program has developed a guidance document that identifies the principles of effective wildlife management in emergencies.[80] The document draws on wildlife emergency response plans and reviews of emergency response principles relating to wildlife and animal management across all hazards.

Through the Emergencies Program, WHA is continuing its collaborative work in EAD preparedness for a range of diseases affecting wildlife. A focus in recent years has been preparedness for H5 high pathogenicity avian influenza (HPAI), also known as H5 bird flu. WHA has developed several H5 bird flu preparedness resources and continues to collaborate actively with government agencies and other stakeholders to ensure alignment and inclusion of wildlife in preparedness and planning. A dedicated webpage has been created to enable easy access to key resources.[81] A notable recent achievement has been the launch of AviFluMap,[82] a model tool for H5 bird flu in Australia's wild birds, which allows users to better understand the potential role of wild birds in the introduction and spread of H5 bird flu in Australia.

The *Guidelines for Management of an Emergency Wildlife Disease Response*[83] developed in 2020 were updated in 2023. These guidelines use the AUSVETPLAN (covered earlier in this section) framework and provide a high-level document for guiding the management of an emergency wildlife disease response in Australian native animals.

Other preparedness activities and resources

Emergency animal disease response training

A range of training opportunities is available across Australia to increase awareness of EADs and response management, and to develop skills in emergency response functions.

Face-to-face EAD response awareness training provides government officers, private veterinary practitioners and livestock industry workers with guidance on the role they can play to support the implementation of an EAD response in their jurisdiction. This type of training is usually provided by state and territory governments and industry bodies. Many of these courses are now also available via the National Biosecurity Training Hub.[84]

Online courses run by AHA provide a general introduction to EAD response arrangements in Australia, and the role and responsibilities performed by government and industry representatives.

AHA also holds twice-yearly scenario-based workshops to prepare industry executives, senior government officers and technical specialists involved with the 2 key response decision-making bodies, the NMG and CCEAD.[85] See Chapter 1 for further information about the NMG and CCEAD.

In addition, AHA runs several Liaison-Livestock Industry workshops[86] each year to support the deployment of industry representatives into EAD control centres.

AHA further supports national EAD response awareness through a range of national EAD education and communication resources.[87] AHA consults with government and industry members to develop these resources.

Emergency animal disease resources for veterinarians

In 2019, DAFF, in partnership with CSIRO, published a comprehensive online field guide for EADs.[88]

The guide was developed to support veterinarians in the field to include EADs in their differential diagnoses, and to take appropriate action if presented with signs of an unusual disease. DAFF has recently added 12 new chapters to this field guide.

An EAD online training package[89] – collaboratively developed by all Australian veterinary schools and

80 wildlifehealthaustralia.com.au/Portals/0/OurWork/Programs/Emergencies/Principles_effective_wildlife_mgt_in_emergencies.pdf

81 wildlifehealthaustralia.com.au/Resource-Centre/H5-bird-flu

82 hpairisk.deakin.edu.au

83 wildlifehealthaustralia.com.au/Portals/0/ResourceCentre/BiosecurityMgmt/Emergency_Wildlife_Disease_Response.pdf

84 biotraininghub.com.au/courses/?topic=EAD%20vet%20resources

85 animalhealthaustralia.com.au/national-management-group-and-consultative-committee-on-emergency-animal-diseases-training

86 animalhealthaustralia.com.au/liaison-livestock-industry-role

87 animalhealthaustralia.com.au/resource-hub/training

88 outbreak.gov.au/prepare-respond/identify-pests-diseases/emergency-animal-diseases-field-guide

89 eadonline.com.au

information technology partner Epi-interactive – was also released in 2019 to educate veterinarians and veterinary students in the detection, investigation, reporting and management of EADs. Since then, 2 extra disease modules have been added to the package with another 2 in the development stage.

Simulation exercises

Australia conducts regular animal health simulation exercises at national and state and territory levels to evaluate response plans and associated capabilities. These exercises provide government, industry and NBRT with opportunities to test existing response arrangements, policies, procedures, decision-making processes, communication and coordination. These activities help ensure that both government and industry are equipped to respond effectively to disease threats.

AHA also plays a vital role in delivering and supporting simulation exercises. AHA is well positioned to bring together its government and livestock industry organisation members and other biosecurity stakeholders, and to facilitate access to external expertise. AHA has contributed to numerous exercises, either through NBRT or via member-funded initiatives. Previous simulation exercises with AHA involvement are listed on the AHA website.[90]

DAFF routinely reports information about simulation exercises conducted in Australia to the World Organisation for Animal Health (WOAH).[91] Information on several recent national exercises is available on the DAFF website,[92] and summaries of simulation exercises conducted each year are published in the *Animal Health in Australia* annual reports.[93]

Vaccine banks and supply agreements

Australian governments and livestock industries collaboratively fund vaccine banks[94] to allow rapid production, storage and delivery of foot-and-mouth disease (FMD) or anthrax vaccine should it be required in an outbreak.

AHA manages these vaccine banks on behalf of its members. AHA also has contracts in place for vaccination equipment, cold storage and distribution of vaccines.

The manufacture, storage and supply agreement for the Australian FMD Vaccine Bank was renewed in December 2024 and is in effect through to December 2029.

The Anthrax Vaccine Bank has been renewed for the period 2025–2026, and work has commenced to renew the arrangements beyond this period.

In June 2023, an LSD vaccine supply agreement was signed to ensure an initial supply of LSD vaccine will be available for Australia, Timor-Leste and Papua New Guinea, if required. The doses are being held in a secure overseas location.

The LSD vaccine supply agreement means we will have priority access to a high-quality vaccine that can be used quickly to protect Australian animals if Australia needs to respond to an outbreak, or it can be used overseas to reduce the risk to us by protecting our near neighbours.

'Biosecurity TopWatch' and 'Biosecurity – it's everyone's business'

'Biosecurity TopWatch' and 'Biosecurity – it's everyone's business' are public awareness campaigns that seek to improve the likelihood of early detection of an exotic pest or disease incursion.

Various strategies have been used to promote public interest and awareness in biosecurity and the consequences of an exotic pest or disease incursion into northern Australia. These strategies include the engagement of celebrity and industry biosecurity champions to endorse targeted messaging; digital animations to raise awareness of target diseases such as avian influenza,[95] lumpy skin disease[96] and rabies;[97] and virtual reality experiences.[98]

These initiatives continue to be facilitated through the Northern Australia Quarantine Strategy (see Chapter 3).

90 animalhealthaustralia.com.au/training-exercises

91 woah.org/en/what-we-do/animal-health-and-welfare/disease-data-collection/simulation-exercises

92 agriculture.gov.au/biosecurity-trade/policy/emergency/exercises

93 animalhealthaustralia.com.au/ahia

94 animalhealthaustralia.com.au/vaccine-banks

95 agriculture.gov.au/biosecurity-trade/policy/australia/northern-biosecurity/avian-influenza-animation

96 agriculture.gov.au/biosecurity-trade/policy/australia/northern-biosecurity/lumpy-skin-disease-awareness

97 agriculture.gov.au/biosecurity-trade/policy/australia/northern-biosecurity/rabies-awareness

98 agriculture.gov.au/biosecurity-trade/policy/australia/northern-biosecurity/biosecurity-everyones-business-vr

Timeline of eradicated diseases

1989

Australia declared freedom from bovine brucellosis

Australia declared freedom from bovine brucellosis (*Brucella abortus*) in 1989. Targeted surveillance for *B. abortus* continued until the end of 1993. Australia uses general surveillance to demonstrate its ongoing freedom from *B. abortus*. State and territory veterinary laboratories test for *B. abortus* as part of abortion investigations and for other reasons. Additional testing is done to meet export requirements for certain markets.

1997

Australia declared freedom from bovine tuberculosis

Australia declared freedom from bovine TB (*Mycobacterium bovis*) in 1997, in accordance with recommendations in the World Organisation for Animal Health (WOAH) Terrestrial Animal Health Code.

2002

Australia's last case of bovine tuberculosis was reported in buffalo

The last case of bovine TB was reported in 2002 in buffalo. Australia uses general surveillance to demonstrate its ongoing freedom from bovine TB. In addition, the Australian Standard for Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS 4696:2023)[99] requires that all carcasses and their parts are inspected by a meat safety inspector. Because bovine TB is an exotic animal disease in Australia, suspicious granulomas identified when cattle carcasses are inspected at slaughter establishments, including export abattoirs, are submitted for testing to exclude *M. bovis* as a cause. Additional testing is done to meet export requirements for certain markets.

99 standards.org.au/standards-catalogue/standard-details?designation=as-4696-2023

2003

Australia declared freedom from virulent Newcastle disease

Australia's last outbreaks of virulent ND were in 2002. The 2 incidents affected single properties and the disease was eradicated. In accordance with recommendations in the WOAH Terrestrial Animal Health Code, Australia declared freedom from virulent ND in 2003. Non-pathogenic (lentogenic) ND virus strains are present in Australia. However, as of 2017, all long-lived chickens in flocks greater than 1,000 birds are required to be vaccinated. In addition, broiler chickens in New South Wales and Victoria are required to be vaccinated. Vaccination of broilers in other jurisdictions is optional. Australia uses general surveillance to demonstrate its ongoing freedom from virulent ND in poultry populations. For additional information about the 2002 outbreak and response, visit the AHA website.[100]

100 animalhealthaustralia.com.au/newcastle-disease-management

Australia has successfully eradicated bovine brucellosis, bovine tuberculosis (bovine TB), equine influenza (EI), virulent Newcastle disease (ND) and all H7 high pathogenicity avian influenza (HPAI) incidents during the past 37 years.

In 2024 and 2025, Australia experienced multiple outbreaks of H7 HPAI associated with different strains of the virus. These outbreaks are most likely to have come from mutation of low pathogenicity avian influenza viruses that were already present in Australia. Each outbreak was successfully contained and eradicated.

2007

Australia experienced a large outbreak of equine influenza

In August 2007, Australia experienced a large outbreak of EI. National eradication of the disease was successful, and the last case was reported in December 2007.

2008

Australia declared freedom from equine influenza

In accordance with recommendations in the WOAH Terrestrial Animal Health Code, Australia declared freedom from EI in December 2008. Australia uses general surveillance to demonstrate its ongoing freedom from EI.

2024

Australia eradicated multiple outbreaks of H7 high pathogenicity avian influenza

Three strains of HPAI – H7N3, H7N9 and H7N8 – were detected between May and July 2024. Response measures included establishment of declared areas in Victoria, New South Wales and the Australian Capital Territory, in which movement controls and poultry housing requirements were imposed to limit the spread of disease. Depopulation, disposal and decontamination activities were conducted in accordance with the Australian Veterinary Emergency Plan (AUSVETPLAN) *Response strategy: Avian influenza*.[101]

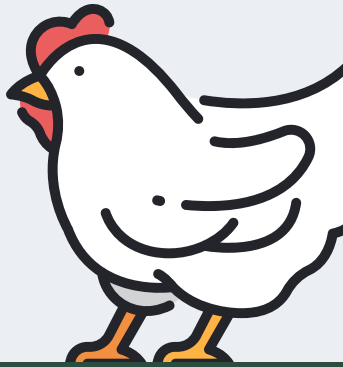
Surveillance confirmed that each strain originated from separate spillover events from wild birds, though no HPAI was detected in wild populations during the outbreaks. The outbreaks were successfully eradicated in January 2025.

101 animalhealthaustralia.com.au/ausvetplan

2025

Australia eradicated another outbreak of H7 high pathogenicity avian influenza

In February 2025, another outbreak of H7N8 HPAI occurred in Victoria. The outbreak was unrelated to the 2024 H7 HPAI outbreaks. Response measures were undertaken to eradicate the outbreak and extensive proof-of-freedom surveillance activities were completed. Australia self-declared freedom from HPAI in poultry in accordance with recommendations in the WOAH Terrestrial Animal Health Code on 13 June 2025.



CASE STUDY

The National Emergency Management Agency

The establishment of the National Emergency Management Agency

The National Emergency Management Agency (NEMA) was formed on 1 September 2022. It was formed by merging the National Recovery and Resilience Agency and Emergency Management Australia to create a single national agency for all phases of emergency management. NEMA's establishment was prompted by disasters such as the 2019–2020 Black Summer bushfires, and was recommended by the Royal Commission into National Natural Disaster Arrangements.

NEMA's strategic initiatives and programs offer critical support for rapid, coordinated national responses across a range of affected areas, including the Australian agricultural sector and during threats to animal health.

Supporting national coordination and alignment

Under the Australian Government Crisis Management Framework, NEMA provides whole-of-government leadership during crises. This is achieved through key mechanisms, including:

- a National Coordination Mechanism (NCM), which brings together all levels of government, industry (including agriculture), and not-for-profit organisations to build shared situational awareness and cooperative solutions. The NCM is flexible, scalable, and can be rapidly convened before, during and after crises.
- the Crisis Coordination Team, which is responsible for deploying specialists in planning, intelligence and liaison, and embedding them within agencies such as Australian, state and territory government agricultural departments and biosecurity teams. This ensures seamless integration of expertise into broader emergency management support.
- the National Situation Room, which operates 24/7 to provide whole-of-government monitoring and reporting. Its National Joint Common Operating Picture mapping tool delivers real-time, all-hazards situational awareness, enabling coordinated decision-making and resource allocation.
- Crisis Appreciation and Strategic Planning, which provides a high-level, repeatable strategic planning process to analyse complex crisis scenarios as part of response planning, contingency planning and conducting exercises.

These mechanisms support NEMA's central role in providing leadership, funding, coordination and strategic guidance for disaster recovery in Australia.

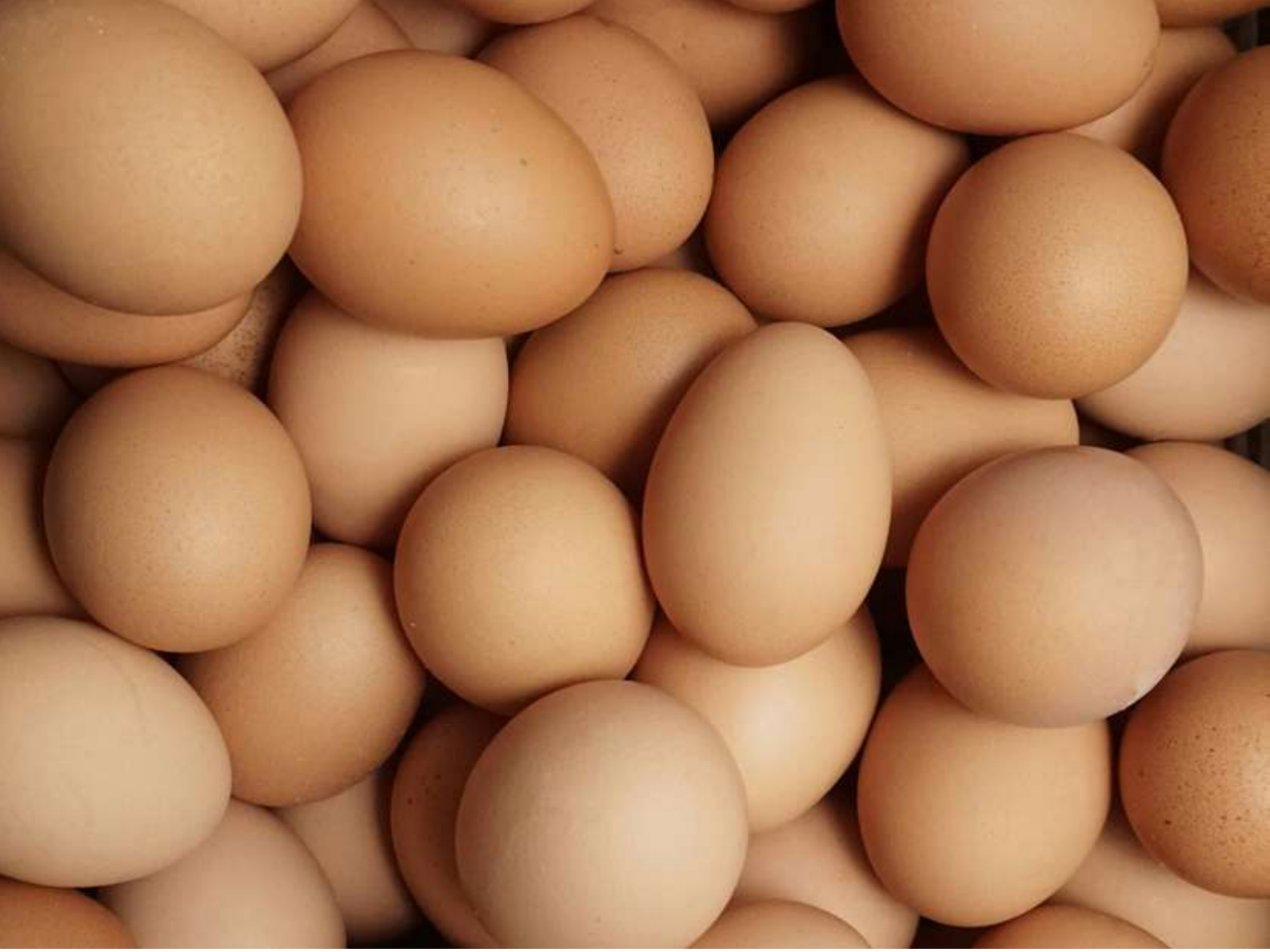
Recovery and resilience supporting the agricultural sector

In relation to the agricultural sector, NEMA's commitment is demonstrated by initiatives such as the North Queensland Recovery and Resilience Package. In the aftermath of the severe 2019–2023 monsoon seasons, this package was designed to help local communities recover through:

- Restocking and On-farm Infrastructure Grants, which farmers could apply for to minimise ongoing economic losses and support the continuity of local food production following these extraordinary events. The co-contribution grants could be used to help replenish lost livestock and rebuild essential infrastructure such as fencing, yards, sheds and watering systems, which are vital for safeguarding animal welfare and ensuring biosecurity during recovery periods.
- the On-farm Resilience Study, a collaborative initiative aimed at identifying ways to strengthen the capacity of farms to withstand and recover from future disasters. The study will evaluate farm-level risks and vulnerabilities, and explore best practices for emergency preparedness such as building livestock mounds as safe areas during floods or raising farm infrastructure above flood levels.

These programs ensure farmers have access to the resources and knowledge they need to protect their animals, livelihoods and communities.

NEMA was established to unify and strengthen Australia's emergency management system, addressing potential gaps in leadership, coordination and capability. Through its strategic initiatives, national coordination mechanisms and targeted recovery programs, NEMA enhances the nation's ability to withstand and recover from disasters. Whether confronting emergency animal disease outbreaks or disasters affecting livestock, NEMA's work is integral to building a safer, more resilient Australia.



2.5 Animal feed safety

Stockfeeds represent a high animal biosecurity risk due to their potential to be contaminated with extraneous material, such as dirt, faeces or even animal-derived tissues (e.g. meat and bone meal), and the direct pathway to livestock. Concerns over transmissible spongiform encephalopathies (TSEs) generally, and bovine spongiform encephalopathy in particular, have led to a range of measures designed to manage the risk of cases occurring in Australian livestock.

Australia has a ban on feeding any meat or bone meal derived from vertebrates (including fish and birds) to ruminants. This ban was established by statutory laws in each of Australia's jurisdictions and is enforced by official inspections that also consider quality assurance schemes that operate within Australia's ruminant livestock industries. All states and territories have adopted in their respective legislation the term 'restricted animal material' (RAM) to describe animal meals that cannot be fed to ruminants, being any meal of vertebrate animal origin, including fish and birds. More information about Australia's ruminant feed ban can be found on the Animal Health Australia website.[102]

Australia's enforceable and inclusive bans on the feeding of RAM to ruminant animals are part of a comprehensive national TSE Freedom Assurance Program (TSEFAP). See Chapter 3 for further information on the TSEFAP.

Australia also takes appropriate measures to protect itself from the risks of TSEs through controls on the importation of animals and products that present a potential TSE risk. This includes products such as stockfeed, stockfeed ingredients (including fishmeal), stockfeed additives, and other products with diversion risks such as fish feed intended for aquariums, hatcheries and aquaculture, pet food and fertilisers.

102 animalhealthaustralia.com.au/australian-ruminant-feed-ban

2.6 Regulation of veterinary medicines

Veterinary medicines are regulated under the National Registration Scheme for Agricultural and Veterinary Chemicals, a partnership between the Australian, state and territory governments, with a shared division of responsibilities. The scheme is given effect through agricultural and veterinary (agvet) chemical legislation that includes the *Agricultural and Veterinary Chemicals (Administration) Act 1992* (Cth) and the *Agricultural and Veterinary Chemicals Code Act 1994* (Cth).

The *Agricultural and Veterinary Chemicals Code Act 1994* (Cth) contains, as a schedule, the Agvet Code.

The Agvet Code makes provision for the evaluation, registration and control of agvet chemical products and for related matters. Mirror legislation is found in the states and territories of Australia, consistent with the arrangements set out in the *Agricultural and Veterinary Chemicals Act 1994* (Cth).[103]

The Australian Pesticides and Veterinary Medicines Authority (APVMA)[104] is established under section 6 of the *Agricultural and Veterinary Chemicals Code Act 1994* (Cth) and administers the National Registration Scheme. It assesses and approves products before they can be sold, using a scientific, risk-based approach. This includes evaluating safety, efficacy and product labelling.

Once a product is registered, manufacturers and suppliers must comply with ongoing legal obligations covering labelling, advertising, manufacturing, importing, sales and distribution.

State and territory governments are responsible for regulating the use of veterinary medicines, including prescribing and dispensing. This is controlled by state and territory drugs and poisons legislation, typically administered by each jurisdiction's health department.

The APVMA has certain powers to manage and monitor compliance with the Agvet legislation and to undertake enforcement activities when required. Enforcement is carried out in partnership with law enforcement, the judiciary and other Australian, state and territory government agencies.

2.7 Animal production food safety

Food regulation and safety

Australia has strict regulations to protect consumers from unsafe food – whether locally produced, imported or exported. The Australian food regulatory system involves all 3 levels of government: the Australian, state and territory governments, and local councils. In this system, Food Standards Australia New Zealand,[105] an Australian Government statutory authority, is responsible for developing food standards for Australia and New Zealand. In Australia, these standards are enforced by state and territory governments and local councils. The Department of Agriculture, Fisheries and Forestry (DAFF) is responsible for enforcing these standards for imported food.

Food standards are applied across the food supply chain – from paddock to plate – and cover:

- general food standards (including labelling requirements)
- specific food product standards
- food safety standards
- primary production and processing standards.

Australian food standards are developed considering agreed national policy guidelines as well as Codex Alimentarius international food standards.

Imported food is regulated under the *Imported Food Control Act 1992* (Cth), administered by DAFF. This Act includes offences for importing food that is unsafe and/or non-compliant with Australia's food standards. To monitor compliance, DAFF operates a risk-based border inspection scheme, in which foods classified as 'risk foods' are referred at higher rates than low-risk or 'surveillance foods'.

Within the national border, state and territory food enforcement agencies are responsible for

103 apvma.gov.au/about/about-us/our-legislative-framework

104 apvma.gov.au

105 foodstandards.gov.au

monitoring the safety and compliance of all food available for sale within their jurisdictions, whether domestically produced or imported.

State and territory legislation governs the slaughter and processing of animals for human consumption, including of animals in the wild, and the preparation, packing, transportation and storage of meat or meat products. These laws require all establishments involved in such activities to comply with relevant Australian standards, including the Australian Standard for Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS 4696:2023).[106] The Australian Standard includes requirements relevant to infrastructure, food safety and animal welfare.

Australia's export controls are managed under the *Export Control Act 2020* (Cth), which regulates the export of prescribed agricultural commodities such as meat, eggs and dairy products. The legislation ensures that exported food meets importing country requirements and is fit for purpose. Exported food must be:

- fit for human consumption
- accurately described and labelled
- fully traceable, where required.

Establishments involved in the preparation or storage of export commodities must have an approved arrangement, which is a documented food safety management system approved by DAFF. The approved arrangement outlines how the establishment complies with export legislation and meets importing country requirements. Further details on Australia's export controls are covered in Section 2.3.

National Residue Survey

The National Residue Survey (NRS)[107] is delivered by DAFF and monitors residues in animal products through various random and targeted testing programs.

Random residue monitoring includes 15 meat programs, an egg program, a honey program and 2 seafood programs.

The random programs are designed to:

- ensure participating industries satisfy Australian export certification and importing country requirements
- enable domestic meat-processing facilities to satisfy state and territory government regulatory authority licensing requirements
- provide evidence of good practice in the use of pesticides and veterinary medicines by the participating industries
- support quality assurance initiatives in participating industries.

Targeted animal product residue monitoring programs are designed to meet particular management objectives or monitor potential chemical residues that could pose a risk for access to export or domestic markets.

Animal product residue monitoring programs are designed, operated and reviewed, within agreed budgets, by the NRS in consultation with peak industry bodies.

106 standards.org.au/standards-catalogue/standard-details?designation=as-4696-2023

107 agriculture.gov.au/agriculture-land/farm-food-drought/food/nrs

CHAPTER 3

Animal health surveillance and laboratories

Image credit: CSIRO

This chapter outlines Australia's animal health surveillance system and the national programs that support emergency animal disease preparedness, market access, and improved animal, human and environmental health outcomes. It describes both general and targeted surveillance programs and how their data are managed and stored. The chapter also provides an overview of the national animal health laboratory network, summarising its key functions and programs. Finally, it describes the quality assurance measures that ensure accurate diagnostic results and the biosafety and biocontainment standards that protect animals, people and the environment from biological hazards.

3.1 Animal health surveillance

Australia's animal health surveillance system is delivered by the Australian Government and the state and territory governments. Each jurisdiction is responsible for surveillance and monitoring within its boundaries, including compliance with legislated obligations to detect and report nationally notifiable diseases.

Under the Australian Constitution, the state and territory governments have primary responsibility for animal health within their borders. The Australian Government coordinates national policy, international trade matters, quarantine, export certification and reporting to the World Organisation for Animal Health (WOAH).[108]

Surveillance programs are described as either general or targeted. General surveillance collects animal health information from diverse sources to detect unusual or emerging events, including reports from veterinarians, producers and laboratories. Targeted surveillance focuses on specific diseases, species or regions to meet defined objectives, such as demonstrating freedom from disease. Both types may be passive, relying on voluntary reporting, or active, involving structured sampling or investigations.

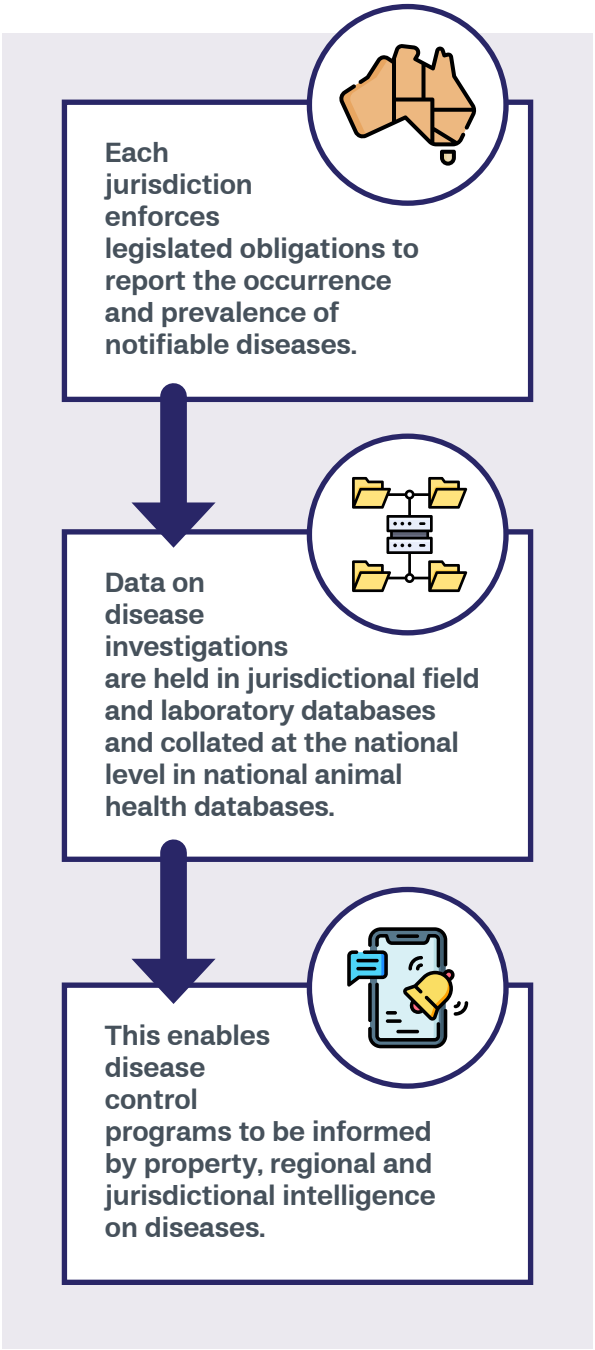
The objectives of Australia's surveillance system are to:

- detect emergency and emerging animal diseases early
- support management of endemic pests and diseases
- facilitate access to international markets.

Section 3.2 outlines Australia's national general and targeted surveillance programs, which address priority diseases and specific surveillance objectives.

National partnerships for animal health surveillance

Australia's surveillance system relies on strong partnerships between governments, private veterinarians, veterinary laboratories, livestock industries, research organisations and community



stakeholders. Diagnostic services are provided by jurisdictional and contracted laboratories, supported by the Australian Centre for Disease Preparedness (ACDP), which provides specialist diagnostic, research and emergency response capability at the national level. Many advances in disease management have resulted from these laboratory–field collaborations.

Private veterinarians can access subsidised diagnostic investigations and training through the National Significant Disease Investigation Program. Strategic consultation between government and industry occurs through Animal Health Australia (AHA), whose members include the Australian Government, state and territory governments,

108 WOAH was previously known as the Office International des Epizooties (OIE)

and peak industry bodies. The *National Animal Health Surveillance Plan 2022-2027*[109] reflects a shared commitment to maintain and improve surveillance systems. It summarises existing programs and sets national priorities for future activities. Other initiatives include the Northern Australia Biosecurity Surveillance Network, which connects veterinarians across northern Australia to strengthen early detection and investigation of significant disease events (see Section 3.2).

Data collection and reporting

Animal health surveillance for terrestrial livestock and other domestic animals involves field and laboratory investigations, which are recorded in state and territory government databases, providing intelligence at property, regional and jurisdictional levels. A subset of these data are collated nationally under the National Animal Health Information Program into the National Animal Health Information System (NAHIS) database. This national dataset informs Australian Government reporting to WOAH and is published in *Animal Health Surveillance Quarterly*[110] and the *Animal Health in Australia* annual reports.[111]

Wildlife health surveillance and aquatic animal health surveillance are managed through separate national systems. Wildlife health surveillance is coordinated nationally by Wildlife Health Australia (WHA), in partnership with government and non-government agencies. Information is reported into the national electronic Wildlife Health Information System (eWHIS) database. Aquatic health surveillance is coordinated nationally by DAFF and reported into the national electronic AUSPestCheck® Aquatic Animal Health Tenancy. For further information on aquatic animal health surveillance, refer to Chapter 5.

Together, these systems contribute to Australia's national and international reporting obligations and provide a comprehensive picture of animal health across terrestrial livestock and other domestic animals, wildlife and aquatic animals.

109 agriculture.gov.au/agriculture-land/animal/health/surveillance-diagnostics

110 animalhealthaustralia.com.au/ahsq

111 animalhealthaustralia.com.au/ahia

Data management

State and territory animal health and property databases

Data gathered from field and laboratory investigations are recorded and held in the respective state and territory animal health information management system. These systems also maintain animal population and disease data that can provide intelligence for districts and individual properties and enable disease control programs to be tailored by region.

National animal health databases

Central Animal Health Database

The Central Animal Health Database (CAHD) is Australia's national platform for managing animal health surveillance data. It has 3 interfaces: NAHIS, National Arbovirus Monitoring Program Info (NAMP-Info) and the Endemic Disease Information System (EDIS). CAHD enables the collation and reporting of Australian animal health data that are required to meet Australia's international obligations for disease status, trade and market access. It also plays a role in informing domestic surveillance and guiding national animal health management. CAHD is administered by AHA.

- **National Animal Health Information System**: NAHIS is a web-based database management system that sits under CAHD into which jurisdictional held disease investigation data for a range of important diseases are collated nationally.
- **National Arbovirus Monitoring Program Info**: NAMP-Info maintains records on the monitoring of economically important arboviruses in ruminant livestock and their vectors (see NAMP in Section 3.2).
- **Endemic Disease Information System**: EDIS maintains records on abattoir surveillance of sheep (see National Sheep Health Monitoring Project in Section 3.2). It also has a searchable register of herds and flocks participating in market assurance programs.

Electronic Wildlife Health Information System

Data relating to wildlife health surveillance and significant disease investigations in Australia are reported in eWHIS, a national wildlife health information database administered by WHA. Data are contributed by government sources (e.g. Northern Australia Quarantine

Image credit: W K Clifford © Australian Museum

Strategy programs, and state and territory agricultural, environment and health agencies) and by non-government sources (e.g. sentinel veterinary clinics, zoo-based wildlife hospitals, universities, wildlife rehabilitators and other organisations including the Australian Registry of Wildlife Health).

Laboratory databases

Jurisdictional laboratories and ACDP record their testing data in their respective laboratory information management systems (LIMS). These systems process, store and manage data from all stages of sample testing. The Sample Tracking and Reporting System network developed by ACDP facilitates the transfer of sample information from each jurisdictional LIMS to the ACDP LIMS.

3.2 Animal health surveillance programs

Australia's animal health surveillance programs underpin the detection and management of animal diseases. These programs include general and targeted surveillance, regional initiatives in northern Australia, and wildlife health surveillance, providing a comprehensive approach to early detection and response. The following sections outline key programs that support national and regional priorities.

National general surveillance

National Significant Disease Investigation Program

The National Significant Disease Investigation Program (NSDIP) provides funding to facilitate investigation of significant disease events by non-government veterinarians. NSDIP also includes training of private veterinary practitioners in disease investigation to increase the level of knowledge, skills and confidence to investigate and report on disease events.[112]

Significant disease events are broadly defined as those clinically consistent with national notifiable animal diseases or diseases showing an increasing incidence and/or an expanding geographic or host range. National notifiable diseases include:

- any of the known exotic diseases
- a variant (non-endemic) strain of an endemic disease
- an endemic disease occurring in a severe outbreak form – meaning a response is required to prevent an epidemic
- a serious infectious disease of uncertain cause, which may be a new disease.

Where there is genuine suspicion of an emergency animal disease (EAD), the disease event is considered to be outside the scope of NSDIP funding. The relevant state or territory government department will instead lead and fund an investigation.

NSDIP is managed by Animal Health Australia (AHA) in consultation with an advisory committee of industry and government

112 animalhealthaustralia.com.au/collaborative-disease-investigations

stakeholders and Wildlife Health Australia (WHA). It has the objective of increasing the quantity and quality of livestock and wildlife disease investigations reported nationally. By doing so, NSDIP increases the likelihood that significant disease events are investigated. It also improves Australia's ability to detect emerging diseases by supporting the knowledge, skills, resources and government relationships of non-government veterinary practitioners.

Registered private veterinarians engaged in clinical veterinary medicine, including those in university clinics, zoos and wildlife parks, are eligible to participate in NSDIP. Disease investigation subsidies are available for field work (e.g. clinical evaluation, necropsy and collection of diagnostic samples), laboratory diagnostic work and any follow-up field investigation that is required.

National targeted surveillance

National Arbovirus Monitoring Program

The National Arbovirus Monitoring Program (NAMP) monitors the Australian distribution of economically important arboviruses (insect-borne viruses) of livestock, and their associated insect vectors. In this case, livestock includes cattle, sheep, goats and camelids (e.g. alpacas, camels and llamas).

Arboviruses monitored by NAMP include bluetongue, Akabane and bovine ephemeral fever viruses. NAMP supports Australian Government export certification that Australian livestock are sourced from areas that are free from transmission of these specified arboviruses.

NAMP data are gathered throughout Australia through:

- serological monitoring of cattle in sentinel herds
- strategic serological surveys of other cattle herds (serosurveys)
- trapping of insect vectors.

For bluetongue virus, the number and locations of herds are selected to establish 2 zones: a transmission zone and a transmission-free zone, where no transmission has been detected in the past 2 years. These zones are shown on AHA's online interactive Bluetongue Virus Zone Map.[113]

Areas in the known bluetongue virus transmission zone are sampled to detect any new serotypes of bluetongue virus. Although bluetongue virus is present in northern and eastern Australia, clinical disease is an uncommon occurrence in Australian sheep and has never been reported in any other susceptible animal species in Australia.

Along with the zone map, AHA publishes yearly NAMP reports on its website.[114]

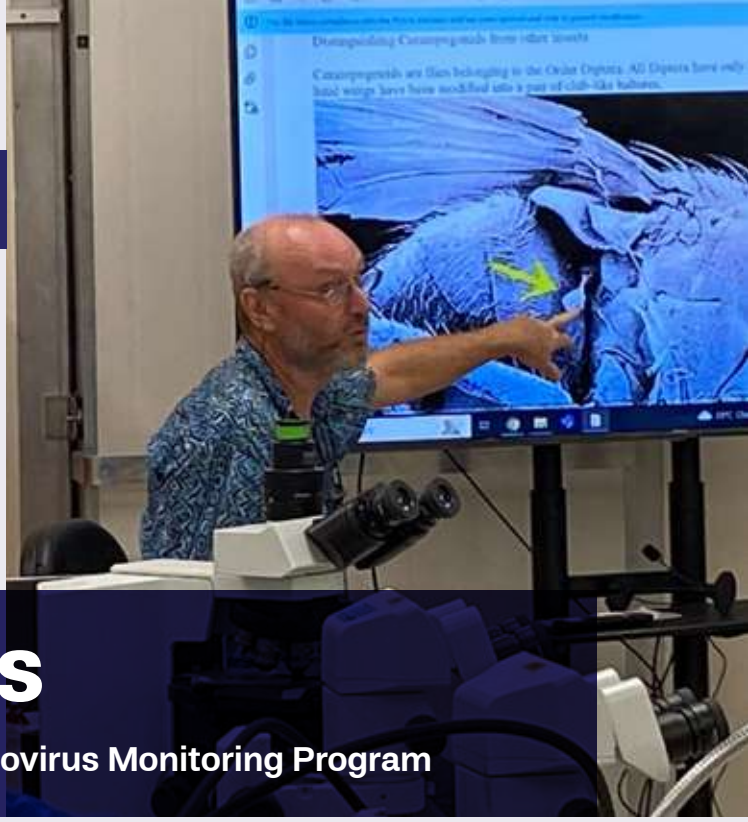
Image credit: Berwyn Squire

113 namp.animalhealthaustralia.com.au/public.php

114 animalhealthaustralia.com.au/national-arbovirus-monitoring-program

IN THE SPOTLIGHT

Real-world examples showing how individual roles support the animal health system.



Dr Glenn Bellis

Reference Entomologist, National Arbovirus Monitoring Program

Dr Glenn Bellis is the Reference Entomologist for the National Arbovirus Monitoring Program (NAMP). He has comprehensive knowledge of the ecology and taxonomy of the *Culicoides* genus – biting midges – some species of which can transmit viruses such as bluetongue and Akabane. His contribution to NAMP is varied and includes:

- producing taxonomic keys and confirming sample identification to help others identify *Culicoides* species
- contributing to a DNA barcode library of Australasian *Culicoides* species
- training other entomologists involved with the program
- advising on the NAMP monitoring strategy and any changes to the bluetongue virus transmission zone.

Dr Bellis studied environmental science at the Queensland Institute of Technology (now the Queensland University of Technology) in Brisbane and was introduced to entomology as a graduate working on sheep blowfly control. A further project studying the vector competence of *Culicoides* ignited his interest in the genus, leading to a master's research degree in *Culicoides* and a PhD in *Culicoides* taxonomy. Dr Bellis studied under the Australian midge expert Alan Dyce and worked for many years in the Queensland Government's Oonoonba veterinary laboratory. He later joined the Northern Australia Quarantine Strategy in Darwin where he worked on *Culicoides* and other insect pests of livestock and plants.

Dr Bellis' research projects have included:

- assessing the potential of *Culicoides* to be vectors for lumpy skin disease in Thailand
- working on midge taxonomy and identification in China, Thailand, Singapore, New Zealand, Tahiti, Fiji and Samoa.

He is currently also assisting Queensland Health in assessing the vector potential of biting midges and march flies for *Mycobacterium ulcerans*.

He has comprehensive knowledge of the ecology and taxonomy of the *Culicoides* genus – biting midges – some species of which can transmit viruses such as bluetongue and Akabane.

Transmissible Spongiform Encephalopathies Freedom Assurance Program

Australia is free from classical scrapie and continues to be recognised by the World Organisation for Animal Health (WOAH) as a country of negligible risk for bovine spongiform encephalopathy (BSE). Both classical scrapie and BSE are types of transmissible spongiform encephalopathies (TSEs).

The TSE Freedom Assurance Program (TSEFAP) is managed by AHA and funded by 9 industry stakeholders along with state and territory governments and the Australian Government. It aims to increase market confidence that Australian animals and animal products are free from TSEs with structured and nationally integrated management of animal-related TSE activities.[115]

Projects that operate under TSEFAP include:

- the National TSE Surveillance Project (NTSESP)
- the Australian Ruminant Feed Ban, a scheme that includes inspections and testing
- communications campaigns, supporting both NTSESP and Ruminant Feed Ban projects.

NTSESP demonstrates Australia's ability to meet the requirements for classification as free from classical scrapie and a BSE risk status of 'negligible'. It also helps ensure these diseases can be detected early if they do occur. Samples are collected from cattle displaying clinical signs suggestive of BSE on farm, in ante-mortem inspections at abattoirs or found fallen with appropriate supporting clinical history. Australia implements surveillance as per the WOAH Terrestrial Animal Health Code chapter for BSE.[116] For sheep and goats, NTSESP is a targeted surveillance program using brains collected from animals showing clinical signs consistent with scrapie, which are then tested by laboratory examination.

Since 2002, feeding of ruminants with any feed derived from vertebrate animals (including fish and birds) has been banned. The ban is enforced under legislation in each state and territory, and by a uniform approach to the inspection of all parts of

115 animalhealthaustralia.com.au/maintaining-australias-freedom-from-tses

116 woah.org/fileadmin/Home/eng/Health_standards/tahc/2024/en_chapitre_bse.htm

the ruminant production chain. It does not include tallow, gelatine, milk products, or animal oils and rendered fats.

National Sheep Health Monitoring Project

The National Sheep Health Monitoring Project (NSHMP) is managed by AHA and monitors lines of sheep in abattoirs for important animal health conditions.[117] Monitored conditions include arthritis, bladder worm (*Cysticercus tenuicollis*), bruising, caseous lymphadenitis, cirrhosis, dog bites, grass seed contamination, fever/septicaemia, hydatids, knotty gut, liver fluke, lungworm, nephritis, pleurisy, pneumonia, rib fractures, *Sarcocystis* spp., sheep measles (*Taenia ovis* infection) and vaccination lesions. Sheep are also inspected for Johne's disease if a producer requests it when selling sheep to the abattoir.

NSHMP monitoring data are stored in the Endemic Disease Information System, which is maintained by AHA. Information on the health conditions found is also available to producers through the myFeedback portal, managed by Meat & Livestock Australia.[118] Processors are provided with a daily report for their own abattoir.

Monitoring of livestock in abattoirs enables public health risk management of diseases such as hydatid disease. It also provides an opportunity to collect surveillance data, which can be used to inform livestock health management decisions and to support Australia's freedom from specified diseases. Since 2007, NSHMP has generated a comprehensive, contemporary dataset that gives a good indication of the animal health status of the Australian flock.

117 animalhealthaustralia.com.au/national-sheep-health-monitoring-project

118 mla.com.au/meat-safety-and-traceability/WhatismyFeedback

Screw-Worm Fly Surveillance and Preparedness Program

Old World screw-worm fly (*Chrysomya bezziana*) and New World screw-worm fly (*Cochliomyia hominivorax*) are exotic to Australia but are present in Africa and Asia and in south and central America, respectively.[119] Screw-worm fly myiasis (infestation with fly larvae) causes significant welfare and production impacts on livestock throughout its geographic range.

Old World screw-worm fly is considered the greater threat to Australian livestock industries because of Australia's proximity to areas in which it occurs and livestock export vessels returning to Australian ports from Asia and the Middle East, where it is prevalent (see Figure 3.1).

Although risk analysis indicates a low likelihood of screw-worm fly entering Australia, the tropical and subtropical climates across most of northern Australia and part of the eastern seaboard would be favourable to its establishment. The flies lay their eggs in the wounds of any living warm-blooded animal, and Australian livestock, feral animals and wildlife could be hosts.

AHA manages the Screw-Worm Fly Surveillance and Preparedness Program in consultation with a committee of industry and government stakeholders.[120] The program aims to detect any potential incursion early enough to maximise the likelihood of successful eradication. Elements of the program include:

- trapping flies and running targeted livestock wound surveys for myiasis in the Northern Territory, Queensland and Western Australia
- holding entomology training and developing reference resources
- promoting awareness to increase general surveillance for myiasis
- monitoring the risk profile for screw-worm fly in Australia.

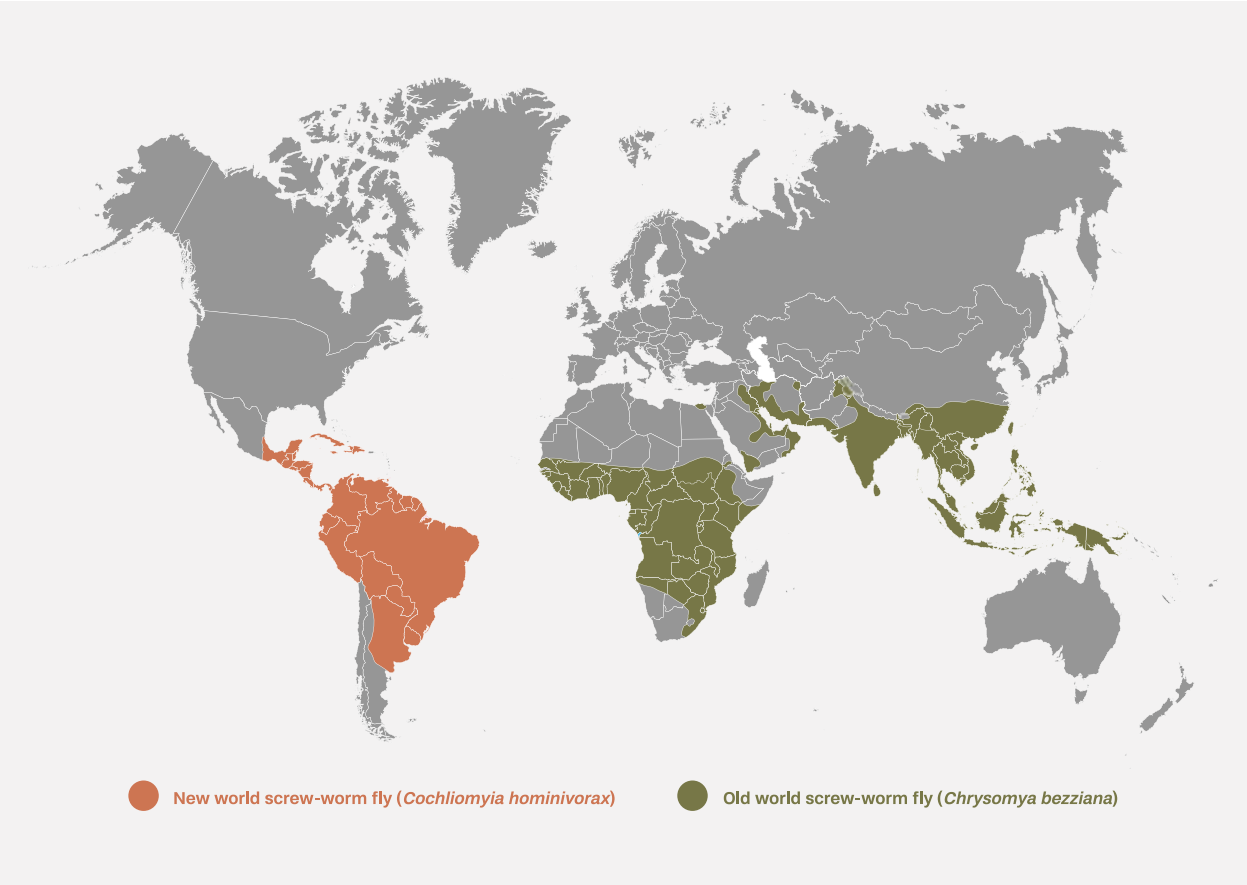


Figure 3.1 Global distributions of Old World screw-worm fly (*Chrysomya bezziana*) and New World screw-worm fly (*Cochliomyia hominivorax*)

119 Spradbery P. 1994. Screw-worm fly: a tale of two species. *Agricultural Zoology Reviews*; 6: 1–62.

120 animalhealthaustralia.com.au/monitoring-for-swf

IN THE SPOTLIGHT

Real-world examples showing how individual roles support the animal health system.

Dr Will Janson

Field Veterinary Officer, Western Australian Department of Primary Industries and Regional Development

Dr Will Janson is part of team of veterinary officers responsible for field surveillance within Western Australia. In addition to undertaking significant disease investigation activities, he contributes to several state and national programs, including:

- the Northern Australia Biosecurity Strategy
- the National Transmissible Spongiform Encephalopathies Surveillance Program
- the Screw-Worm Fly Surveillance and Preparedness Program
- the National Biosecurity Response Team.

Dr Janson grew up on his family's cattle farm in southwest Africa, where many of the nationally notifiable emergency animal diseases that are exotic to Australia are present. This allowed him to gain significant, firsthand experience with livestock diseases such as foot-and-mouth disease and lumpy skin disease.

Dr Janson studied at the University of Pretoria in South Africa, where he obtained a Bachelor of Animal Science with Honours in nutrition, followed by a Bachelor of Veterinary Medicine at the university's veterinary campus at Onderstepoort. After graduating, he worked in mixed practice and with wildlife alongside his colleagues, including his wife, Dr Rozanne Janson, who is also a veterinarian.

Dr Janson's background allows him to pass on his experiences with exotic animal diseases, such as presenting on topics like screw-worm fly at NABSnet (Northern Australia Biosecurity Surveillance Network) masterclasses. He also helped to develop the protocols for donning and doffing personal protective equipment, which is required for veterinary work on suspect or infected premises, for the Veterinary Reserve program in Western Australia. This sharing of knowledge strengthens Australia's disease surveillance capabilities, emergency animal disease preparedness, and interjurisdictional awareness and cooperation.

Dr Janson's background allows him to pass on his experiences with exotic animal diseases, such as presenting on topics like screw-worm fly at NABSnet (Northern Australia Biosecurity Surveillance Network) masterclasses.

National Bee Pest Surveillance Program

The National Bee Pest Surveillance Program is an early warning system to detect new incursions of a wide range of pests and diseases affecting honey bees.[121] In addition, the program provides technical, evidence-based information to support Australia's pest-free status during export negotiations and to assist exporters in meeting export certification requirements. The program includes surveillance using a range of methods at the ports throughout Australia that are considered to be the most likely entry points for pests. Plant Health Australia has been coordinating state and territory government bee surveillance activities at seaports and airports nationwide since 2012.

Surveillance in Northern Australia

Although Australia remains free from many serious animal diseases, northern Australia is particularly vulnerable. This is due to its proximity to neighbouring countries and exposure to wind, ocean currents, vessel movements, shipping channels and migratory animals.

To manage this risk, the Northern Australia Quarantine Strategy (NAQS) was established in 1989 within the Department of Agriculture, Fisheries and Forestry (DAFF). It covers the northern regions of the Northern Territory, Western Australia and Queensland including the Torres Strait. Under NAQS, DAFF gathers intelligence on unregulated risk pathways, conducts risk assessments, implements risk-based surveillance for target diseases and engages with stakeholders, particularly Aboriginal and Torres Strait Islander communities.

Northern Australia Quarantine Strategy targeted animal health surveys

Wild and domestic animal health surveys are conducted routinely across northern Australia, including the Torres Strait, to detect changes in the health status of target animal populations. These surveys test for specific diseases and provide observations of large groups of animals. They have the added benefit of enabling NAQS veterinarians to access remote and regional areas of northern Australia, facilitating engagement with relevant stakeholders and promoting biosecurity awareness. Data, which are reported through the National Animal Health Information System and the electronic Wildlife Health Information System (eWHIS), help Australia to demonstrate the absence of pests and diseases of significance to trading partners.

Japanese encephalitis surveillance

NAQS conducts Japanese encephalitis virus (JEV) surveillance on pigs, cattle and horses in routine feral and domestic animal health surveys across the Northern Territory, Queensland and Western Australia. Detections of JEV have been confirmed throughout mainland northern Australia since 2022 (through either molecular surveillance or serosurveys). Ongoing surveillance for JEV contributes to the One Health framework with detections reported to at-risk communities and data shared across Australia.

Northern Australia Biosecurity Surveillance network

The Northern Australia Biosecurity Surveillance network (NABSnet) is a general surveillance program under the Northern Australia Biosecurity Strategy 2030.[122] The network now encompasses more than 100 private livestock veterinarians, and jurisdictional and federal government veterinarians and veterinary pathologists from across the northern jurisdictions.

NABSnet aims to enhance the national animal health surveillance system, increase information sharing and collaboration in extensive cattle production areas, and improve significant disease investigations in northern Australia. It holds an annual masterclass that brings the network together to build practical field disease investigation skills and awareness of EADs while fostering collaboration and knowledge exchange. NABSnet veterinarians also have access to experienced veterinary advisers and online resources to support them in investigating significant disease events.[123]

Indigenous ranger groups

The Indigenous Ranger Biosecurity Program began in 2015. It is facilitated by NAQS and covers a network of over 70 Aboriginal and Torres Strait Islander ranger groups across northern Australia who conduct fee-for-service biosecurity tasks. The rangers provide invaluable coverage and

121 planthealthaustralia.com.au/national-bee-pest-surveillance-program-activities

122 agriculture.gov.au/biosecurity-trade/policy/australia/northern-australia-biosecurity-strategy-2030

123 nabsnet.com.au

knowledge of vast tracts of remote land that would otherwise be impossible to survey or gather biosecurity risk information on.

Wildlife surveillance

WHA (see Chapter 1 case study) administers Australia's general wildlife health surveillance system, in partnership with government and non-government agencies. The surveillance system aims to:

- identify exotic and emerging diseases, and changes to the pattern of endemic diseases
- provide data to improve the management of disease outbreaks
- inform risk analysis and decision-making
- support national and international reporting commitments.

The information from this surveillance program is used to better understand disease threats to biodiversity, human health and domestic animals. It contributes to our national picture of wildlife health.

National coordination of wildlife disease surveillance

The national wildlife disease surveillance system is built on a network of over 45 surveillance partners, including:

- WHA Coordinators and Environment Representatives based in each jurisdiction's animal health and environment agency
- 'sentinel' surveillance partners from the Sentinel Wildlife Disease Surveillance Program coordinated by WHA (see below)
- other organisations such as the Australian Registry of Wildlife Health, NAQS and the Australian Centre for Disease Preparedness.

These partners see over 65,000 wildlife cases each year, representing a significant surveillance effort. Disease events are additionally reported by private practitioners, wildlife rehabilitators and members of the public.

WHA coordinates the Sentinel Wildlife Disease Surveillance Program (Figure 3.2), which comprises a network of:

- 'sentinel' veterinary clinics – clinics with a high wildlife caseload or that enhance the geographic and species coverage of the surveillance system
- zoo-based wildlife hospitals – coordinated in conjunction with the Zoo and Aquarium Association
- university veterinary schools.

Wildlife disease surveillance numbers

22
years of operation

65,000
wildlife cases assessed per year

18,000
cases in eWHIS

312
species reported

123
stakeholder organisations in the WHA network

50
surveillance partner organisations

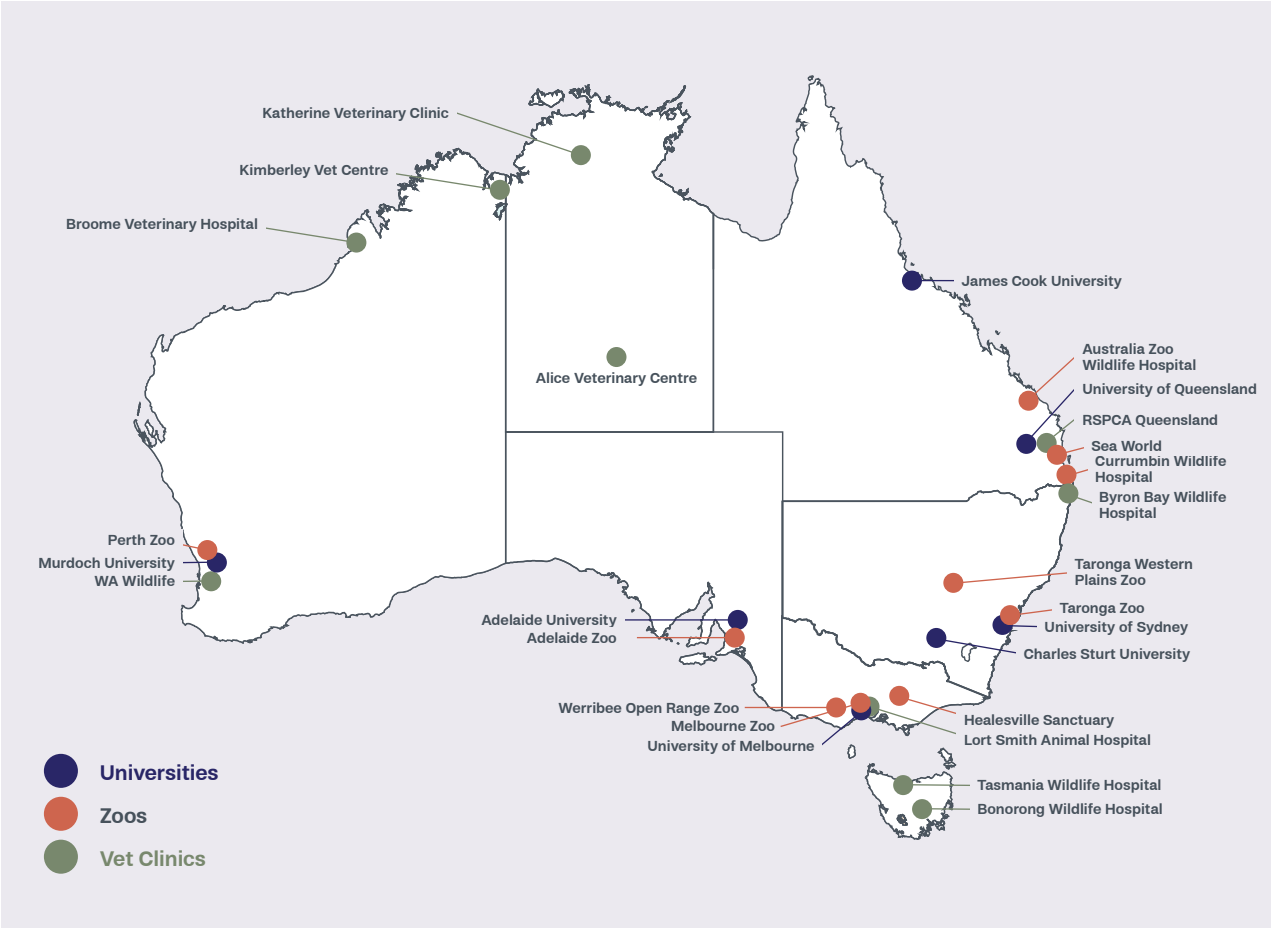


Figure 3.2 Partners in the Sentinel Wildlife Disease Surveillance Program as of April 2026

Wildlife health surveillance and disease information is reported by surveillance partners into eWHIS, the national database administered by WHA. Reporting focuses on nationally agreed priorities, such as:

- nationally notifiable animal diseases
- diseases listed by WOAH
- diseases with potential biodiversity impacts (including diseases on the National Priority List of Exotic Environmental Pests, Weeds and Diseases)[124]
- zoonoses and diseases with public health impact
- poisoning events
- mass or unusual mortality events
- diseases considered unusual, interesting or emerging.

A national dataset of Australian bat lyssavirus testing in bats is also maintained in eWHIS and coordinated by the WHA Bat Health Focus Group.[125]

124 agriculture.gov.au/biosecurity/environmental/priority-list

125 wildlifehealthaustralia.com.au/Our-Work/Surveillance/Bat-Health-Focus-Group

National Avian Influenza Wild Bird Surveillance Program

The National Avian Influenza Wild Bird (NAIWB) Surveillance Program is coordinated by WHA and funded by DAFF. It also receives substantial in-kind support from surveillance partners, including jurisdictional biosecurity agencies, universities and NAQS. The program is overseen by a steering group, which includes government animal health agencies, researchers, veterinary laboratories, industry partners and ecologists.

The NAIWB program has 2 sampling components. The first is targeted surveillance for avian influenza virus (AIV) from samples of apparently healthy and hunter-shot wild birds. The second is general surveillance where significant unexplained morbidity and mortality events in wild birds are investigated. A subset of the targeted surveillance samples is also tested for avian paramyxoviruses (APMVs), including APMV-1.

The program continues to provide valuable ecological and epidemiological information. It informs strategic risk management for minimising

the potential effects of AIVs – particularly high pathogenicity avian influenza (HPAI) – on human health, poultry industries and wildlife in Australia. The multi-agency and cross-jurisdictional approach also provides a forum for collaboration on technical aspects of influenza in humans, domestic animals and wildlife.

The NAIWB program has expanded its targeted surveillance activities, increasing the focus on migratory shorebirds and seabirds during the migration season. This is in response to the threat of H5 HPAI (also known as H5 bird flu), which has been impacting bird and mammal populations overseas.

Importantly, regular surveillance of these viruses in Australian wild birds informs risk to industry and supports responses to detections in poultry, people and wildlife. It does this by:

- maintaining and enhancing Australia's sampling and laboratory capacity to rapidly and reliably test for AIVs and APMVs in poultry and wild birds
- providing the principal source of AIV and APMV-1 sequence data necessary to generate a sequence reference library and monitor the ongoing evolution of Australian-specific lineages
- allowing regular evaluation of primer target sequence variability to ensure fit-for-purpose diagnostic tests are available to reliably detect these viruses
- serving as a point of comparison when novel AIV strains of importance are detected in Australia or emerge overseas
- developing our understanding of the dynamics of AIVs in Australian wild birds.

WHA's *Wild Bird News*[126] presents data from the NAIWB program.

3.3 Australia's animal health laboratories

Animal health laboratories play an integral role in Australia's animal health system. Australia's animal health laboratory network comprises laboratories operated by the Australian, state and territory governments, veterinary schools and the private sector. Government laboratories provide core surveillance, diagnostic and research services for notifiable animal diseases, including zoonoses. University and private laboratories also support the network, especially through participating in specific endemic national disease management programs (e.g. anthrax and arboviruses), or providing specialist diagnostic, research and other services to meet business needs on an ad hoc basis.

Government laboratory networks

There are 8 government animal health laboratories in Australia. The Australian Centre for Disease Preparedness (ACDP) in Geelong, Victoria, is the national animal health laboratory. There are also government animal health laboratories in all states and the Northern Territory. All these laboratories play a key role in supporting disease surveillance and response, biosecurity risk management, and domestic and international trade for animals and animal products. Several of these laboratories also have a national leadership or coordination role in quality assurance (QA), training or research programs relating to laboratory preparedness and responses for emergency animal diseases (EADs). These laboratories collaborate through the Subcommittee on Animal Health Laboratory Standards (SCAHLS).

Subcommittee on Animal Health Laboratory Standards

SCAHLS, which was originally formed in 1990, provides technical, scientific and policy support to the national Animal Health Committee (AHC) in terrestrial animal health laboratory diagnostics. SCAHLS functions include QA, standard testing procedures, test development and evaluation, EAD preparedness and training initiatives.

SCAHLS members include the Department of Agriculture, Fisheries and Forestry (DAFF), ACDP, state and territory government laboratories, relevant private veterinary laboratories, the Council of Veterinary Deans of Australia and New Zealand and the New Zealand Ministry for Primary Industries. Regular observers are Animal Health Australia, the National Association of Testing Authorities, the Subcommittee on Aquatic Animal Health and the Public Health Laboratory Network. Other observers include the chairs of SCAHLS subordinate groups, including the Antimicrobial Resistance Testing Technical Working Group (ARTTWG) and the Laboratories for Emergency Animal Disease

126 wildlifehealthaustralia.com.au/Resource-Centre/Surveillance-Reports?t=2

Diagnosis and Response (LEADDR) network. The membership recognises the broad role laboratories play in animal and community health, and members play a key role in communicating matters of national interest about animal health diagnostics to internal and external stakeholders. Most importantly, members collaborate to provide national leadership and coordination to maintain and enhance laboratory capabilities and capacities in diagnosis and outbreak response for EADs, including endemic, exotic and zoonotic diseases.

SCAHLS oversees the development and implementation of the *National Animal Health Diagnostics Business Plan 2021–2026*, which supports continuous improvement of the national animal health laboratory system.[127] Information on the business plans' key activities and SCAHLS national diagnostic laboratory policies, procedures and resources is available on DAFF's website.[128]

Antimicrobial Resistance Testing Technical Working Group

ARTTWG was established in 2018 to address the laboratory testing aspect of the National Antimicrobial Resistance Strategy 2015–2019. ARTTWG aims to develop and implement nationally consistent antimicrobial susceptibility testing methods and reporting standards in Australian animal health laboratories. Its activities support national priorities for One Health surveillance for antimicrobial resistance described in Australia's National Antimicrobial Resistance Strategy – 2020 and Beyond[129] and Australia's *Animal Sector Antimicrobial Resistance Action Plan 2023 to 2028*.[130] Further information on antimicrobial resistance can be found in Chapter 7.

Laboratories for Emergency Animal Disease Diagnosis and Response

The LEADDR network, which began in 2009, consists of members from DAFF, ACDP, and state and territory government laboratories. The network is coordinated by ACDP and aims to standardise or harmonise screening performance for targeted EADs in all member laboratories. This ensures a nationally coordinated approach and maximises

127 agriculture.gov.au/agriculture-land/animal/health/laboratories/national-animal-health-diagnostics-business-plan

128 agriculture.gov.au/animal/health/laboratories

129 amr.gov.au/resources/australias-national-antimicrobial-resistance-strategy-2020-and-beyond

130 agriculture.gov.au/agriculture-land/animal/health/amr/animal-sector-plan

the availability of resources where large-scale testing is needed in an EAD outbreak.

LEADDR has developed various QA programs over the years, covering several targeted terrestrial and aquatic animal diseases. These diseases include African swine fever, avian influenza, bluetongue, classical swine fever, foot-and-mouth disease, Hendra virus infection, lumpy skin disease, megalocytivirus infection, Newcastle disease, ostreid herpesvirus 1 microvariants infection, white spot disease, and others as directed by AHC. QA programs include the use of standard testing procedures and network quality controls for each test, as well as proficiency testing activities.

To strengthen Australia's preparedness for and response to major disease emergencies, LEADDR members work closely with each other through monthly online meetings and an annual face-to-face meeting. To ensure access to specific expertise or materials that may not be immediately available, LEADDR laboratories also:

- maintain strong working relationships with various overseas animal health and other laboratories
- work closely with local public health laboratories as required for zoonoses and other veterinary public health issues.

The Australian Veterinary Emergency Plan management manual *Laboratory preparedness* details the roles of testing laboratories during an EAD response. It helps LEADDR and other laboratories in all jurisdictions to prepare for a disease emergency.[131] Under direction from the Consultative Committee on Emergency Animal Diseases (CCEAD), the LEADDR coordinator or their delegate will maintain coordination of available laboratory resources for sample testing – and, if necessary, laboratory supplies. This is to ensure the effective use of resources across laboratories to enable sufficient quality assured surge capacity and biosecurity containment.

In an EAD outbreak, LEADDR will form the LEADDR Emergency Committee at the request of the ACDP Director, as a member of CCEAD. The committee will provide technical advice to CCEAD and technical coordination among laboratories involved in the EAD response.

Non-government laboratories

Universities

There are 7 Australian universities that have veterinary schools, as outlined in Chapter 1. Although veterinary schools operate as independent entities, they are important to the national animal health system.

Each veterinary school has its own diagnostic laboratory and experts to support its diagnostic, teaching and research activities. These experts cover a broad range of animal health laboratory specialties, including pathology, molecular biology, virology, bacteriology, mycology, parasitology and immunology. Collectively they represent the major national repository of veterinary-trained laboratory diagnosticians.

While veterinary schools generally have a diagnostic and research focus on endemic animal health matters, some of their experts work on specific EAD-related activities through consultancies and research collaboration. Some veterinary schools provide laboratory screening services for specific national animal disease surveillance programs. Several university veterinary laboratory diagnosticians provide expert advice or training to governments and industries on major animal health issues.

Private and industry-based laboratories

In Australia, private veterinary laboratories also provide animal health testing and diagnostic services. The South Australian Government has outsourced its veterinary diagnostic services to the private sector through contract. Private laboratories that have appropriate QA programs and government approval may offer government-recognised testing services, including those for international trade purposes. Some private laboratories also provide training opportunities for veterinarians to pursue specialist diagnostician qualifications, especially in pathology.

Industry-owned veterinary testing laboratories can be found in some vertically integrated companies, especially in intensive livestock industries. These laboratories provide diagnostic services for the companies and their contractors.

131 animalhealthaustralia.com.au/ausvetplan

International coordination

Australia's WOAH National Focal Point for Veterinary Laboratories, based in DAFF, supports our WOAH Delegate on various regional and international laboratory issues. These include building laboratory capacity for disease emergencies and preparing commentary on all relevant WOAH laboratory standards and guidelines, such as the *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals*.

The current national and international reference laboratories and collaborating centres are summarised in Table 3.1.

3.4 Quality assurance

Laboratory standards and accreditation

The Australian Centre for Disease Preparedness (ACDP) and all state and territory government animal health laboratories are accredited by the National Association of Testing Authorities (NATA)[132] against ISO/IEC 17025:2017, General Requirements for the Competence of Testing and Calibration Laboratories. Accreditation covers a range of animal health testing services, including those for trade and public health purposes. Many

Table 3.1 Reference laboratories and collaborating centres in Australia

Expertise	Organisation
Infection with abalone herpesvirus	ACDP (3)
African swine fever	ACDP (3)
Animal influenza and Newcastle disease	ACDP (5)
Anthrax	Agriculture Victoria, DEECA (1)
Avian influenza	ACDP (3)
Bluetongue	ACDP (3)
Bovine viral diarrhoea	Elizabeth Macarthur Agricultural Institute (2)
Brucellosis	ACDP (1)
Diagnostic test validation science in Asia–Pacific region	ACDP (4)
Infection with epizootic haematopoietic necrosis virus	ACDP and University of Sydney (3)
Hendra and Nipah virus diseases	ACDP (3)
Johne's disease	DEECA and University of Melbourne (1)
Laboratory biological risk management	ACDP (5)
Laboratory capacity building	ACDP (4)
New and emerging diseases	ACDP (4)
Rabies	ACDP (1)
Infection with yellow head virus genotype 1	ACDP (3)
Zoonotic coronaviruses	ACDP (5)

Status: (1) National Reference Laboratory; (2) WOAH Reference Laboratory; (3) National and WOAH Reference Laboratory; (4) WOAH-designated Collaborating Centre; (5) FAO-designated Reference Centre.

ACDP: Australian Centre for Disease Preparedness; DEECA: Department of Energy, Environment and Climate Action; FAO: Food and Agriculture Organization; WOAH: World Organisation for Animal Health.

132 nata.com.au

major private or industry-based animal health laboratories in Australia are also accredited by NATA for their relevant scope of testing services. Maintaining appropriate NATA accreditation is important for government-recognised testing. NATA continually contributes to the development of international standards relating to accreditation. These standards underpin various arrangements that support the international acceptance and trade of Australian animals and animal products. NATA is an active member of the International Laboratory Accreditation Cooperation.

Standard diagnostic procedures

For government-recognised testing purposes, Australian laboratories generally adhere to the testing methods recommended by the World Organisation for Animal Health (WOAH) aquatic and terrestrial diagnostic manuals. Diagnostic experts from ACDP and some government and university laboratories contribute to developing or revising chapters of these manuals regularly and as required.

Australian and New Zealand laboratories have also collaborated to produce and maintain a comprehensive series of Australian and New Zealand standard diagnostic procedures (ANZSDPs)[133] for major aquatic and terrestrial emergency animal diseases (EADs). The series aims to standardise testing procedures for consistency between laboratories and to facilitate proficiency testing (PT) programs in both countries. The series also reflects specific regulatory or disease-management needs in Australia or New Zealand where corresponding chapters of the WOAH diagnostic manuals and other international standard procedures do not meet these requirements.

To date, more than 40 revised and new editions of ANZSDPs and Australian standard diagnostic techniques for terrestrial and aquatic EADs have been published on the Department of Agriculture, Fisheries and Forestry (DAFF) website.[134]

In 2019, the Laboratories for Emergency Animal Disease Diagnosis and Response (LEADDR) network developed the first national guidelines for animal health laboratories preparing for implementation of next generation sequencing for use in animal disease investigations in Australia.[135] In 2024, the National Biosecurity Committee endorsed the Standards & Guidelines: Generation & Analysis of High Throughput Sequencing Data for diagnostic applications in animal, plant and environmental biosecurity. This document also supports quality assurance (QA) in this area for animal health laboratories in Australia.[136]

New test evaluation

The Subcommittee on Animal Health Laboratory Standards (SCAHLS) has the role of evaluating new or modified testing methods through a peer-review process before approval by the national Animal Health Committee. Once approved, testing methods are listed on DAFF's website and may be included in the relevant ANZSDP. SCAHLS tests evaluation policy, requirements and process, and provides specific test validation templates to help laboratory scientists prepare their applications.[137]

Proficiency testing

PT is an effective external QA practice commonly used by Australian laboratories to demonstrate their relevant testing competence, especially for accreditation. The Australian National Quality Assurance Program (ANQAP) is managed by Agriculture Victoria at La Trobe University's AgriBio centre in Victoria. ANQAP operates through a fee-for-service system and is a national and international PT provider accredited by NATA in line with ISO/IEC 17043:2023, Conformity Assessment – General Requirements for the Competence of Proficiency Testing Providers. ANQAP provides several PT programs to guide the continuous improvement of individual Australian laboratory testing performance, including some LEADDR network tests. These programs cover serology, virology, bacteriology and molecular diagnostics.

ACDP is also accredited by NATA to ISO/IEC 17043:2023 and is another major PT provider in Australia and the region. ACDP supports the LEADDR network PT programs for targeted EADs, mainly in serology and molecular diagnostics.

133 agriculture.gov.au/animal/health/laboratories/procedures/anzsdp

134 agriculture.gov.au/agriculture-land/animal/health/laboratories/procedures

135 agriculture.gov.au/agriculture-land/animal/health/laboratories/guidelines-next-gen-sequencing

136 agriculture.gov.au/agriculture-land/animal/health/laboratories/hts-standards-and-guidelines

137 agriculture.gov.au/agriculture-land/animal/health/laboratories/tests/test-development

CSIRO is working towards harmonising and strengthening regional guidelines for high pathogenicity avian influenza (HPAI) and pandemic H1N1 (swine influenza) to provide coordinated protocols for laboratory diagnosis as well as for surveillance of animal influenza in Southeast Asia. Image credit: CSIRO

The Australian Animal Pathology Standards Program (AAPSP) is a national joint initiative under the management of Animal Health Australia (AHA), with support from governments, industry and relevant professional organisations. It aims to improve QA in veterinary anatomic pathology by developing and delivering PT programs, including a registry of national digital reference materials, and ongoing professional development. For example, state and territory government and private laboratories participate in a quarterly histopathology PT program, which was launched in 2006.

In addition, some animal health laboratories are involved in international PT programs run by independent private companies, especially concerning conventional microbiological methods.

Laboratory diagnostician training

In Australia, universities, diagnostic services, and professional bodies and networks play a major role in providing scientific and technical training opportunities to laboratory diagnosticians. Some training activities may support individuals to gain recognisable laboratory specialisations through professional bodies such as the Australian and New Zealand College of Veterinary Scientists and overseas equivalents.

The Australian Association of Veterinary Laboratory Diagnosticians, the Australian Society for Veterinary Pathology, the Australian Society for Microbiology and AAPSP all provide regular training programs, especially through scientific conferences and workshops. These programs cover a range of contemporary topics, including EADs and new methods or technologies. The AAPSP Digital Slide Archive, which represents cases of endemic and exotic diseases in many terrestrial and aquatic animal species, holds thousands of histopathological slides and gross images suitable for online training and education. Some of the jurisdictional laboratories also conduct or participate in interactive pathology case studies online and make materials available online for training.

CASE STUDY

AAPSP
Australian Animal Pathology Standards Program

The Australian Animal Pathology Standards Program

The Australian Animal Pathology Standards Program (AAPSP) supports veterinary pathologists working in animal health laboratories across Australia and beyond. It helps them to maintain and enhance their skills in morphological pathology at the gross and histopathological levels.

Veterinary pathologists play an important role in national biosecurity by confirming endemic diseases, investigating new and emerging diseases, and diagnosing exotic diseases. Their role is critical to animal disease control, public health, wildlife biodiversity and the maintenance of Australia's reputation for healthy livestock and safe livestock products.

AAPSP partners with the Davis Thompson Foundation each year to provide a series of 2-day, face-to-face continuing professional development workshops tailored for veterinary pathologists known as the annual roadshow. Each roadshow focuses on a specific topic and is delivered by invited international experts. The roadshow typically has workshops held in Perth, Adelaide, Melbourne, Sydney and Brisbane, with the option of online attendance facilitated each year at one of the venues.

Other than the formal program, the roadshow is a great opportunity for veterinary pathologists in each state to get together, meet face to face and engage in excellent continuing professional development.

In addition to the annual roadshow, AAPSP delivers a quarterly proficiency testing program. This program assesses veterinary pathologists' written descriptions of pathological changes, diagnostic interpretation and comments based on scanned images of histopathological material. Each round of proficiency testing contributes to the subscribing laboratory's quality management system and supports the maintenance of their National Association of Testing Authorities Australia accreditation.

AAPSP also maintains comprehensive online resources, including:

- an archive of gross and histopathological material for global animal diseases and a unique reference for diseases that occur in Australian animals
- an archive of training resources and reference material for working pathologists and those studying for membership of the Australian and New Zealand College of Veterinary Scientists or other postgraduate veterinary pathology qualifications.

3.5 Biosafety and biosecurity

Standards and certification

Biosafety and biosecurity practice for the storage and handling of materials containing infectious microorganisms in laboratory facilities in Australia is generally based on relevant standards and guidelines developed by international and/or national bodies (e.g. the World Health Organization, ISO/IEC and Standards Australia). AS/NZS 2243.3:2022 Safety in Laboratories, Part 3: Microbiological Safety and Containment is the national standard for the control and containment of microorganisms, good laboratory practices, work health and safety of laboratory personnel, and design of biocontainment facilities. It supports the development of regulatory requirements and certification guidelines.

Laboratories working with genetically modified organisms must be certified by the independent Office of the Gene Technology Regulator to a specific level and type of physical containment (PC) facility. Laboratories handling security-sensitive biological agents (SSBA) must also be certified by the SSBA Regulatory Scheme. The SSBA standards outline the handling, storage, disposal and transport requirements of confirmed and suspected SSBAs under the National Health Security Regulations 2018. The SSBA scheme is administered by the Australian Government Department of Health, Disability and Ageing.

Laboratories working with genetically modified organisms must be certified by the independent Office of the Gene Technology Regulator to a specific level and type of physical containment (PC) facility.

Importing of pests and disease agents (and other biologicals) is regulated by the Department of Agriculture, Fisheries and Forestry under the *Biosecurity Act 2015* (Cth). Handling may be permitted under specific circumstances. Prior to the import, a risk assessment must be carried out. This assessment determines potential consequences and appropriate risk management to prevent the establishment of the pest or agent in Australia in accordance with Australia's appropriate level of protection.[138] If the handling and import are permitted, specific circumstances may apply, such as use in an appropriate level of laboratory containment, referred to as an approved arrangement (AA) biosecurity containment (BC) facility. The procedures and containment facilities either meet or exceed the requirements of AS/NZS 2243.3:2022.

Specific biocontainment facilities

The Australian Centre for Disease Preparedness is one of the few high-containment research laboratories in the world capable of working with large animals. It has facilities up to biosafety level 4. Under Australian regulation,[139] this is PC/AA BC level 4 (i.e. the maximum level) and is suitable for both laboratory testing and animal studies, including for emergency animal diseases that threaten Australia's animal industries or public health. State and territory government laboratories have facilities certified at PC/AA BC2 or PC/AA BC3; levels that are adequate for their testing and research purposes. The Elizabeth Macarthur Agricultural Institute in New South Wales also has a PC/AA BC3 level animal facility suitable for investigational studies.

138 agriculture.gov.au/biosecurity-trade/policy/risk-analysis/conducting-import-risk-analysis/appropriate-level-of-protection

139 The *Biosecurity Act 2015* (Cth) and the *Gene Technology Act 2000* (Cth)

CHAPTER 4

Traceability, domestic biosecurity and quality assurance

This chapter introduces Australia's first ever National Agricultural Traceability Strategy 2023 to 2033, which was co-designed by stakeholders across the supply chain to strengthen national traceability systems. The chapter describes the National Livestock Identification System, which enables lifetime traceability for cattle, goats, pigs and sheep. This chapter also highlights the role of Australian industries in maintaining effective biosecurity at the enterprise level, detailing comprehensive industry-led programs for managing nationally significant endemic diseases, on-farm biosecurity and quality assurance. These programs are critical for reducing the risk of animal disease introduction and spread, and for ensuring food safety throughout the supply chain – from farm to fork.

4.1 Identification and traceability

National Agricultural Traceability Strategy 2023 to 2033

The National Agricultural Traceability Strategy 2023 to 2033 (the strategy) facilitates the adoption of world-class traceability systems by industries and governments along Australia's agricultural supply chains. The strategy aims to accelerate Australian exports, enhance biosecurity, improve food safety and protect cultural intellectual property. Data-enabled traceability provides access to multiple verified credentials for producers and access to international markets with changing environmental, social and governance requirements. Traceability also supports monitoring of animal health, allowing quick detection and response to animal disease or other issues. The strategy and its implementation plan can be downloaded from the Australian Government Department of Agriculture, Fisheries and Forestry's (DAFF) national traceability webpage.[140]

National Livestock Identification System

The National Livestock Identification System (NLIS) is Australia's system for livestock identification and traceability. All cattle, goat, pig and sheep owners must identify and record all stock movements in NLIS. This includes movements between properties, as well as to saleyards and abattoirs. NLIS is a permanent, whole-of-life system that allows animals to be identified and tracked from property of birth to slaughter. It provides accurate tracing for food safety, animal health, product integrity and market access. It is also possible to identify and trace alpacas using NLIS through a voluntary program.

All animals are individually identified with an NLIS-approved device or pig brand from their property of birth with a PIC (Property Identification Code). As animals are bought, sold and moved along the supply chain, each movement is recorded centrally on NLIS. Using this information, NLIS can provide a life history of an animal's movements (Figure 4.1).

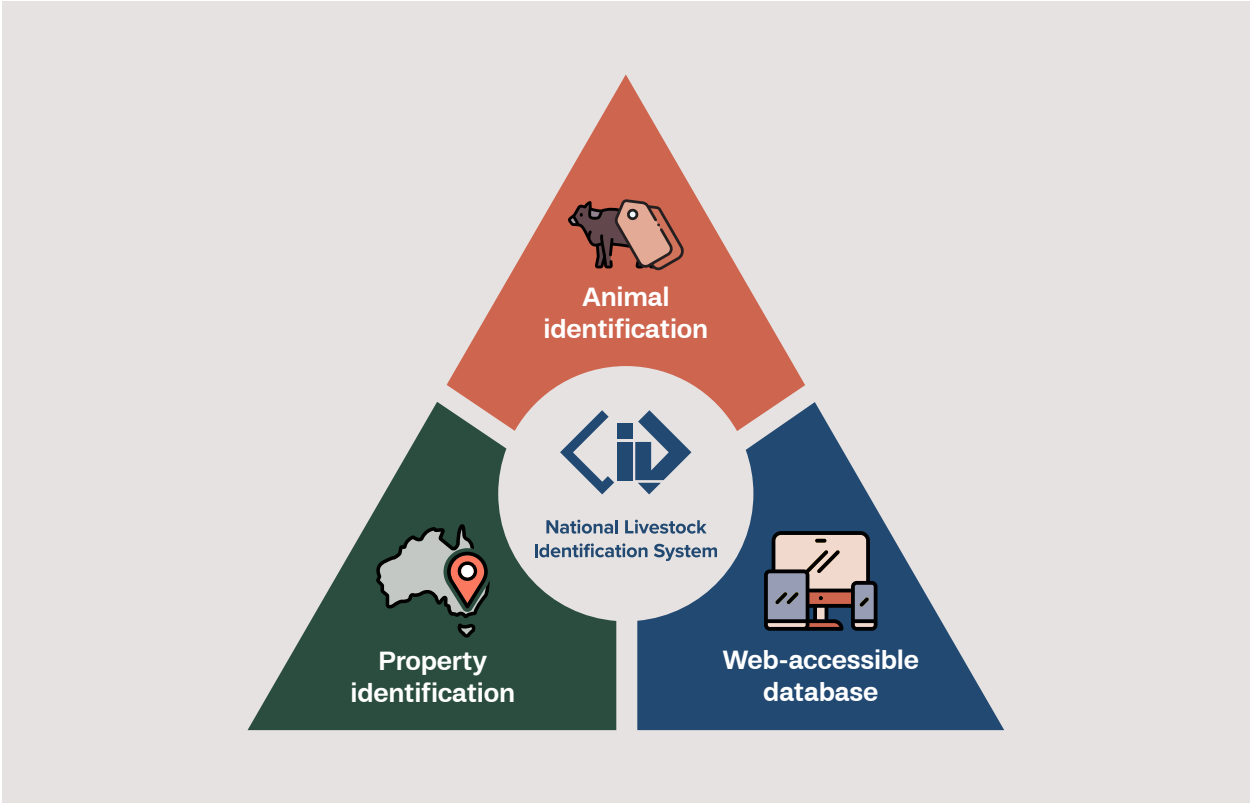


Figure 4.1 Elements of National Livestock Identification System lifetime traceability

Source: Graphic adapted from the Integrity Systems Company (integritysystems.com.au/identification--traceability/national-livestock-identification-system)

140 agriculture.gov.au/biosecurity-trade/market-access-trade/national-traceability

Jurisdictions legislate and monitor compliance with NLIS throughout the livestock supply chain, checking the consigning, receiving and slaughtering of stock. Information on animal movements is recorded on National Vendor Declarations submitted to NLIS by producers, saleyard operators, livestock agents and processors.

Integrity Systems Company administers NLIS for industry and government stakeholders.[141] NLIS is endorsed by the major producer, feedlot, agent, saleyard and processor bodies, and is certified by the International Organization for Standardization (ISO) 9001.

Australia's ability to track livestock during disease and food safety incidents relies on NLIS. The system reflects Australia's commitment to biosecurity and ensures domestic consumers and trading partners can be sure of the quality of Australian agricultural produce.

National Livestock Identification System Database Uplift Project

The NLIS Database Uplift Project[142] is modernising NLIS by creating a contemporary, cloud-based, user-friendly platform to enhance livestock traceability, data accuracy and system flexibility for current and future biosecurity and market access requirements. The Australian Government has awarded grant funding to the project, along with providing pass-through funding to support industry and governments in their transition to the new system. This project will result in greater capacity to accommodate emerging data for sustainability and animal health and welfare.

Broiler chicken traceability

Due to the highly integrated nature of the chicken meat industry, producers maintain detailed records on each batch of chicken processed. This enables rapid tracing of chickens back to their farms of origin, and in most cases to the specific sheds within a grower's property. Tracing may also extend further back to the hatchery where the chicks were hatched, and to the breeder farm that supplied the fertile eggs. Chickens are managed as flocks throughout the production chain, from the hatchery to the grower and subsequently the processing plant, ensuring comprehensive traceability at every stage.

Egg traceability

Egg stamping is compulsory for all commercial hen egg producers in Australia. Every whole egg sold or supplied in Australia must have a unique identifying mark on its shell to enable tracing to the farm of origin. Traceability is a key component of the egg industry's food safety management plan and protects consumers and producers alike. Egg stamping enables the identification of the source farm in the event of a food safety incident. State and territory legislation and the Australia New Zealand Food Standards Code – Standard 4.2.5, most recently updated in 2025, provide the regulatory framework for the egg industry, ensuring the product is safe, suitable and correctly labelled.[143]

4.2 Jurisdictional government–industry collaborative disease control programs

Biosecurity is a responsibility shared between all governments, industry, natural resource managers, custodians, users and the community. Disease control programs vary in each state and territory depending on climate and the types of livestock production systems present, both of which strongly influence disease prevalence. To achieve the best outcome across Australia, a range of jurisdictional government–industry collaborative disease control programs are in place.

Ovine brucellosis

Ovine brucellosis, caused by *Brucella ovis*, is not a nationally notifiable animal disease, but is notifiable in Tasmania and Victoria. This disease is endemic in commercial sheep flocks in most states, but its prevalence is low. Voluntary accreditation schemes (primarily for stud flocks) are in place in most jurisdictions. Information about state-based accreditation schemes, and a database of accredited flocks, can be found on Animal Health Australia's (AHA) website.[144]

141 integritysystems.com.au/identification--traceability/NLIS-Database-Uplift-Project/homepage

142 agriculture.gov.au/biosecurity-trade/market-access-trade/national-traceability/nlis-database-uplift-project

143 legislation.gov.au/F2011L00860

144 animalhealthaustralia.com.au/sheep-health-and-biosecurity

Caprine arthritis–encephalitis

Caprine arthritis–encephalitis (CAE) is a multisystemic inflammatory disease of goats caused by a caprine retrovirus. The disease is present in most countries and has been reported in all Australian states and territories except the Northern Territory. Caprine arthritis–encephalitis is not a nationally notifiable animal disease but is notifiable in the state of Victoria.

Australia has a voluntary national accreditation program for CAE, which is part of the Goat Industry Market Assurance Program (GoatMAP).[145] AHA and the Goat Industry Council of Australia have also developed *Guidelines for the Voluntary Control and Eradication of CAE from Individual Herds*[146] for the use of veterinarians, in partnership with their goat producer clients, to achieve effective CAE control.

Cattle tick and tick fever

The cattle tick, *Rhipicephalus* (formerly *Boophilus*) *microplus* or *R. australis*, was introduced to Australia in the late 19th century. The distribution of cattle ticks is largely determined by climatic conditions: high humidity and ambient temperatures of at least 15–20°C are needed for egg laying and hatching.

Ticks also transmit tick fever (bovine babesiosis or anaplasmosis), caused by *Babesia bigemina*, *B. bovis* or *Anaplasma marginale*. Babesiosis and anaplasmosis are nationally notifiable animal diseases in tick-free areas.

Acaricide treatment is widely used for tick control in endemic areas. Inspection and treatment are compulsory for cattle leaving defined tick areas in the Northern Territory, Queensland and Western Australia, and for cattle leaving known infested properties in New South Wales. The spread of ticks from endemic areas is restricted by state-managed zoning policies.

Enzootic bovine leucosis

Enzootic bovine leucosis (EBL) is a nationally notifiable animal disease with low prevalence in Australia (in sectors of the Australian beef herd). In 2008, the Australian Dairy Industry Council and animal health authorities implemented a national EBL eradication program.

Declaration of unconditional freedom from EBL in the Australian dairy herd, according to the requirements in the national *Standard Definitions and Rules for Control and Eradication of Enzootic Bovine Leucosis in Dairy Cattle* (version 2.0, February 2009), was achieved in 2012. Maintenance of the status of the Australian dairy herd requires strict ongoing controls on the introduction of beef cattle, as EBL is still present at very low prevalence in sectors of the Australian beef herd.

For more information, visit the Department of Agriculture, Fisheries and Forestry website.[147]

Ovine footrot

Ovine footrot, caused by *Dichelobacter nodosus* infection, causes significant economic loss in southern Australia.

Ovine footrot is not a nationally notifiable animal disease but is notifiable in the Australian Capital Territory, New South Wales, Queensland, South Australia, Victoria and Western Australia. Several states (New South Wales, South Australia and Western Australia) have eradication or control programs aimed at limiting spread of the disease. Tasmania and Victoria do not have official control programs for footrot, although legislation is available to quarantine properties if required.

Paratuberculosis

Paratuberculosis, or Johne's disease (JD), is a chronic infection caused by *Mycobacterium avium* subsp. *paratuberculosis* that produces ill thrift, wasting and death in ruminants. There are 2 strains found in Australia, with some degree of host preference; however, they can infect and be passed between multiple species. The sheep strain is mostly seen in sheep, but is also found in cattle and goats, and the cattle strain affects cattle, goats, deer, sheep and (rarely) alpacas. Johne's disease is a nationally notifiable animal disease.

145 animalhealthaustralia.com.au/goatmap

146 animalhealthaustralia.com.au/wp-content/uploads/2015/09/CAE-Voluntary-Guidelines-Document_FA_web-002-002.pdf

147 agriculture.gov.au/biosecurity-trade/pests-diseases-weeds/animal#enzootic-bovine-leucosis-ebl

Livestock industries fund the National Johne's Disease Program (NJDP),[148] which aims to collaboratively reduce the effects of the disease. NJDP includes Australian JD market assurance programs (MAPs) for sheep and goats. They provide a high level of assurance that participating herds and flocks are not infected with JD. Details of herds and flocks participating in MAPs are maintained in the Endemic Disease Information System and are available on AHA's website.[149] Each affected livestock industry has also implemented strategies that suit its needs and disease situation.

Beef cattle

Johne's disease is uncommon in beef herds in Australia, especially in the north and west of the country. To help protect this low prevalence, producers are encouraged to use a voluntary assurance system for cattle (the Johne's Beef Assurance Score). Producers are also encouraged to use a National Cattle Health Declaration to provide health information on cattle for sale and to assess the risk of cattle being purchased.

Dairy cattle

Johne's disease is endemic in the dairy industry in southeastern Australia. The dairy industry promotes hygienic calf rearing to help reduce the incidence of JD in replacement heifers. Buyers of dairy cattle are also encouraged to ask the seller for a written declaration of their JD Dairy Score. It is based on a property and herd biosecurity plan, vaccination for infected herds, and testing at higher scores.

Sheep

The management of JD in sheep sits within the Sheep Health Program[150] at AHA. Producers are encouraged to manage JD and other diseases under their property biosecurity plan and by using a National Sheep Health Declaration. This declaration by the owner enables buyers to assess the risk of JD and other diseases. A vaccination program for JD is strongly recommended in endemic areas (namely much of southern Australia).

Goats

The goat industry uses a risk-based trading approach for JD using a National Goat Health Declaration. This owner declaration includes a risk rating for JD and provides herd information on other conditions that can spread between herds. A component of the strategy is a National Kid Rearing Plan to help protect young goats from disease such as JD and CAE.

Salmonella Enteritidis

Salmonella Enteritidis (SE) is a nationally notifiable animal disease of poultry that may result in depression, poor growth, weakness, diarrhoea and dehydration. *Salmonella* Enteridis also causes foodborne illness in people.

The New South Wales Department of Primary Industries and Regional Development administers the National *Salmonella* Enteritidis Monitoring & Accreditation Program,[151] which is available to all commercial egg and breeding stock producers. It can be used both as a compliance tool and to assist producers in Australia exporting eggs to overseas markets. The program offers a staged process to enable flocks to become accredited free from SE.

Salmonella Pullorum

Pullorum disease is a nationally notifiable animal disease of poultry caused by *Salmonella* Pullorum (SP). Transmission is primarily via the egg, but SP can also be spread by direct or indirect contact (respiratory or faecal). *Salmonella* Pullorum mostly affects young poultry but may also be associated with disease in turkey poults. Reduced egg production and hatchability may be the only signs of pullorum disease. *Salmonella* Pullorum can also be carried sub-clinically or show a range of atypical signs in older birds.

The Joint New South Wales/Victoria *Salmonella* Pullorum Monitoring & Accreditation Program[151] is available to commercial producers in New South Wales and Victoria that export day-old chicks, hatching eggs and other poultry products to overseas markets. Poultry species covered by the program include chickens, ducks, geese, turkeys and quail.

148 animalhealthaustralia.com.au/johnes-disease

149 edis.animalhealthaustralia.com.au/public.php

150 animalhealthaustralia.com.au/sheep-health-project

151 dpi.nsw.gov.au/dpi/biosecurity/animal-biosecurity/national-and-state-partnerships

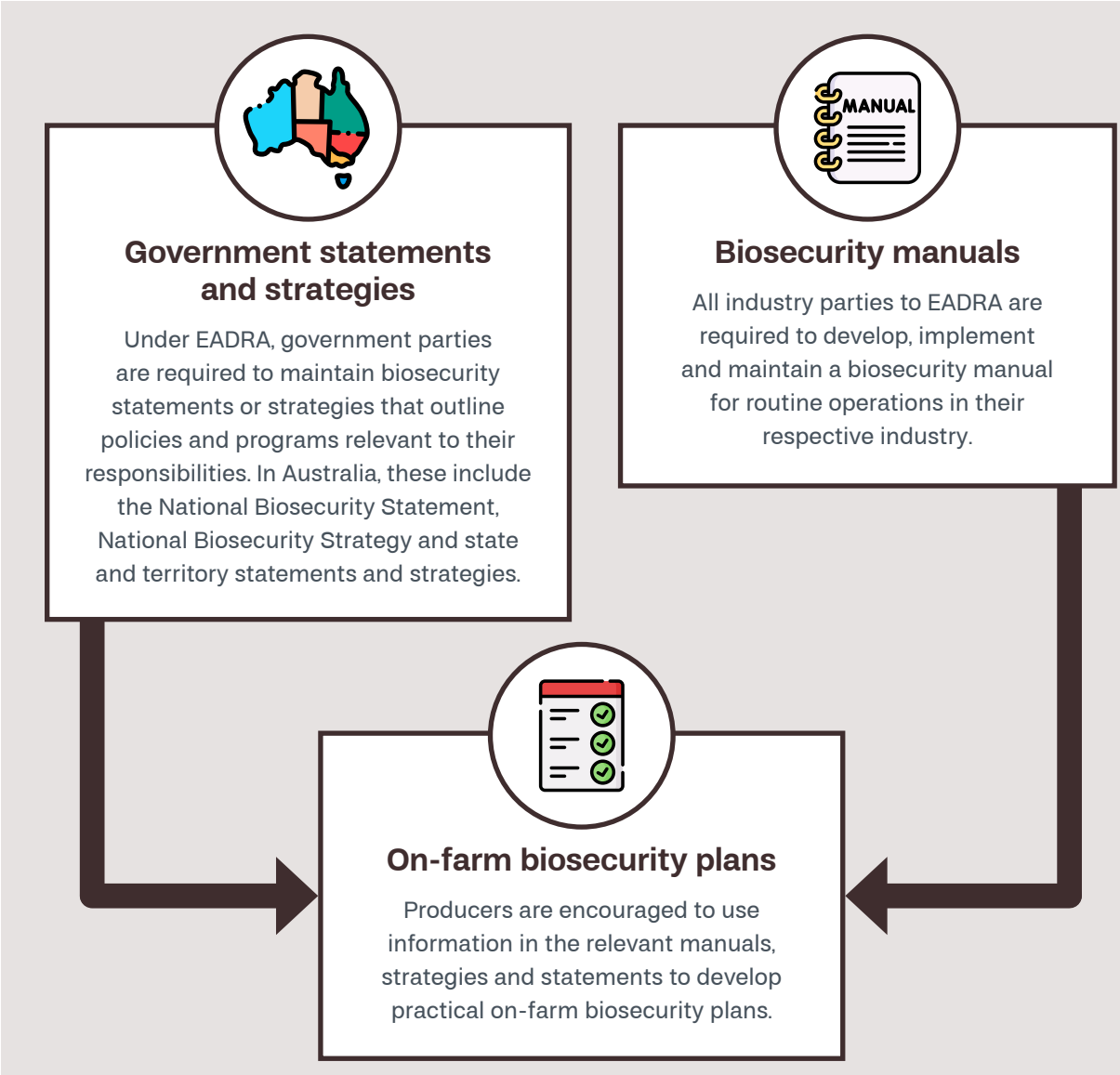
4.3 On-farm biosecurity and quality assurance

Biosecurity planning

Effective biosecurity at the enterprise and industry level is extremely important in mitigating the risk of the introduction or spread of animal diseases, especially for animal diseases exotic to Australia. Livestock producers know their livestock and are therefore best placed to notice and report any suspected emergency animal disease (EAD) early for quick containment and eradication. Maintaining Australia's resilient and world-leading approach to biosecurity relies on continued partnerships between industry, producers, land managers, environmental bodies, and the Australian, state, territory and local governments, as well as the broader public.

Australian producers are encouraged to maintain an on-farm biosecurity plan that contains all the measures used to reduce the risk of disease entry or spread through livestock, feed and equipment. To support effective on-farm biosecurity plans, Animal Health Australia (AHA) coordinates the ongoing review and maintenance of Australia's terrestrial animal industry biosecurity manuals.

All industry parties to the Emergency Animal Disease Response Agreement (EADRA) are required to develop, implement and maintain a biosecurity manual for routine operations in their respective industry. Industry biosecurity manuals are endorsed by all EADRA parties and are designed for producers to evaluate and implement biosecurity practices suitable for their circumstances. The practices listed in the industry biosecurity manuals have been incorporated



as standards into a range of industry quality assurance (QA) and verification programs. These programs include APIQ®✓ (Australian Pork Industry Quality Assurance Program), Egg Standards of Australia (ESA) for Rearing and Laying Farms, and the National Feedlot Accreditation Scheme (NFAS). All industry biosecurity manuals can be found on the Farm Biosecurity website.[152]

Under EADRA, government parties are required to maintain biosecurity statements or strategies that outline policies and programs relevant to their responsibilities.

The National Biosecurity Statement, which presents a shared vision for Australia's biosecurity, has been developed by a working group of industry and environmental groups and government. The statement sets out a national vision and goals, clear roles and responsibilities, and priorities and principles for managing biosecurity risk.

The National Biosecurity Strategy provides a collective vision for Australia's future biosecurity system – a biosecurity system that protects Australia's way of life. The strategy, which is endorsed by all agriculture ministers, was released in August 2022.

Each state and territory government also publishes its own biosecurity statements and strategies, which are available on AHA's website. These strategies include objectives aimed at strengthening biosecurity planning at both enterprise and industry levels. See Chapter 1 for more information about Australia's animal health legislation and the National Biosecurity Strategy, and Chapter 2 for more information about EADRA.

Australian Biosecurity Awards

The Farm Biosecurity Producer of the Year Award recognises Australian primary producers who demonstrate exceptional leadership and commitment to biosecurity on their farms. This award is presented as a part of the Australian Biosecurity Awards (ABAs), held annually, which celebrate individuals, groups and organisations committed to supporting and promoting biosecurity systems.

The ABAs cover 9 categories: the Dr David Banks Biosecurity Lifetime Achievement Award, the Dr Kim Ritman Award for Science and Innovation, the First Nations Award for Excellence in Biosecurity, Farm Biosecurity Producer of the Year, and awards for Industry, Government, Environmental Biosecurity, Community and Education.

More information on ABA recipients can be found on the Department of Agriculture, Fisheries and Forestry's (DAFF) website.[153]

Farm Biosecurity Program

The Farm Biosecurity Program is a joint initiative of AHA and Plant Health Australia (PHA). This program aims to help producers reduce the risks posed by diseases, pests and weeds to their livestock and crops by increasing understanding and implementation of on-farm biosecurity practices.

The Farm Biosecurity website[154] is a hub of information, tools and resources to help producers prevent both endemic and exotic diseases, pests and weeds from entering and becoming established on farms. It includes information on understanding disease, pest and weed risks, and how to minimise those risks through the implementation of good biosecurity practices, including:

- livestock- and crop-specific information
- biosecurity manuals for each industry
- templates for checklists, records and signs
- animal health declarations
- videos on the 6 biosecurity essentials
- a farm biosecurity planner
- links to member websites and other useful websites
- biosecurity-related news and events.

152 farmbiosecurity.com.au/toolkit/plans-manuals

153 agriculture.gov.au/biosecurity-trade/policy/australia/public-awareness/aba

154 farmbiosecurity.com.au

CASE STUDY

Price Cattle Company

In 2022, Central Queensland beef producers Brigid and Owen Price were awarded the Farm Biosecurity Producer of the Year award at the Australian Biosecurity Awards (ABAs). The aim of the award is to encourage producers to reduce risks posed by diseases, pests and weeds to their crops and livestock by increasing understanding and implementation of on-farm biosecurity practices. Their biosecurity initiatives remain highly relevant in 2026, demonstrating the ongoing value of proactive efforts to strengthen Australia's agricultural resilience.

This accolade, jointly presented by Animal Health Australia and Plant Health Australia, celebrated their outstanding commitment to biosecurity, sustainability and industry leadership at their business, Price Cattle Company.

Price Cattle Company is a family-run beef enterprise led by the Prices. Their journey towards biosecurity excellence began with a desire to improve operational transparency and environmental stewardship while supporting fellow producers.

In 2017, the Prices achieved Grazing Best Management Practice certification, having been assessed against over 150 international standards. As part of the certification process, they developed policies, procedures and risk-management documents for their business and attended training days to learn the essentials of a comprehensive biosecurity management plan.

After recognising that fellow producers were often overwhelmed by biosecurity compliance, the Prices shared their biosecurity plan as a valuable resource for others. Their practical approach to on-farm biosecurity measures includes setting quarantine periods for new cattle, maintaining sign-in registers, using specific access points and designated roads for moving within properties and requiring contractors to hold third-party washdown certificates for vehicles and machinery.

The 2022 ABAs not only honoured the Prices' dedication and hard work but also the encouragement they give to farmers in prioritising biosecurity and sustainability. Their efforts have positioned them as role models in the agricultural sector, inspiring others to prioritise biosecurity and sustainability. Through collaboration and education, Price Cattle Company contributes to a more resilient and secure agricultural landscape that is vital for Australia's economy and food security.

Industry biosecurity and quality assurance programs

B-QUAL

The B-QUAL food safety program is a voluntary QA program for apiarists and honey-processing businesses that ensures the honey bee industry's standards meet best practice and domestic and international market demands. The program is owned by the Australian Honey Bee Industry Council (AHBIC), managed by B-QUAL Australia's Board and administered by Safe Food Australia (a national service provider). B-QUAL standards encompass all facets of production and industry services, including honey production, queen bees, pollination and honey packing.

Beekeepers who wish to become certified must undergo nationally recognised training provided by B-QUAL through both online and paper formats.

Once a beekeeper has integrated B-QUAL requirements into their operation, the business is audited by a third-party auditor. Certification is provided by Safe Foods Australia. Beekeepers selling direct to the public are audited every year. Those selling bulk honey to packers only are audited once every 2 years.

The B-QUAL program provides comprehensive work instructions and record forms that must be maintained for:

- hive management (identification, location, movement and disease status)
- extraction (process, facilities and equipment)
- traceability from hive to retail
- biosecurity
- hygiene (personal, machinery maintenance, sanitation and vermin control)
- purchases (inventory lists and stocktake activities)
- equipment calibration
- internal and external audit results
- staff training
- occupational health and safety issues.

If a beekeeper shows they are audited to the B-QUAL standard and have current certification, several state and territory governments now accept, without further auditing, B-QUAL accreditation as being compliant with the Australian Honey Bee Industry Biosecurity Code of Practice (the Honey Bee Industry Code).

National Bee Biosecurity Program

The National Bee Biosecurity Program (NBBP) is managed and administered by PHA on behalf of AHBIC and is underpinned by the Honey Bee Industry Code.[155] NBBP employs Bee Biosecurity Officers (BBOs) in New South Wales, Queensland, South Australia, Tasmania, Victoria, the Northern Territory and Western Australia. Through the Honey Bee Industry Code, NBBP aims to improve the management of established bee pests and diseases (particularly American foulbrood) and to increase the preparedness of beekeepers for exotic pests (including pest bees). The Honey Bee Industry Code has been updated as part of the Varroa Mite Transition to Management Program.[156] NBBP also aims to harmonise the movement of honey bees and honey bee products between states and territories. NBBP is funded by the honey bee industry through the honey levy, with state and territory governments contributing in-kind resources.

BBOs support beekeepers in understanding their biosecurity obligations under the Honey Bee Industry Code and provide general advice on pest and disease management practices, while performing a variety of extension and education activities.

To assist beekeepers in complying with the Honey Bee Industry Code and to provide advice on keeping honey bees healthy using industry best practice, an online training course, Biosecurity for Beekeepers,[157] was launched in April 2017 and was revised in 2024.

The BeeAware[158] website provides substantial materials to support the Honey Bee Industry Code, as well as access to the online training course and templates to facilitate better record keeping for hive inspections and reporting notifiable diseases.

Livestock Production Assurance

The Livestock Production Assurance (LPA) program[159] is the Australian red meat industry's

155 beeaware.org.au/code-of-practice

156 varroa.org.au/nvmmp

157 beeaware.org.au/training

158 beeaware.org.au

159 integritysystems.com.au/on-farm-assurance/livestock-product-assurance

on-farm assurance program covering food safety, animal welfare and biosecurity. It provides evidence of livestock history and on-farm practices when transferring livestock through the value chain. Producers declare this information on LPA National Vendor Declarations (NVDs). NVDs support mandatory livestock traceability, which is recorded in the National Livestock Identification System (NLIS). See Section 4.1 for more information on NLIS.

The LPA program (including LPA QA) is managed on behalf of the red meat industry by Integrity Systems Company and is independently audited by AUS-MEAT. Producers who choose to become LPA accredited commit to carrying out on-farm practices that support responsible red meat production and the integrity of the traceability system.

The LPA program, LPA NVDs and NLIS make up Australia's red meat integrity system covering cattle, sheep and goats. This integrity system protects the disease-free status of Australian red meat and underpins the marketing of our product as clean, safe and natural.

The 7 LPA requirements are:

- **property risk assessment**: to assess the risk of livestock on a property being exposed to areas that are contaminated with organochlorides, other persistent chemicals, pathogens from recycled water, or potentially injurious physical contaminants
- **safe and responsible animal treatments**: to ensure that livestock intended for human consumption do not contain unacceptable chemical residues or physical hazards
- **stock foods, fodder crops, grain and pasture treatments**: to ensure that livestock are not exposed to feeds containing unacceptable contamination, especially animal products or unacceptable chemical residues
- **preparation for dispatch of livestock**: to ensure that livestock to be transported are fit for the journey and not unduly stressed, as well as minimising contamination during on-farm assembly and transport to the destination
- **livestock transactions and movements**: to ensure that movements of livestock can be traced, if necessary, and that the livestock are accompanied by information on their status regarding exposure to chemical residues
- **biosecurity**: to ensure that the risks of introducing infectious diseases to livestock production properties and spreading diseases between properties are minimised
- **animal welfare**: to ensure that livestock management is consistent with the requirements of the relevant Australian Animal Welfare Standards and Guidelines. Read more about animal welfare in Chapter 6.

Producers involved in the program are required to renew their LPA accreditation every 2 years to ensure that their knowledge of the program remains up to date. While LPA is a voluntary program, it is recognised both domestically and internationally and is required by many supply chains around the globe.

National Feedlot Accreditation Scheme

NFAS[160] is an independently audited QA program for the Australian lotfeeding industry. It was initiated by the Australian Lot Feeders' Association (ALFA) and is managed by AUS-MEAT through the Feedlot Industry Accreditation Committee. NFAS accreditation is a prerequisite for beef processed in AUS-MEAT-accredited processing establishments to be marketed as 'grain-fed', 'grain-fed young beef' or 'grain-fed finished'. The program encompasses QA elements for animal health and welfare, environmental management, food safety, biosecurity and product integrity. A key requirement of NFAS is annual auditing to promote independent verification of practices within an NFAS-accredited feedlot and ensure that consumers can maintain confidence in the way grain-fed beef is produced.

ALFA views its QA program as an ever-evolving set of standards that continually improve production methods and demonstrate responsible and ethical production.

Alpaca CheQA

Biosecurity is a major priority for the Australian Alpaca Association (AAA) and the alpaca industry at large, therefore, the Alpaca CheQA biosecurity program[161] has been introduced to meet the needs of members and industry. Alpaca CheQA is available to all AAA members at no cost. The current priority with this biosecurity program is to increase participation among the AAA

160 nfas.org.au/about

161 alpaca.asn.au/alpaca-cheqa-farm-protect

membership, which will reduce the overall risk of diseases (emergency and endemic) to the industry. Approximately 25% of all members are currently enrolled. The program has 3 hierarchy levels – protect, assure and secure – with the levels increasing in formal accountability rising from the protect level up to the secure level.

Australian Pork Industry Quality Assurance Program

The Australian Pork Industry Quality Assurance Program (APIQ®✓)[162] is in place to provide assurance to consumers, regulators, markets and the Australian public that pig production standards are of a high level. APIQ®✓ is an independently, annually audited program that verifies producer compliance with management, food safety, animal welfare, biosecurity, traceability, environment and transport standards.

A producer can be certified as:

- APIQ®✓: pigs are primarily indoors
- APIQ®✓ Free Range: all pigs live outdoors with constant free access to shelter
- APIQ®✓ Outdoor Bred, Raised Indoors on Straw: breeding stock always have free access to paddocks, and piglets always have free access to paddocks until weaning, when they are moved to indoor group housing with bedding.

APIQ®✓ also provides voluntary verification options for specific customers or markets, such as:

- Gestation Stall Free
- Customer Specifications for Coles
- Voluntary Enhanced Biosecurity Standards for African swine fever.

APIQ®✓ certification incorporates the recommendations set out in the Model Code of Practice for the Welfare of Animals: Pigs. Certification enables producers to demonstrate that they are meeting relevant national standards alongside state and territory legislative requirements and are following best-practice industry guidelines.

APIQ®✓ standards are based on Hazard Analysis and Critical Control Points (HACCP),[163] are outcome focused and supported by performance indicators and supplementary information to help producers comply with the standards provided on the APIQ®✓ website.

The APIQ®✓ program undergoes an annual system audit conducted by an independent certifying body to ensure that its policies, processes and administration are robust, reliable and of a high standard.

APIQ®✓ helps underpin the PigPass NVD and health declarations needed to comply with requirements for state and territory food and agriculture authorities; importing country requirements overseen by the Australian Government Department of Agriculture, Fisheries and Forestry; the Australia New Zealand Food Standards Code; and the Australian standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS 4696:2023).[164]

Australian Chicken Meat Federation's quality systems

The Australian Chicken Meat Federation (ACMF) maintains and promotes the *National Farm Biosecurity Manual for Chicken Growers*.[165] This manual sets out the minimum biosecurity requirements for chicken meat farms in Australia and includes an auditable checklist.

162 australianpork.com.au/apiq

163 Pork On-Farm HACCP Plan, SARDI Final Report: Project No. 2009/2260.

164 store.standards.org.au/product/as-4696-2023

165 farmbiosecurity.com.au/industry/chickens

These procedures also largely meet the requirements of the Primary Production and Processing Standard for Poultry Meat (Standard 4.2.2),[166] issued by FSANZ. Introduced in May 2012, the standard has been incorporated into state and territory legislative frameworks and requires all chicken meat farms to operate an appropriate food safety management system.

Depending on the jurisdiction, farms may need to be licensed by the relevant food safety authority and have their food safety management system approved. These requirements may also extend to the integrated producer they supply. Audits confirm effective measures are in place to support positive food safety outcomes. Beyond regulatory requirements, growers and integrated producers must also meet a range of standards set by supply chain participants, including major supermarkets and quick-service restaurant chains. These cover food safety, animal welfare and animal health, with compliance often verified through independent audits. Some customers also apply global supplier standards and assurance programs that Australian chicken meat producers must satisfy.

To support industry preparedness, ACMF has developed the *Chicken Grower's Guide: Early Action in a Potential Emergency Disease*. This guide provides practical advice to growers, with checklists on the immediate steps to take if a suspicious disease arises on their property or if an EAD is detected in their area.

For chickens farmed with outdoor access, most operations are accredited under the Free Range Egg and Poultry Australia[167] certification program, and are independently assessed. In addition, more than 90% of chicken meat farms in Australia are accredited under the RSPCA Approved Farming Scheme,[168] with RSPCA staff conducting regular assessments against scheme standards.

Egg Standards of Australia

Australian Eggs Limited developed ESA,[169] a voluntary national egg QA program, on behalf of the egg industry. ESA is a unique QA scheme with 2 components that promote best practice across all elements of egg production, from pullet rearing to grading and packing safe, high-quality eggs for consumers.

Egg Standards of Australia addresses:


Hen welfare


Egg quality


Biosecurity

Food safety


Work health and safety


Environmental management

ESA for Rearing and Laying Farms has been in operation since April 2018, replacing the previous QA program (Egg Corp Assured). ESA for Grading and Packing Floors was released in November 2019. In June 2025, a revised version of ESA for Rearing and Laying Farms was released to align with the adoption of new animal welfare standards and guidelines across various states and territories.

Australian Eggs Limited delegates ESA audit management to 4 independent certification bodies. Auditors from these bodies must hold, at minimum, internationally recognised accreditation in food safety, and are required to complete all relevant training and participate annually in the ESA calibration auditor training program conducted by Australian Eggs Limited. ESA-certified farms are audited annually to ensure they continue to meet ESA requirements.

Dairy industry quality assurance program

The Australian dairy industry has a comprehensive QA system to ensure food safety from farm

166 legislation.gov.au/F2012L00292

167 frepa.com.au

168 rspcaapproved.org.au

169 australianeggs.org.au/farming/egg-quality-standards

to consumer; product traceability throughout the supply chain is paramount. At a national level, FSANZ sets national mandatory standards under the Food Standards Code (specifically Standard 4.2.4 – Primary Production and Processing Standard for Dairy Products),[170] which are enforced by states and territories. All milk processors and dairy farm businesses are licensed by the state or territory food regulators and regular audits against licence conditions are undertaken. Dairy businesses wishing to export must also comply with the requirements of the DAFF Export Control (Milk and Milk Products) Orders 2005; these businesses are audited annually by DAFF to ensure compliance and maintain their status as a registered exporter of dairy products. All dairy companies have product identification and traceability systems to track raw materials and products from farm to consumer.

The Australian dairy industry has developed and implemented quality management systems underpinned by comprehensive regulatory requirements. Customer needs, food safety and product traceability are vital to these quality systems, but other factors such as animal welfare, biosecurity and environmental sustainability are also important considerations in the development of quality management programs. Regulation and industry QA programs require all sectors of the dairy supply chain to take responsibility for food safety.

In 2015, SAFEMEAT recognised dairy on-farm QA programs as meeting the food safety requirements of the Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS 4696:2007 Clauses 6.1 and 6.2).[171]

Elements of these requirements include the following:

- From farm to product storage, all dairy businesses must be licensed by food regulatory authorities. Individual food safety programs for farms and factories are approved by food regulatory authorities before licences are granted, and compliance is monitored through regular audits of both farms and factories.
- DAFF has arrangements in place with food regulatory authorities for the enforcement of standards for exported dairy products.
- State and territory governments enforce regulations for the use of chemicals on farms, animal welfare, and control of animal diseases and biosecurity, including traceability.

Industry and government support programs underpin dairy QA programs, and the partnership between industry and government is a critical factor in their success. The food safety requirements of the dairy industry's on-farm QA program are complemented by recommended biosecurity elements to protect animal health.

Wool

The Australian Wool Traceability Hub enables the tracing of all farm-originating bales of greasy (unprocessed) wool from the farm of origin through to the point of processing or export. All wool packs imported to Australia are equipped with unique radiofrequency identification (RFID) and QR code identification (eBale). Combining these identifiers with the requirement to declare Property Identification Codes for all farm-originating bales means that over 90% of the Australian wool clip can be traced efficiently and effectively to support both EAD response and export certification requirements.

In addition to the LPA program, voluntary certification programs specific to the wool industry, such as the Australian Wool Sustainability Scheme, require participating growers to implement farm-specific biosecurity plans to protect their animals and environment, as well as further protect long-term profitability and sustainability.

Other quality assurance programs

FAMI-QS and FeedSafe®

There are 2 verification and integrity programs for the Australian stock feed industry. Coordinated by the Feed Ingredients and Additives Association of Australia, FAMI-QS[172] is an international program specifically designed to meet the requirements of feed ingredient and additive manufacturers and suppliers. The Stock Feed Manufacturers' Council of Australia operates FeedSafe® for manufacturers of compound feeds. Both programs are recognised by the Australian Government as satisfying the requirements for the manufacture of safe feed.

170 legislation.gov.au/F2012L00294

171 store.standards.org.au/product/as-4696-2007

172 fami-qs.org

The central aspects of FAMI-QS and FeedSafe® are HACCP, ISO and the Code of Good Manufacturing Practice for the Feed Milling Industry (Feb 2009), with a focus on feed safety, workplace health and safety, risk assessment, biosecurity, treatment/handling of materials, training, traceability/product recall, and labelling requirements that meet state and territory legislation. FAMI-QS- and FeedSafe®-accredited suppliers and manufacturers play an integral role in Australian livestock by producing more than 10 million tonnes of feed annually, which is more than 90% of the manufactured feed sold in Australia. These manufacturers feed approximately 90% of aquaculture animals, 99% of poultry, 90% of pigs, 60% of dairy cows and 40% of grazing cattle, sheep and goats in Australia. They also produce feed for zoo animals and family pets. FeedSafe® was developed in consultation with the state and territory governments and was endorsed by the then Standing Council on Primary Industries. The Australian, state and territory governments are notified of any critical non-conformance or any breach of legislation as identified during an audit.

Rendering standards

The Australian Standard for the Hygienic Rendering of Animal Products (AS 5008:2007) provides the national framework for producing safe, hygienic rendered products in Australia. All states and territories require rendering plants to comply with this standard and any additional legislation, with compliance verified through regular audits conducted by, or on behalf of, government food authorities or by independent auditors.

Additionally, the Code of Practice for the Hygienic Rendering of Animal Products underpins the Australian Renderers' Association (ARA) Accreditation Program, which is formally recognised by the Australian Government as part of the framework for listing establishments eligible to export rendered products; all export-approved establishments must be ARA-accredited. The code strengthens traceability, QA and verification systems to meet regulatory and market-access requirements. The ARA Accreditation Program also includes recyclers of used cooking oil, which are audited to verify compliance with the National Standard for Recycling of Used Cooking Fats and Oils Intended for Animal Feeds.

Accreditation is delivered on behalf of ARA by AUS-MEAT, the government-approved third-party provider responsible for conducting annual audits. As of 2025, there are 95 ARA-accredited establishments in Australia, and these capture most rendering operations. Any critical non-compliances identified during audits are reported to ARA and DAFF. In some jurisdictions, auditors also report audit outcomes or product labelling issues to the relevant state or territory authorities.

Pet Food Adverse Event System of Tracking

The Pet Food Adverse Event System of Tracking (PetFAST) is a voluntary joint initiative of the Australian Veterinary Association (AVA) and the Pet Food Industry Association of Australia (PFIAA). It is designed to track dog and cat health issues suspected of being associated with pet foods, treats or pet meats. Veterinarians can log suspected pet food adverse events on the PetFAST webpage, and in response, PFIAA and AVA will alert the manufacturer(s) and request that the matter be investigated. Where there is a trend or cluster identified, further action can be initiated, such as the manufacturer voluntarily recalling the suspect food, and communication to alert the wider veterinary profession, if appropriate.

Volunteers from AVA and PFIAA monitor the PetFAST reports in real time. Sometimes links are made between reports on specific conditions and products that span years. Once a pattern or trend is identified, manufacturers can be rapidly notified of the suspected problem. The revised Australian Standard for the Manufacturing and Marketing of Pet Food – Cats and Dogs (AS 5812:2023) contains detailed protocols for responding to both PetFAST and customer reports, and for product recalls.

CHAPTER 5

5

Aquatic animal health

While many of the systems outlined in earlier chapters also apply to aquatic animal health, sector-specific groups, committees and mechanisms have been established to reflect the unique nature of the aquatic industry. This chapter details the sector-specific programs and frameworks that support aquatic animal health management, including disease preparedness and response. It covers aquatic animal diagnostics and surveillance programs, regulation of aquatic veterinary medicines, antimicrobial resistance management in the aquatic industry, and the systems that ensure the safety and traceability of Australia's seafood exports.

5.1 National aquatic animal health policy governance

Australia's national aquatic animal health policy and programs are developed from sound scientific evidence. The Subcommittee on Aquatic Animal Health (SCAAH) is an advisory committee to the Animal Health Committee (AHC). SCAAH supports AHC's policy deliberations by providing robust scientific and technical advice on aquatic animal health issues. AHC reports to the National Biosecurity Committee (NBC) for high-level endorsement of decisions and policy. See Chapter 1 for more information on the AHC and NBC.

SCAAH comprises representation from the Australian Government, the state and Northern Territory governments, the New Zealand Government, and the Australian Centre for Disease Preparedness. It includes a representative from Australian universities and from the Aquaculture Advisory Committee at Seafood Industry Australia (SIA) as observers. SCAAH engages with industry on aquatic animal health matters through SIA.

5.2 AQUAPLAN

Australia's aquatic animal health management system has been shaped by the collaborative efforts of aquatic animal industries and government agencies through AQUAPLAN.[173] This is the national strategic plan for aquatic animal health, which addresses industry–government agreed priorities. The plan outlines objectives and priorities ranging from biosecurity, diagnostics, surveillance and emergency preparedness through to international leadership, enhancing Australia's management of aquatic animal health. There have been 4 editions of AQUAPLAN to date: 1998–2003;[174] 2005–2010;[175] 2014–2019[176] and 2022–2027.[177]

AQUAPLAN 2022–2027 is underway and completed activities have produced several outcomes and their outputs.

Outcomes

- Clarify opportunities, needs and barriers to domestic translocations of high value animal or genetic material and develop a national approach to domestic translocation.
- A national surveillance strategy that guides objectives, roles and responsibilities, and investment principles for the national surveillance system.
- A priority disease list for industry and governments to target preparedness and risk-mitigation activities.
- Guidelines on the disease investigation process ensure a consistent and efficient approach to investigating new and emerging aquatic animal diseases between all Australian jurisdictions.

Outputs

- A report outlining recommendations on a national approach to domestic translocation was developed and provided to decision-makers to inform policy.
- A National Aquatic Animal Disease Surveillance Strategy was developed, which recognises the strengths of the existing surveillance system and provides an agreed framework from which improvements can be made.[178]
- The National Priority Aquatic Animal Disease List was developed, which identifies the highest priority exotic diseases that require coordinated investment and activity to improve risk mitigation and emergency preparedness.[179]
- The *Outbreak!* handbook was developed, which contains guidelines to use in the event of a disease outbreak in aquatic animals including finfish, molluscs and crustaceans.[180]

173 agriculture.gov.au/agriculture-land/animal/aquatic/aquaplan

174 agriculture.gov.au/sites/default/files/documents/review-of-aquaplan-1998-2003.pdf

175 agriculture.gov.au/sites/default/files/documents/review-of-aquaplan-2005-2010.pdf

176 agriculture.gov.au/sites/default/files/documents/aquaplan-2014-2019-review.pdf

177 agriculture.gov.au/sites/default/files/documents/aquaplan-2022-2027.pdf

178 agriculture.gov.au/sites/default/files/documents/national-aquatic-animal-disease-surveillance-strategy.pdf

179 agriculture.gov.au/agriculture-land/animal/aquatic/emergency/national-priority-aquatic-animal-disease-list

180 agriculture.vic.gov.au/biosecurity/animal-diseases/aquatic-animal-diseases/outbreak!

5.3 National aquatic animal health policy and programs

Australia's national aquatic animal health policy and programs are developed from sound scientific evidence, and aim to achieve several key objectives:

- enterprise biosecurity – stronger biosecurity measures for managing aquatic animal disease risks
- surveillance – a national system that supports early detection and defines our disease status
- diagnostic capability – maintaining and strengthening national diagnostic capability (see Chapter 3)
- emergency preparedness – a national approach to preparedness arrangements and effective national coordination of emergency aquatic animal disease incidents
- veterinary medicines in aquaculture – supporting a nationally consistent approach for the safe and effective use of aquatic veterinary medicines
- seafood safety and traceability.

Enterprise biosecurity

National aquaculture farm biosecurity plans

Australia has a consistent national framework of enterprise-level biosecurity guidance resources, such as the Aquaculture Farm Biosecurity Plan published in 2017.[181] The generic biosecurity plan guidelines and biosecurity plan template aim to guide the development of biosecurity plans at the farm level. They have been developed as generic documents so they can be adapted to develop biosecurity plans for specific aquaculture sectors or production systems.

Several sector-specific biosecurity plans have been published for land-based abalone farms, oyster hatcheries, barramundi farms, prawn farms and, more recently, freshwater native finfish and sea-cage finfish (non-salmonid aquaculture).[182] The plans explain how to assess disease risks and how to design and maintain on-farm biosecurity plans. Each plan includes template forms, checklists and signs to make it easier for farms to produce biosecurity plans that are fit for purpose, practical, cost-effective and auditable.

Surveillance programs

National surveillance programs

Australia's aquatic animal health surveillance system has 2 main components. General surveillance is where disease is observed in an animal population and the observer initiates an investigation of the problem, which may lead to a diagnosis (e.g. major fish kills event). The other type of surveillance is targeted surveillance, in which animals are sampled to determine their status for a particular disease for a specific objective.

Australia has various targeted surveillance programs, each working towards specific objectives such as trade, disease control and eradication. For example, there is an ongoing targeted surveillance program for haliotid herpesvirus-1 as part of the Abalone Health Accreditation Program. Most nationally significant diseases are under ongoing general surveillance systems, which have been strengthened by various awareness programs and publications, such as the disease identification field guide (see 'Aquatic animal disease field guide' section below). Collectively, these elements constitute Australia's national surveillance system.

The National Aquatic Animal Disease Surveillance Strategy, published in 2025, provides guidance for

181 agriculture.gov.au/sites/default/files/documents/aquaculture-farm-biosecurity-plan-generic.pdf

182 agriculture.gov.au/agriculture-land/animal/aquatic/biosecurity-plan-guidelines

industry and governments on infectious diseases of national significance in wild and farmed populations of aquatic animals in Australia.[183] The strategy:

- defines expected outcomes from investment in the national surveillance system
- defines agreed principles for investing in surveillance that will optimise return on investment
- supports a coordinated and collaborative approach to surveillance by industry and government.

Aquatic animal disease field guide

The *Aquatic Animal Diseases Significant to Australia: Identification Field Guide* aims to facilitate recognition and reporting of aquatic animal diseases.[184] It is intended for people working directly with aquatic animals, as they are usually the first to notice signs of a significant disease event. The guide provides useful information on 53 significant diseases of finfish, crustaceans, molluscs and amphibians.

The field guide's fifth edition is available as a Word document, PDF or free mobile app (see the App Store or Google Play). A sixth edition is underway and will incorporate new and updated information after an extensive review of the current edition.

Diagnostic capability

The Australian Centre for Disease Preparedness (ACDP) Fish Diseases Laboratory is the national reference laboratory for aquatic animal diseases and provides services for exclusion testing for significant diseases.

Australia's diagnostic network draws on nodes of expertise throughout the national, state and Northern Territory government laboratories, research laboratories and private service providers. This high standard of diagnostic service is built upon:

- quality research
- validation of methods
- diagnostic and laboratory standards
- quality assurance programs.

DAFF, in collaboration with state and territory governments and industry, coordinates activities to manage aquatic animal health nationally. This includes activities to enhance the diagnostic system.

National proficiency testing program

Australia's aquatic animal health diagnostic laboratories, which are supported by the ACDP Fish Diseases Laboratory, participate in interlaboratory proficiency testing (PT) and contribute to maintenance and improvement of national diagnostic standards. Testing is done in line with the Australian and New Zealand standard diagnostic procedures (ANZSDPs), if there are no appropriate international standard procedures. ANZSDPs are discussed in the next section.

The national aquatic PT program is run by ACDP as an ISO/IEC 17043:2023-accredited PT scheme provider. The program enables Australian laboratories to assess their diagnostic capabilities to correctly detect priority aquatic animal diseases using molecular methods. Participants include private, university and government laboratories. They all benefit from benchmarking that supports the reproducibility and validation of tests, strengthened competencies and laboratory techniques, and accreditation.

Australian laboratories can participate in PT for the following aquatic animal disease agents:

- *Bonamia exitiosa*
- haliotid herpesvirus-1
- ostreid herpesvirus-1 microvariant
- *Perkinsus olseni*
- *Vibrio parahaemolyticus* PirA/PirB toxin genes
- infectious hypodermal and haematopoietic necrosis virus
- Taura syndrome virus
- white spot syndrome virus
- yellow head virus 1
- koi herpesvirus
- megalocytiviruses
- nervous necrosis virus
- spring viraemia of carp virus.

183 agriculture.gov.au/sites/default/files/documents/national-aquatic-animal-disease-surveillance-strategy.pdf

184 agriculture.gov.au/animal/aquatic/guidelines-and-resources/aquatic_animal_diseases_significant_to_australia_identification_field_guide

Australian and New Zealand standard diagnostic procedures

DAFF maintains the list of ANZSDPs. These procedures have optimal accuracy, robustness, sensitivity and specificity for animal health diagnostic laboratories in Australia and New Zealand. They provide consistency between laboratories and support a quality assurance system that includes PT. ANZSDPs are available for both terrestrial and aquatic animal diseases.

Aquatic ANZSDPs are consistent with the World Organisation for Animal Health (WOAH) *Manual of Diagnostic Tests for Aquatic Animals* (WOAH aquatic manual). However, they may exceed those requirements where Australian and New Zealand circumstances require special procedures or interpretation.

Where an ANZSDP has not been developed for a particular test, the methods recommended in the WOAH aquatic manual should be used.

Emergency preparedness and the Aquatic CCEAD

The national system to prepare for and respond to aquatic emergency animal diseases (aquatic EADs) encompasses all activities relating to disease surveillance, planning, monitoring and response. These activities are carried out by the Australian Government, state and territory governments, aquatic animal industries, universities, ACDP, private laboratories and private veterinarians.

The Aquatic Consultative Committee on Emergency Animal Diseases (Aquatic CCEAD) coordinates the national technical response to aquatic animal disease emergencies. The Aquatic CCEAD comprises:

- the Australian Chief Veterinary Officer
- representatives from DAFF
- the Chief Veterinary Officer (or the Director of the fisheries department) in each state and territory government
- the ACDP Director.

As with terrestrial animal disease emergencies, operational responsibility for the response to an aquatic EAD primarily lies with the relevant jurisdiction. Each state and territory government brings together a broad range of resources to assist fisheries, aquaculture and aquatic animal

Each state and territory government brings together a broad range of resources to assist fisheries, aquaculture and aquatic animal health authorities to address disease incidents.

health authorities to address disease incidents. Experts from other jurisdictions may also be called on, if required.

DAFF provides a national coordination role for response activities through chairing and supporting the operation of the Aquatic CCEAD. The Aquatic CCEAD assesses the situation and advises on managing the outbreak until it is determined that the disease has been eradicated or that a response is no longer feasible or cost-effective.

AQUAVETPLAN

The *Australian Aquatic Veterinary Emergency Plan* (AQUAVETPLAN) is a series of technical response manuals that describe the proposed Australian approach to an aquatic EAD outbreak. The manuals provide technical information and preferred policy approaches to guide emergency responses.

AQUAVETPLAN aligns with the *Australian Veterinary Emergency Plan* (AUSVETPLAN) for terrestrial animal disease responses. Disease strategy manuals provide guidance for animal health professionals to respond appropriately to outbreaks of specific EADs. Operational manuals address important procedural issues (e.g. destruction, disposal and decontamination) and complement the disease strategy manuals.

During 2025, a structural review of AQUAVETPLAN revised the manual templates and the procedure to develop and review manuals. This was to ensure manuals provide clear, consistent and up-to-date guidance that supports industry and government needs during an emergency response.

AQUAVETPLAN manuals can be downloaded from the DAFF website.[185]

185 agriculture.gov.au/animal/aquatic/aquavetplan

Veterinary medicines in aquaculture

Agricultural and veterinary chemical products are an important tool to support aquatic animal health, welfare and emergency disease responses. Australia's aquatic animal industries require timely access to safe, appropriate and effective products, including vaccines, disinfectants, anaesthetics and antimicrobials. The regulation and management of veterinary medicines mitigate risks associated with their use, including consideration of antimicrobial resistance (AMR) risks by the Australian Pesticides and Veterinary Medicines Authority when registering or permitting a product.

Safe and effective medicine use

Aquatic veterinary medicines can be accessed and safely used in line with registered product labels or minor use permits issued by the national regulator (the Australian Pesticides and Veterinary Medicines Authority). Aquaculture is a relatively young industry that innovates with new species and farming methods in a changing climate, so new medicines or different patterns of use are sometimes required in response to emerging needs. Consequently, there is an ongoing need for emergency use permits and off-label use provisions when registration or permits are not available.

In Australia, registered veterinarians have prescription authority for off-label use, in line with environmental regulations, to facilitate emergency disease response and disease management, although regulatory provisions differ among the states and territories.

Industry peak bodies continue to support farmers with their veterinary medicine access needs. They do this through funding and coordinated efforts to maintain and seek new registrations and minor use permits for priority chemicals.

Antimicrobial resistance in aquaculture

AMR is a significant international issue that threatens the effectiveness of antimicrobials to treat some diseases in animals and humans. Reducing AMR involves a range of health management measures such as prudent antimicrobial use, vaccination, farm biosecurity and appropriate husbandry to prevent or minimise disease.

The aquaculture sector is becoming increasingly aware of the need to better understand antimicrobial usage and the extent of AMR, both in Australia and internationally. This issue was discussed at the OIE[186] (now WOAH) Global Conference on Aquatic Animal Health in 2019, where countries were encouraged to improve their data collection and develop policies to understand and deal with this issue.

AQUAPLAN 2022–2027 highlights AMR as an important national priority for aquatic industries. Australia's National Antimicrobial Resistance

186 WOAH was previously known as the Office International des Epizooties (OIE)

Strategy – 2020 and Beyond (see Chapter 7), published by the Australian Government, guides actions on issues relating to AMR and antimicrobial use. The strategy calls for more efforts in communication to raise awareness and to improve knowledge and evidence of AMR through surveillance and research in animal industries, including aquaculture. Research and communication strategies are aimed at demonstrating antimicrobial stewardship in aquatic industries, which currently include, for example, farm biosecurity, surveillance, robust translocation policies, regulatory frameworks for veterinary medicine use and vaccine developments.

Seafood safety and traceability

Ensuring the safety and traceability of Australia's seafood exports is essential to maintaining our overseas markets. DAFF is responsible for the regulatory oversight of export registered establishments, including the registration process for new establishments. Under the Export Control (Fish and Fish Product) Rules 2021 (the Rules), all establishments that prepare, handle and store prescribed fish and fish products intended for export must be registered with the department. They must also have a hazard analysis and critical control points (HACCP) based food safety program within their documented procedural manual,

which is called an 'approved arrangement' (AA). The AA must be assessed and approved by the department prior to commencing export operations.

DAFF monitors compliance with regulatory requirements and each establishment's AA for exports of fish and fish products under the Rules. Establishments must ensure the safety and traceability of products and keep records as required in accordance their AA that are audited by the department's trained food safety auditors to determine compliance with the Rules.

The following 4 key requirements must be implemented for fish and fish products.

1. Sourcing of products

- Products must be sourced from waters that have no potentially harmful pathogens or substances.
- Products must be sourced from an export registered establishment, a catcher boat or an establishment that has an exemption granted by the department.

2. Identification and traceability of products

- Products must be able to be identified, traced and, if necessary, recalled.
- Products must be identified throughout handling and storage, including identification and segregation from fish not intended to be consumed.
- For an establishment to deem a product as meeting export requirements, it must remain within the exporting establishment's chain of responsibility.

3. Identification of hazards and implementation of controls

- An HACCP plan must be in place covering each step in the preparation of the products.
    - Hazards and critical limits must be identified at each step and preventative controls must be established and in place.
    - Where significant hazards (called critical control points or CCPs) are identified, the establishment must ensure that CCP process controls are met, and the required records that demonstrate compliance with the HACCP plan are made and kept.
    - Corrective action must be taken when the control measures have not been met, including the prevention of recurrence.
- Products must be fit for human consumption and meet importing country requirements.

4. Structure and hygiene for export registered establishments, including fishing vessels

- Establishments must meet the defined minimum standards for structures and hygiene to ensure products are not contaminated.

DAFF issues certification for export based on establishments meeting export legislation and importing country requirements.

Export establishments must also comply with the Australian New Zealand Food Standards Code, which governs food safety, composition and food labelling. The code sets legally enforceable rules for food sold in Australia and New Zealand. It includes requirements for the primary production and processing of food, such as requirements for traceability, identification and hygiene.

CHAPTER 6

6

Animal welfare

This chapter explores Australia's collaborative approach to farm animal welfare, involving the Australian Government, state and territory governments, industry and veterinarians. It highlights the shared commitment to driving meaningful improvements in Australia's animal welfare system through the renewal of the Australian Animal Welfare Strategy. The chapter also describes the Australian Animal Welfare Standards and Guidelines, which provide a nationally consistent framework for farm animal welfare. It explains how responsibilities are distributed across the three tiers of government and industry, highlighting the importance of coordinated action in delivering positive welfare outcomes for farm animals across the country.

6.1 Australian Animal Welfare Strategy

Australian Government and state and territory agriculture ministers are committed to renewing the Australian Animal Welfare Strategy (AAWS).[187] The renewed strategy will confirm Australia's commitment to a modern, sustainable, scientific and evidence-based approach to animal welfare. The strategy will also provide a contemporary national animal welfare framework and will signal to our trading partners and the Australian community that animal welfare remains a priority for our nation.

The Australian Government is working closely with states and territories to take a joint leadership approach to renewing the AAWS. Consultation to support developing the AAWS is ongoing and is informed by broad stakeholder engagement and a principles-based framework.

The Australian Government has committed $5 million to renew the AAWS, which is expected to be finalised in 2027.

As part of developing the renewed AAWS, all Australian agriculture ministers endorsed the National Statement on Animal Welfare, published on 13 December 2024. The national statement sets a vision for the future of Australia's animal welfare system, acknowledging the role of animal welfare practices and standards informed by science and evidence.

The national statement reflects a joint commitment by all governments to issues of national significance and identifies priority areas of opportunity for Australia's animal welfare system (see Table 6.1).

Four context-setting statements identify important considerations when addressing the priority areas for opportunity. These statements acknowledge the interconnectedness of animal welfare with other national priorities and issues of significance, such as climate change and biosecurity, and the importance of partnering with First Nations people to incorporate their teachings and perspectives on protecting and caring for all animals.

The national statement also sets out 6 priority areas for achieving good animal welfare outcomes in Australia: leadership and coordination, standards and implementation, reporting and compliance, research and development, education and communication, and international engagement.

The national statement was informed by broad consultation with stakeholders across Australia's animal welfare system.

187 agriculture.gov.au/agriculture-land/animal/welfare/aaws

Table 6.1 National Statement on Animal Welfare

Vision for animal welfare in Australia

Australia achieves good animal welfare outcomes through the development and adoption of animal welfare practices and standards that are underpinned by science and evidence.

Context

- We acknowledge the interconnectedness of animal welfare, human wellbeing, animal and human health, the environment and climate change, biosecurity, and Australia's socioeconomic sustainability and prosperity.
- We acknowledge the need to build trusted relationships and sustainable continuous improvement across the animal welfare system to progress the vision.
- We acknowledge the spiritual connection that First Nations people have with animals, and the importance of partnering with First Nations people to incorporate their teachings and perspectives on protecting and caring for all living beings.
- We acknowledge the need to continue to develop Australia's capability to support the animal welfare system.

Priority areas	Opportunities linked to priority area
Leadership and coordination Establishes governance arrangements to oversee implementation of the Australian Animal Welfare Strategy and coordination of activities.	We are working towards national consistency, while recognising the need for flexibility. Our governance arrangements include expert capability and independent advice, supported by broad stakeholder engagement. Responsibilities are clear and decisions are transparent.
Standards and implementation Implement standards development frameworks that identify national priorities and streamline the development and rapid adoption by jurisdictions.	We are working towards standards that consider contemporary animal welfare science, costs, practicalities, community standards and international expectations. We promote the role of species-specific approaches, industry guidelines, codes and other mechanisms such as sustainability frameworks and extension activities that complement national standards and guidelines.
Reporting and compliance Establish systems to track outcomes and monitor compliance.	We are working towards measurable animal welfare outcomes, ensuring practices meet or exceed national, state and territory requirements, including monitoring, data collection, transparent reporting and auditing activities. We recognise the role of quality assurance and accreditation systems. There is opportunity for the continuing role of emerging technology in monitoring, alerting, reporting and compliance.
Research and development Implement a coordinated approach to animal welfare research and extension activities.	We are working towards a coordinated approach that builds the evidence base to meet animal welfare challenges and opportunities. There are opportunities for cross-sector research and for building on industry investment (e.g. Rural Research and Development Corporations), understanding the use of technology in improving animal welfare, identifying gaps and translating findings to application.
Education and communication Promote best practice to industry and the community, showcase good outcomes and raise community awareness about animal use across all sectors.	We recognise the role of social licence in Australia, and support work to increase community awareness about animal welfare practices and standards. Opportunity exists to promote examples of positive animal welfare outcomes and to extend outreach education programs.
International engagement Establish cooperation and sharing of animal welfare information with international standard-setting bodies such as the World Organisation for Animal Health and advocate for Australian standards and practices that are designed for our unique landscapes, ecosystems and climate.	We will build Australia's sustainable trade credentials, maintaining and securing future market access by showcasing and maturing Australia's national approach to animal welfare.

Source: Australian Government (www.agriculture.gov.au/sites/default/files/documents/national-statement-on-animal-welfare.pdf)

6.2 Roles and responsibilities of government

Australia has a collaborative approach to managing animal health and welfare. Animal welfare oversight in Australia involves the Australian Government, state and territory governments, industry and veterinarians.

Australia's 3 tiers of government each have animal welfare responsibilities:

- The Australian Government's responsibilities for animal welfare relate to external trade and treaties that encompass some animal welfare issues. The Australian Government also administers a regulatory framework designed to minimise the risk of adverse animal welfare outcomes for exported livestock, through to and including the point of slaughter for feeder and slaughter livestock.
- State and territory governments have primary responsibility for animal welfare within Australia. This includes preparing and enforcing animal welfare legislation, providing suitable institutional and legislative frameworks, developing appropriate policies and programs, and promoting and making these readily accessible to the public.
- Local governments have responsibility for some areas of domestic animal control and public health that have a significant impact on animal welfare. This includes providing feedback to state and territory governments on animal welfare legislation, and promotion and maintenance of responsible animal ownership.

Since the 1980s, the welfare of livestock in Australia has been supported by a series of Model Codes of Practice for the Welfare of Animals (MCOPs), which were adopted voluntarily by animal industry sectors.

A review of MCOPs in 2005 recommended that the codes be converted into Australian Animal Welfare Standards and Guidelines. The standards were to be adopted as minimum legal standards by Australian states and territories, and the guidelines for best practice were to be adopted voluntarily by industry.

The introduction of Australian Animal Welfare Standards and Guidelines for livestock aimed to improve livestock welfare regulation in Australia through a greater focus on improved welfare outcomes, practical implementation for industry and consistency across all Australian jurisdictions.

The development of Australian Animal Welfare Standards and Guidelines is overseen by the Animal Welfare Task Group, a committee comprising officials from the Australian Government and state and territory governments, with New Zealand as an observer. Progress with developing Australian Animal Welfare Standards and Guidelines is available on the Department of Agriculture, Fisheries and Forestry website.[188]

188 agriculture.gov.au/agriculture-land/animal/welfare/standards-guidelines

6.3 Roles and responsibilities of industry

Livestock industries work collaboratively with governments and other stakeholders to deliver optimal animal welfare outcomes in international trade, in the domestic market, on-farm and in all aspects of the supply chain.

Industry's roles and responsibilities for animal welfare span several areas:

- Industry provides a high standard of livestock welfare by ensuring that animals are treated in accordance with animal welfare legislation, best-practice guidelines and the provisions outlined in animal welfare framework models such as Five Freedoms and Five Domains.
- Industry is integral to ensuring that the Australian Animal Welfare Standards and Guidelines and other jurisdictional animal welfare legislation are adhered to and implemented on-farm. As part of this, industries have developed their own animal welfare best-practice guidelines, certification systems and quality assurance systems, which align with legislative requirements and report on animal welfare practices to ensure compliance. These systems are regularly updated to reflect legislative changes and advances in animal welfare science.
- Industry co-invests in, supports and informs the direction of animal welfare research, development and extension (RD&E). Investments in animal welfare RD&E provide industry with the information and tools to support practice change and to ensure continuous improvements in animal welfare. RD&E enables industry to develop and promote animal welfare resources for farmers, as well as contribute to the provision of animal welfare education and training throughout Australia. Specific industry animal welfare initiatives and projects are referred to in the *Animal Health in Australia* annual reports.
- Industry representative bodies take leading roles in developing national animal welfare policy and standards, educating the community about farm animal welfare, and engaging with producers to ensure good welfare outcomes on-farm and through the supply chain.

Good animal welfare is supported by knowledge and skilled management in the prevention of disease and injury, veterinary treatment, appropriate shelter and nutrition, and recognised Australian industry best practice for handling, transport, slaughter and euthanasia. Some animal industries have demonstrated their commitment to animal welfare by developing animal welfare policy and position statements.

6.4 Improving the process for developing and reviewing Australian Animal Welfare Standards and Guidelines

The development and implementation of national standards contribute to Australia's animal welfare system. The Animal Welfare Task Group continues to work to improve the process for developing and reviewing Australian Animal Welfare Standards and Guidelines.

Animal welfare continues to be a priority for agriculture ministers from the Australian Government and all state and territory governments. Through the Animal Welfare Task Group, jurisdictions continue to work collaboratively to support the development and implementation of national standards in a harmonised and timely manner. Jurisdictions are working towards standards that consider contemporary animal welfare science, costs, practicalities, community standards and international expectations.

Good animal welfare is supported by knowledge and skilled management in the prevention of disease and injury, veterinary treatment, appropriate shelter and nutrition, and recognised Australian industry best practice for handling, transport, slaughter and euthanasia.

CHAPTER 7

7

One Health

One Health is an integrated and unifying principle that aims to balance and optimise the health of people, animals and ecosystems. It recognises that the health of humans, domestic and wild animals, plants and ecosystems is closely linked.

The One Health approach mobilises multiple sectors, disciplines and communities at varying levels of society to work together to:

- foster wellbeing
- tackle threats to health and ecosystems
- address the collective need for healthy food, water, energy and air
- act on climate change
- contribute to sustainable development.[189]

The approach is crucial for addressing global threats like antimicrobial resistance (AMR) and emerging zoonotic diseases. AMR occurs when bacteria, viruses, fungi or parasites are no longer susceptible to the medicines used to kill them. It may occur naturally, but its development is accelerated by the inappropriate use of antimicrobial medicines. It can spread through human and animal movements, contaminated food and water, and the environment. Cross-sectoral and international cooperation is essential to preserve the effectiveness of antimicrobial medicines, and Australia participates in global initiatives to promote awareness, advocate for responsible antimicrobial stewardship practices and monitor antimicrobial usage.

More than 60% of the emerging infectious diseases reported globally are zoonoses,[190] which are diseases and infections in humans that are spread by or have originated in animals. Recent examples include avian influenza, COVID-19, Ebola disease and Hendra and Nipah viruses. There is growing recognition that zoonotic spillovers are largely driven by factors at the human–animal–plant–environment interface. Continued work to strengthen global One Health systems and reduce the risk of zoonotic pandemics is paramount as it enables timely detection, coordinated response and effective prevention strategies across the human, animal and environmental health sectors.

7.1 Antimicrobial resistance

Australia has one of the world's most conservative approaches to antimicrobial use in animals. Several medically important antimicrobials, such as colistin, carbapenem and fourth generation cephalosporins, have never been registered for

use in animals in Australia. Fluoroquinolones have never been registered for use in food-producing animals. Additionally, no antimicrobial agents that are medically important for human health are registered for growth promotion in Australia.

Nearly all antimicrobials used in animals require a prescription and undergo rigorous evaluation by the Australian Pesticides and Veterinary Medicines Authority, which includes an assessment of the risk of antimicrobial resistance (AMR) developing. This strong regulatory system is complemented by high levels of industry biosecurity that help to prevent infectious diseases, resulting in a low risk of AMR developing in animals.

Australia's efforts to combat AMR are guided by Australia's National Antimicrobial Resistance Strategy – 2020 and Beyond (the 2020 strategy).[191] This strategy sets a 20-year plan to protect the health of humans, animals, plants and the environment by minimising the development and spread of AMR and preserving the efficacy of antimicrobials. It aims to address AMR through a comprehensive approach involving governance, infection prevention and control, communication and engagement, antimicrobial stewardship, AMR surveillance, research, and global partnerships. The strategy's implementation is guided by the One Health Master Action Plan (OHMAP). OHMAP provides national priority areas and focus areas, and it identifies which of the One Health sectors need to contribute to each.[192]

189 who.int/publications/m/item/one-health-definitions-and-principles

190 Jones K et al. 2008. Global trends in emerging infectious diseases. *Nature*; 451: 990–993. www.nature.com/articles/s41392-024-01917-x

191 amr.gov.au/resources/australias-national-antimicrobial-resistance-strategy-2020-and-beyond

192 amr.gov.au/resources/one-health-master-action-plan-australias-national-antimicrobial-resistance-strategy-2020-and-beyond

Australia's Animal Sector Antimicrobial Resistance Action Plan 2023 to 2028 has agreed priority activities for the terrestrial and aquatic animal sectors that directly align with Australia's National Antimicrobial Resistance Strategy – 2020 and Beyond, and the OHMAP.[193] Government and industry stakeholders are committed to working together on implementation, and updates are available in the *Animalplan 2022 to 2027* progress reports and the *Animal Health in Australia* reports.[194]

See Chapter 5 to find out how AMR risks are being addressed in the aquaculture sector.

Australian initiatives to combat antimicrobial resistance

Australia works hard to minimise the development and spread of AMR. As part of this, a range of national structures and initiatives have been established to improve antimicrobial stewardship governance and coordination, and to encourage research and innovation. The following initiatives contribute to AMR governance and action:

- The Australian Strategic and Technical Advisory Group on AMR (ASTAG) provides expert advice to the Australian Government on AMR-related issues to support the 2020 strategy. An ASTAG working group reviewed the *Importance Ratings and Summary of Antibacterial Uses in Human and Animal Health in Australia* (2018)[195] to ensure currency and rating of each antibacterial included. The Importance Ratings publication is a key antimicrobial stewardship resource that guides decisions by prescribers.[196]
- The Animal Health Committee (AHC) has established the AMR Task Group to implement activities in the AMR action plan that require government leadership.

193 agriculture.gov.au/agriculture-land/animal/health/amr/animal-sector-plan

194 agriculture.gov.au/agriculture-land/animal/health/animal-plan/project-44; animalhealthaustralia.com.au/ahia

195 The final document will be published on amr.gov.au/resources

196 amr.gov.au/resources/importance-ratings-and-summary-antibacterial-uses-human-and-animal-health-australia

- The AHC Subcommittee on Animal Health Laboratory Standards has set up the Antimicrobial Resistance Testing Technical Working Group (ARTTWG). ARTTWG is developing and implementing nationally consistent antimicrobial susceptibility testing methods and reporting standards in Australian animal health laboratories.
- Australia's national strategic plans for terrestrial animal health (*Animalplan 2022 to 2027*) and aquatic animal health (*AQUAPLAN 2022–2027*), agreed by industry and governments, highlight AMR as an important national priority.

The following group coordinates action on antimicrobial stewardship:

- The AMR Vet Collective is a group of researchers and veterinarians across Australia and New Zealand who have expertise in a field relating to AMR. It works with the Australian Government, Australian Veterinary Association, Veterinary Schools of Australia and New Zealand, and industry partners. The AMR Vet Collective develops and promotes resources[197] on best practice use of antimicrobials in animals and hosts online learning programs[198] for veterinarians. These resources and programs help veterinarians increase their knowledge and confidence in antimicrobial stewardship so that they can be champions for the cause.

The following initiatives support AMR research and innovation in Australia:

- CSIRO, Australia's national science agency, ran the Minimising Antimicrobial Resistance Mission until 2025. This program accelerated research and development and provided pathways to market for solutions to prevent, manage and respond to AMR in humans, animals and the environment. CSIRO is now continuing these efforts more broadly across the organisation, and in partnership with the livestock industries, state governments and the Department of Agriculture, Fisheries and Forestry (DAFF).
- Australia's Cooperative Research Centre for Solving Antimicrobial Resistance in Agribusiness, Food and Environments (SAAFE) brings together the food and agribusiness industries, environmental management sectors, government agencies and research organisations. The goal is to tackle AMR using a coordinated and cross-sectoral approach.[199] Working with a diverse range of stakeholders, SAAFE will, by 2033, invest more than $150 million into collaborative research to mitigate AMR, helping to develop, share and implement solutions. SAAFE's work is underpinned by a One Health approach that not only delivers action across all sectors where antimicrobials are used but also explores the connections and dependencies between sectors. Understanding the complex AMR ecosystem is critical to prioritise stakeholders' perspectives and barriers, as well as activities with the greatest impact.
- The Robotic Antimicrobial Susceptibility Platform (RASP) has been developed by Murdoch University with funding from the Australian Government and others.[200] RASP is a high-throughput, robotic system that automates bacterial isolation and identification and antimicrobial susceptibility testing under internationally accepted standards. The system has been demonstrated in the pig, chicken meat and dairy industries. RASP makes it possible to assess AMR affordably and meaningfully at the level of individual herds and flocks, with potential benefits for animal disease control. It directs objective information in a timely manner to the herd owner and veterinarian so they can make important decisions about antimicrobial use and stewardship.

International engagement on antimicrobial resistance

Australia contributes to international efforts to minimise the spread of AMR. We also engage with global initiatives that promote antimicrobial stewardship and build systems to understand resistance and usage by:

- actively supporting the development of the Political Declaration of the High-level Meeting on Antimicrobial Resistance (the Political Declaration).[201] This was signed during the

197 amrvetcollective.com/home/prescribing-support

198 amrvetcollective.com/home/continuing-education

199 crcsaafe.com.au

200 Truswell A et al. 2021. Robotic Antimicrobial Susceptibility Platform (RASP): a next-generation approach to One Health surveillance of antimicrobial resistance. *Journal of Antimicrobial Chemotherapy*, 76(7): 1800–1807. doi.org/10.1093/jac/dkab107

201 who.int/news-room/events/detail/2024/09/26/default-calendar/un-general-assembly-high-level-meeting-on-antimicrobial-resistance-2024

second United Nations (UN) General Assembly high-level meeting on AMR in New York on 26 September 2024. Animal health sector commitments in this statement are consistent with actions that are already being implemented in Australia.

- contributing to the establishment of the Independent Panel on Evidence for Action against AMR,[202] which was a commitment in the Political Declaration, and to the development of the Global Action Plan on Antimicrobial Resistance 2025–2028, a Quadripartite initiative.[203]
- strengthening global collaboration and partnerships by participating in the Quadripartite AMR Multi-Stakeholder Partnership Platform, with the Australian Government representative provided by the animal health sector.[204] The platform is facilitated by the Food and Agriculture Organization of the UN, UN Environment Programme, World Health Organization and World Organisation for Animal Health (WOAH). It drives global action against AMR by promoting collaboration among all stakeholders across the One Health spectrum.
- contributing to development of international standards for managing AMR in animal health through WOAH.
- fulfilling international reporting obligations by providing aggregated animal health antimicrobial sales data to WOAH annually via ANIMUSE, the online global database on animal antimicrobial usage.[205]
- contributing to the Codex Alimentarius Commission, the intergovernmental body that develops international food standards, guidelines and codes of practice. Codex's science-based texts set the benchmark for global food trade. Other Codex texts on veterinary drugs and their residues, food hygiene and animal feed also help to prevent the development and minimise the transmission of AMR through the food chain.
- participating in the Quadrilateral Animal Health Alliance AMR Network, to align international policy positions and share expertise with Canada, New Zealand, the United Kingdom and the United States.

202 qjsamr.org/publications/m/item/establishing-an-independent-panel-on-evidence-for-action-against-antimicrobial-resistance-(ipea)

203 qjsamr.org/about-us

204 qjsamr.org/multistakeholder-partnership-platform/about

205 amu.woah.org/amu-system-portal/home

7.2 Zoonotic disease and pandemic prevention

Australia has been fortunate to be free from many of the serious zoonotic diseases found around the world. There are well-established systems for managing zoonotic diseases, including notification requirements for key diseases in humans and animals. Considerable efforts are being made to:

- enhance our understanding of emerging exotic zoonoses and address the risks they pose
- develop strategies to reduce human infection from zoonoses that are present in Australia, such as Hendra virus and Q fever.

There is growing recognition of the importance of One Health, following the emergence of COVID-19 in late 2019 and the 2021–2022 Australian mainland outbreak of Japanese encephalitis virus in humans and animals. One Health is being embedded into new and ongoing initiatives, including the Australian Centre for Disease Control (CDC; see Section 7.3 and this chapter's case study).

The Australian Government and state and territory governments facilitate the management of zoonotic diseases (including foodborne diseases) through a One Health approach, as follows:

- The Department of Agriculture, Fisheries and Forestry (DAFF) has a memorandum of understanding with the Department of Health, Disability and Ageing. This underpins a joint approach on areas of cross-portfolio interest.
- The Communicable Diseases Network Australia (CDNA) provides national public health coordination and leadership around the surveillance of communicable and notifiable diseases. It covers vaccine-preventable diseases, zoonotic diseases, sexually transmissible infections, arboviruses and enteric diseases.[206] The network meets fortnightly to share the latest surveillance information. CDNA has members from government public health agencies (state, territory, federal and New Zealand) and other key organisations. Representation includes animal health (DAFF) and food safety (Food Standards Australia New Zealand).
- The National Notifiable Diseases Surveillance System coordinates data on over 70 human diseases that present a risk to public health in

206 health.gov.au/committees-and-groups/cdna

Australia.[207] The system helps identify trends in disease, assess the impact of disease control programs and develop policies to reduce the impact of these diseases. Relevant zoonotic diseases include avian influenza in humans, anthrax, brucellosis, leptospirosis, listeriosis, psittacosis, salmonellosis, tularaemia and Q fever.

- Surveillance statistics on some of the more important human zoonoses in Australia are collated by the Department of Health, Disability and Ageing and reported in *Animal Health Surveillance Quarterly* on the Animal Health Australia website.[208]
- The Bat Health Focus Group is coordinated by Wildlife Health Australia (WHA). It has members from government animal, public health and environment departments (jurisdictional and federal), as well as universities, laboratories and other experts and stakeholders. Using a One Health approach, group discussions include surveillance updates on bat-borne zoonoses, bat movements, and bat–human and bat–animal interactions.
- Australia's outbreak of Japanese encephalitis virus in 2021–2022 provided opportunities to strengthen One Health collaboration and surveillance data-sharing. In particular, a memorandum of understanding between government animal health and public health agencies (state, territory and federal) now supports ongoing national aggregation of data on detections of the virus in humans, animals and mosquitoes.
- The Australian Government One Health Network was established by the interim Australian CDC in 2024. The network facilitates communication, collaboration and coordination on One Health issues across the Australian Government, including the human health, animal health, plant health, environment, food and international development portfolios. This network is complemented by other One Health networks at the state, territory and local levels.
- The Enhancing Australia's One Health surveillance and zoonotic disease prevention capabilities program (the One Health Surveillance Initiative) is implemented by WHA. It aims to position Australia at the forefront of the global transformational change agenda to prevent pandemic and other zoonotic disease risks emerging from the human–animal–environment interface. Implementation of a true One Health approach is a critical part of the initiative. The first phase of the program has now been completed, and an extension was granted in June 2025 to support avian influenza preparedness planning.

7.3 Australian Centre for Disease Control

The Australian Centre for Disease Control (CDC) monitors, assesses and acts to prevent public health risks and has a decisive role to prepare Australia for future public health crises.[209] By enabling a coordinated approach to preventing zoonotic spillovers, the Australian CDC facilitates faster preparedness and response to outbreaks and pandemics, such as COVID-19.

The Australian CDC is led by a Director General, whose responsibilities are defined by legislation. Its governance framework includes an Advisory Council, and the Australian CDC will collaborate with Australian government, states and territories through public health committees and data-sharing agreements.

Reflecting a global shift towards preventing zoonotic spillovers as a vital step in protecting human health, the Australian CDC embeds a One Health approach in its functions, including the early identification of emerging threats. This approach recognises the interconnectedness of people, animals, plants and the environment, enabling more accurate and timely risk assessments, integrated multisectoral collaboration, and transdisciplinary strategies for managing health risks.

207 health.gov.au/our-work/nndss

208 animalhealthaustralia.com.au/ahsq

209 cdc.gov.au

CASE STUDY

Australian Centre for Disease Control

How the new Australian Centre for Disease Control (CDC) benefits our human and animal health systems and One Health coordination

The Australian CDC is an independent public health advisory agency dedicated to safeguarding Australia from public health threats. With a mandate to deliver trusted, evidence-informed advice, the Australian CDC enhances our preparedness and response capabilities in an increasingly complex global health landscape. It brings together advanced data analytics, expert insights and collaborative partnerships to strengthen our ability to prepare for, and respond to, public health challenges, including pandemics.

This case study explores the rationale for establishing the Australian CDC and the importance of strengthening coordination across human, animal and environmental health systems. It also details how the Australian CDC supports national coordination for One Health challenges.

Establishing the Australian Centre for Disease Control

An interim Australian CDC started on 1 January 2024 as the first step in the Australian Government's phased approach to establishing an independent Australian CDC. It operated as part of the Department of Health, Disability and Ageing, with its initial focus on improvements in the following areas:

- preparing for public health emergencies with multi-jurisdictional training exercises
- improving the national public health surveillance system
- building capability in One Health and health security.

The legislation to establish the Australian CDC as an independent agency on 1 January 2026 passed both Houses of Parliament on 6 November 2025. Its establishment is in response to an increasing risk of infectious diseases and natural disasters. Establishing an Australian CDC increases the independence and strength of the advice provided to governments on public health threats. Clear advice, transparent decision-making and consistency of information generate essential trust among experts and the community in responding to emerging threats.

The initial scope of the Australian CDC includes communicable diseases, environmental health hazards and emerging zoonotic diseases, with a future role in the prevention of non-communicable diseases.

Strengthening national coordination and alignment for One Health challenges

Before the Australian CDC's establishment, Australia's public health system faced challenges in coordinating effectively across its many agencies and jurisdictions. The separation of human, animal and environmental health sectors added further complexity, particularly for zoonotic diseases that move within ecosystems or between wildlife, domestic animals and people.

The Australian CDC fosters collaboration across medical, veterinary and environmental disciplines, recognising that human, animal and ecosystem health are deeply interconnected. This holistic approach is critical for addressing complex challenges such as avian influenza, antimicrobial resistance and vector-borne diseases.

The Australian CDC partners with government bodies, research institutions, non-government organisations and One Health experts to ensure consistency and efficiency in public health strategies. It has implemented a One Health approach to increase national capacity to address intersecting health risks across animal, environmental and human health. It ensures an increased focus on One Health as an overarching principle when responding to health emergencies and supports One Health policy coordination and collaboration at the national level. The Australian CDC is also adapting international One Health frameworks for the Australian context to create sustainable solutions for action at the national, state and regional level.

The Australian CDC's leadership in One Health has helped break down traditional sectoral approaches, enabling a coordinated response to diseases that span multiple sectors.

Safeguarding health across Australia

The Australian CDC represents a major step forward in national public health capability. By strengthening coordination across human, animal and environmental health systems and championing the One Health approach, it enhances our readiness to meet complex health challenges. Its ongoing commitment to collaboration, innovation and national coordination remains essential for safeguarding the health of people, animals and the environment across Australia.

Appendices

Appendix A

Research and Development Corporations

Listed below are the Research and Development Corporations (RDCs) in Australia that provide animal-related research, development and extension (RD&E) activities.

Table A1 Australian Research and Development Corporations relating to animal health

RDC	Description	Contact information
AgriFutures Australia	AgriFutures Australia collaborates with industry and government by investing in RD&E, which contributes to the productivity, profitability and sustainability of rural industries. AgriFutures Australia makes strategic investments in its 13 levied industries, emerging industries, workforce and leadership, national challenges and opportunities, and global innovation networks.	**E: info@agrifutures.com.au** **W: agrifutures.com.au**
Australian Eggs	Australian Eggs Limited is a member-owned, not-for-profit company providing marketing and research and development services to benefit Australian egg farmers. Australian Eggs Limited invests directly with universities and CSIRO in projects and activities that affect not only the overall health of the laying flock, but also biosecurity and the welfare of the bird.	**E: contacts@australianeggs.org.au** **W: australianeggs.org.au**
Australian Meat Processor Corporation	Australian Meat Processor Corporation (AMPC) is the RDC for the red meat processing sector. AMPC commissions research in the areas of automation, meat science and food safety, market access, animal welfare and many other areas of significance to members.	**E: admin@ampc.com.au** **W: ampc.com.au**
Australian Pork Limited	Australian Pork Limited (APL) is the industry-owned RDC for the pork industry in Australia. APL funds several initiatives and projects in the areas of animal health and welfare each year, and provides resources, guides and standards to help producers maintain pig welfare.	**E: apl@australianpork.com.au** **W: australianpork.com.au**
Australian Wool Innovation	Australian Wool Innovation Limited (AWI) invests in research, development, marketing and promotion to enhance the profitability, international competitiveness and sustainability of the Australian wool industry, and to increase the demand and market access for Australian wool. AWI invests in projects to improve sheep health and welfare, including management of flystrike and parasites.	**E: info@wool.com** **W: wool.com**

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RDC	Description	Contact information
Dairy Australia	Dairy Australia Limited is the national service body for the Australian dairy industry, supporting dairy farmers to produce a high-quality product from healthy and productive animals. Dairy Australia Limited does this by investing in RD&E projects in alignment with Dairy Moving Forward priorities.	**E: enquiries@dairyaustralia.com.au** **W: dairyaustralia.com.au**
Fisheries Research and Development Corporation	The Fisheries Research and Development Corporation invests in robust research, development and innovation, and supports the extension and adoption of research within the fishing and aquaculture sectors for ongoing sustainability. Research investments are focused on the 4 sectors of the fishing industry – commercial, aquaculture, Indigenous and recreational fishing – while delivering public good benefits for the Australian community.	**E: frdc@frdc.com.au** **W: frdc.com.au**
LiveCorp	The Australian Livestock Export Corporation (LiveCorp) channels most of its research funding through the Livestock Export Program (LEP), which is jointly funded with Meat & Livestock Australia (MLA). The LEP RD&E Program allocates around three-quarters of its budget to improving animal health and welfare outcomes across the supply chain.	**E: livecorp@livecorp.com.au** **W: livecorp.com.au**
Meat & Livestock Australia	Meat & Livestock Australia invests red meat producer levies in RD&E to improve livestock wellbeing, and the profitability and sustainability of the beef cattle, sheep and goat industries.	**E: info@mla.com.au** **W: mla.com.au**

Appendix B

Key animal health websites

Accreditation Program for Australian Veterinarians	animalhealthaustralia.com.au/accreditation-program-for-australian-veterinarians
ACT City and Environment Directorate	act.gov.au/environment
AgriFutures Australia	agrifutures.com.au
AlpacaCheQA	alpaca.asn.au/alpaca-cheqa-farm-protect
AMR Vet Collective	amrvetcollective.com
Animal Health Australia	animalhealthaustralia.com.au
Animal Health in Australia reports	animalhealthaustralia.com.au/ahia
Animal Health Surveillance Quarterly	animalhealthaustralia.com.au/ahsq
Animal Industries Antimicrobial Stewardship RD&E Strategy	aiasrdestrategy.com.au
Animalplan	agriculture.gov.au/agriculture-land/animal/health/animal-plan
ANIMUSE (WOAH)	amu.woah.org/amu-system-portal/home
Antimicrobial resistance – Australian Government	amr.gov.au
AQUAPLAN	agriculture.gov.au/agriculture-land/animal/aquatic/aquaplan
AQUAVETPLAN	agriculture.gov.au/animal/aquatic/aquavetplan
AUS-MEAT	ausmeat.com.au
Australasian Veterinary Boards Council	avbc.asn.au
Australia's Animal Sector Antimicrobial Resistance Action Plan 2023 to 2028	agriculture.gov.au/agriculture-land/animal/health/amr/animal-sector-plan
Australian Alpaca Association	alpaca.asn.au
Australian and New Zealand College of Veterinary Scientists	anzcvs.org.au
Australian Biosecurity Awards	agriculture.gov.au/biosecurity-trade/policy/australia/public-awareness/aba
Australian Centre for Disease Control	cdc.gov.au
Australian Centre for Disease Preparedness	acdp.csiro.au
Australian Chicken Meat Federation	chicken.org.au

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Australian Dairy Farmers	australiandairyfarmers.com.au
Australian Eggs	australianeggs.org.au
Australian Food & Grocery Council	afgc.org.au
Australian Government Department of Agriculture, Fisheries and Forestry	agriculture.gov.au
Australian Government Department of Health, Disability and Ageing	health.gov.au
Australian Honey Bee Industry Council	honeybee.org.au
Australian Lot Feeders' Association	feedlots.com.au
Australian Meat Industry Council	amic.org.au
Australian Meat Processor Corporation	ampc.com.au
Australian National Quality Assurance Program	anqap.com
Australian Pesticides and Veterinary Medicines Authority	apvma.gov.au
Australian Pork	australianpork.com.au
Australian Veterinary Association	ava.com.au
Australian Wool Innovation Limited	wool.com
AUSVETPLAN	animalhealthaustralia.com.au/ausvetplan
AviFluMap (Deakin University)	hpairisk.deakin.edu.au
BeeAware	beeaware.org.au
Dairy Australia	dairyaustralia.com.au
Egg Farmers of Australia	eggfarmersaustralia.org
Elizabeth Macarthur Agricultural Institute	dpi.nsw.gov.au/about-us/science-and-research/centres/emai
Emergency animal disease online training	eadonline.com.au
Emergency Animal Disease Response Agreement	animalhealthaustralia.com.au/eadra
Endemic Disease Information System	edis.animalhealthaustralia.com.au/public.php
Farm Biosecurity	farmbiosecurity.com.au
Fisheries Research and Development Corporation	frdc.com.au
Food Standards Australia New Zealand	foodstandards.gov.au

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Free Range Egg and Poultry Australia	frepa.com.au
Goat Industry Council of Australia	gica.com.au
Inspector-General of Biosecurity	igb.gov.au
Intergovernmental Agreement on Biosecurity	agriculture.gov.au/biosecurity-trade/policy/partnerships/nbc/intergovernmental-agreement-on-biosecurity
LiveCorp	livecorp.com.au
Meat & Livestock Australia	mla.com.au
NABSnet	nabsnet.com.au
National Agricultural Traceability Strategy 2023 to 2033 and Implementation Plan	agriculture.gov.au/biosecurity-trade/market-access-trade/national-traceability
National Animal Health Information System	nahis.animalhealthaustralia.com.au/public.php
National Arbovirus Monitoring Project	animalhealthaustralia.com.au/national-arbovirus-monitoring-program
National Arbovirus Monitoring Project – Bluetongue Virus Zone Map	namp.animalhealthaustralia.com.au/public.php
National Association of Testing Authorities	nata.com.au
National Biosecurity Response Team	nbrt.animalhealthaustralia.com.au
National Biosecurity Strategy	biosecurity.gov.au/about/national-biosecurity-committee/nbs
National Biosecurity Training Hub	biotraininghub.com.au
National Emergency Management Agency	nema.gov.au
National Feedlot Accreditation Scheme	nfas.org.au
National list of notifiable animal diseases	agriculture.gov.au/biosecurity-trade/pests-diseases-weeds/animal/notifiable
National Lumpy Skin Disease Action Plan	agriculture.gov.au/biosecurity-trade/pests-diseases-weeds/animal/lumpy-skin-disease/national-action-plan
National Notifiable Diseases Surveillance System	health.gov.au/our-work/nndss
National priority aquatic animal disease list	agriculture.gov.au/agriculture-land/animal/aquatic/emergency/national-priority-aquatic-animal-disease-list
National Priority List of Exotic Environmental Pests, Weeds and Diseases	agriculture.gov.au/biosecurity/environmental/priority-list

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National Transmissible Spongiform Encephalopathies Surveillance Project	animalhealthaustralia.com.au/maintaining-australias-freedom-from-tses
National Varroa Mite Management Program	varroa.org.au
Northern Australia Biosecurity Strategy 2030	agriculture.gov.au/biosecurity-trade/policy/australia/northern-australia-biosecurity-strategy-2030
NSW Department of Primary Industries and Regional Development	dpird.nsw.gov.au
NT Department of Agriculture and Fisheries	daf.nt.gov.au
Outbreak – Animal and Plant Pests and Diseases	outbreak.gov.au
Plant Health Australia	planthealthaustralia.com.au
Qld Department of Primary Industries	dpi.qld.gov.au
RSPCA Approved	rspcaapproved.org.au
SA Department of Primary Industries and Regions	pir.sa.gov.au
SAFEMEAT	safemeat.com.au
Tas Department of Natural Resources and Environment	nre.tas.gov.au
Vic Department of Energy, Environment and Climate Action	deeca.vic.gov.au
WA Department of Primary Industries and Regional Development	dpird.wa.gov.au
Wildlife Health Australia	wildlifehealthaustralia.com.au
World Organisation for Animal Health	woah.org

Acronyms and abbreviations

AA	approved arrangement
AAA	Australian Alpaca Association
AAO	Australian Government Authorised Officer
AAPSP	Australian Animal Pathology Standards Program
AAV	Australian Government–accredited veterinarian
AAWS	Australian Animal Welfare Strategy
ABA	Australian Biosecurity Awards
ACDP	Australian Centre for Disease Preparedness
ACMF	Australian Chicken Meat Federation
AGCMF	Australian Government Crisis Management Framework
AGSOC	Agriculture Senior Officials' Committee
AHA	Animal Health Australia
AHBIC	Australian Honey Bee Industry Council
AHC	Animal Health Committee
AHiA	Animal Health in Australia
AIV	avian influenza virus
ALFA	Australian Lot Feeders' Association
ALOP	Appropriate Level of Protection
AMM	Agriculture Ministers' Meeting
AMPC	Australian Meat Processor Corporation
AMR	antimicrobial resistance
ANQAP	Australian National Quality Assurance Program
ANZSDP	Australian and New Zealand standard diagnostic procedures
APL	Australian Pork Limited
APMV	avian paramyxovirus
APVMA	Australian Pesticides and Veterinary Medicines Authority

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ARA	Australian Renderers' Association
ARTTWG	Antimicrobial Resistance Testing Technical Working Group
ASTAG	Australian Strategic and Technical Advisory Group on AMR
AVA	Australian Veterinary Association
AVBC	Australasian Veterinary Boards Council
AWI	Australian Wool Innovation
BBO	Bee Biosecurity Officers
BC	biosecurity containment
BICON	Biosecurity Import Conditions
BIRA	Biosecurity Import Risk Analysis
BSE	bovine spongiform encephalopathy
CAB	Catalysing Australia's Biosecurity
CAE	caprine arthritis–encephalitis
CAHD	Central Animal Health Database
CCEAD	Consultative Committee on Emergency Animal Diseases
CCP	critical control point
CDC	Centre for Disease Control
CDNA	Communicable Diseases Network Australia
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CVO	Chief Veterinary Officer
DAFF	Australian Government Department of Agriculture, Fisheries and Forestry
DEECA	Victorian Government Department of Energy, Environment and Climate Action
EAD	emergency animal disease
EADRA	Emergency Animal Disease Response Agreement
EADRP	emergency animal disease response plan
EBL	enzootic bovine leucosis
EDIS	Endemic Disease Information System
EI	equine influenza

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EIC	Environment and Invasives Committee
ESA	Egg Standards of Australia
ESCAS	Exporter Supply Chain Assurance System
FAO	Food and Agriculture Organization
FMD	foot-and-mouth disease
FSANZ	Food Standards Australia New Zealand
FSMA	Food Safety Meat Assessor
GoatMAP	Goat Industry Market Assurance Program
HACCP	Hazard Analysis and Critical Control Points
HPAI	high pathogenicity avian influenza
IAHER	International Animal Health Emergency Reserve
IGAB	Intergovernmental Agreement on Biosecurity
JD	Johne's disease
JEV	Japanese encephalitis virus
LEADDR	Laboratories for Emergency Animal Disease Diagnosis and Response
LEP	Livestock Export Program
LIMS	laboratory information management systems
LPA	Livestock Production Assurance
MAP	market assurance program
MCOP	Model Codes of Practice for the Welfare of Animals
Micor	Manual of Importing Country Requirements
MLA	Meat & Livestock Australia
NAHIS	National Animal Health Information System
NAIWB	National Avian Influenza Wild Bird
NAMP	National Arbovirus Monitoring Program
NAQS	Northern Australia Quarantine Strategy
NASOP	Nationally Agreed Standard Operating Procedure
NATA	National Association of Testing Authorities

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NBBP	National Bee Biosecurity Program
NBC	National Biosecurity Committee
NBCEN	National Biosecurity Communication and Engagement Network
NBRT	National Biosecurity Response Team
NBS	National Biosecurity Strategy
NCM	National Coordination Mechanism
ND	Newcastle disease
NEMA	National Emergency Management Agency
NFAS	National Feedlot Accreditation Scheme
NJDP	National Johne's Disease Program
NLIS	National Livestock Identification System
NMG	National Management Group
NRS	National Residue Survey
NRVR	National Recognition of Veterinary Registration
NSDIP	National Significant Disease Investigation Program
NSHMP	National Sheep Health Monitoring Project
NTSESP	National TSE Surveillance Project
NVD	National Vendor Declaration
OHMAP	One Health Master Action Plan
OIE	Office International des Epizooties
OPV	On-Plant Veterinarian
PC	physical containment
PEQ	Post Entry Quarantine
PetFAST	Pet Food Adverse Event System of Tracking
PFIAA	Pet Food Industry Association of Australia
PHA	Plant Health Australia
PT	proficiency testing
QA	quality assurance

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RAM	restricted animal material
RASP	Robotic Antimicrobial Susceptibility Platform
RD&E	research, development and extension
RDC	Research and Development Corporation
RFID	radiofrequency identification
RSPCA	Royal Society for the Prevention of Cruelty to Animals
SAAFE	Solving Antimicrobial Resistance in Agribusiness, Food and Environments
SCAAH	Subcommittee on Aquatic Animal Health
SCAHLS	Subcommittee on Animal Health Laboratory Standards
SCEAD	Subcommittee on Emergency Animal Disease
SE	***Salmonella*** Enteritidis
SIA	Seafood Industry Australia
SP	***Salmonella*** Pullorum
SSBA	security-sensitive biological agents
TB	tuberculosis
TSE	transmissible spongiform encephalopathies
TSEFAP	Transmissible Spongiform Encephalopathy Freedom Assurance Program
UN	United Nations
VSAAC	Veterinary Schools Accreditation Advisory Committee
VSB	veterinary statutory body
WHA	Wildlife Health Australia
WOAH	World Organisation for Animal Health

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