

# TERRESTRIAL ANIMAL HEALTH STATUS

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Australia has a long history of freedom from the major epidemic diseases of livestock. The geographical isolation of the continent provides a natural biosecurity barrier, which is supported by sound biosecurity policies and a history of successful disease eradication campaigns.

The spread of some endemic diseases of animals in Australia is limited by climate and the animal production enterprises present in a particular area. Tick fever, for example, occurs only in parts of northern Australia where the climate is suitable for the tick vectors.

State and territory governments manage the control and eradication of animal diseases, often with the support of industry accreditation schemes. Chapter 1 describes the coordinating mechanisms that are in place to provide national consistency, for example, the Animal Health Committee (AHC).

This chapter provides information about Australia's reporting system for animal diseases and Australia's status for all nationally significant terrestrial animal diseases.

## 3.1 Status of terrestrial animal health in Australia

Australia provides the World Organisation for Animal Health (OIE) with routine information about OIE-listed diseases through reports every six months. Table 3.1 shows Australia's status for OIE-listed diseases in 2017.

**Table 3.1 Australia's status for OIE-listed diseases of terrestrial animals, 2017**

Disease	Status	Date of last occurrence and notes
<b>Multiple-species diseases</b>		
Anthrax	Present	Limited distribution (see Figure 3.1)
Aujeszky's disease virus (infection with)	Free	Never occurred
Bluetongue	Virus present	Restricted to specific areas of Australia (see Figure 3.1). Sentinel herd and vector monitoring programs are in place
<i>Brucella abortus</i> (infection with)	Free	Australia declared freedom in all terrestrial animal species in 1989
<i>Brucella melitensis</i> (infection with)	Free	Never occurred in terrestrial animals.
<i>Brucella suis</i> (infection with)	Serological evidence	Maintained in feral pigs in parts of NSW and Qld. Rare occurrence in domestic pigs. Sporadic detections in pig hunting dogs however this is not OIE notifiable.
Crimean Congo haemorrhagic fever	Free	Never occurred
<i>Echinococcus granulosus</i> (infection with)	Present	–
<i>Echinococcus multilocularis</i> (infection with)	Free	Never occurred
Epizootic haemorrhagic disease	Virus present	Disease has not been reported
Equine encephalomyelitis (eastern)	Free	Never occurred
Foot-and-mouth disease	Free	1872. Australia is officially recognised by the OIE as free without vaccination
Heartwater	Free	Never occurred
Japanese encephalitis	Serological evidence	Detected seasonally in Torres Strait and on Cape York in 1998 and 2004
New World screw-worm fly ( <i>Cochliomyia hominivorax</i> )	Free	Never occurred
Old World screw-worm fly ( <i>Chrysomya bezziana</i> )	Free	Never occurred
Paratuberculosis	Present	National control and management programs are in place
Q fever	Present	–
Rabies virus (infection with)	Free	1867
Rift Valley fever virus (infection with)	Free	Never occurred
Rinderpest virus (infection with)	Free	1923. With the global eradication of rinderpest in 2011, all countries are free

cont.

Disease	Status	Date of last occurrence and notes
Surra ( <i>Trypanosoma evansi</i> )	Free	Never occurred
<i>Trichinella</i> spp. (infection with)	Not reported	<i>Trichinella spiralis</i> is not present. <i>T. pseudospiralis</i> is present in wildlife
Tularaemia	Present	Two human cases reported in Tasmania in 2011, detected in archived samples from Tasmanian ringtail possums sampled in 2002
West Nile fever	Australian variants present	A previously unknown Australian strain of West Nile virus was identified following an outbreak of neurological disease in horses in 2011. No cases were reported in 2017

### Cattle diseases

Bovine anaplasmosis	Present	Transmission mainly in areas of Qld, NT and WA
Bovine babesiosis	Present	Transmission mainly in areas of Qld, NT and WA
Bovine genital campylobacteriosis	Present	–
Bovine spongiform encephalopathy	Free	Never occurred. The National Transmissible Spongiform Encephalopathies Freedom Assurance Program includes surveillance. Australia has official OIE 'negligible risk' status
Bovine tuberculosis	Free	Australia declared freedom in 1997; the last case in any species was reported in 2002
Bovine viral diarrhoea	Present	Bovine viral diarrhoea virus 1 (BVDV-1) is present; BVDV-2 has never occurred
Enzootic bovine leucosis	The dairy cattle herd is free. Very low prevalence in beef cattle	Australian dairy herd achieved freedom on 31 December 2012
Haemorrhagic septicaemia	Free	Never occurred. Strains of <i>Pasteurella multocida</i> are present, but not the 6b or 6e strains that cause haemorrhagic septicaemia
Infectious bovine rhinotracheitis/ infectious pustular vulvovaginitis	Present	Bovine herpesvirus (BHV)-1.2b is present; BHV-1.1 and BHV-1.2a have never occurred
Lumpy skin disease	Free	Never occurred
<i>Mycoplasma mycoides</i> subsp. <i>mycoides</i> SC (contagious bovine pleuropneumonia) (infection with)	Free	1967. Australia declared freedom in 1973 and is officially recognised by the OIE as free
Theileriosis	Free	<i>Theileria parva</i> and <i>T. annulata</i> are not present
Trichomonosis	Present	–
Trypanosomosis (tsetse borne)	Free	Never occurred

### Sheep and goat diseases

Caprine arthritis–encephalitis	Present	Voluntary accreditation schemes exist
<i>Chlamydophila abortus</i> (enzootic abortion of ewes, ovine chlamydiosis) (infection with)	Free	Never occurred

cont.

Disease	Status	Date of last occurrence and notes
Contagious agalactia	Free	<i>Mycoplasma agalactiae</i> has been isolated, but Australian strains do not produce agalactia in sheep
Contagious caprine pleuropneumonia	Free	Never occurred
Maedi-visna	Free	Never occurred
Nairobi sheep disease	Free	Never occurred
Ovine epididymitis ( <i>Brucella ovis</i> )	Present	Voluntary accreditation schemes exist in all states
Peste des petits ruminants (infection with)	Free	Never occurred. Australia is officially recognised by the OIE as free
Salmonellosis ( <i>Salmonella abortusovis</i> )	Free	Never occurred. Surveillance has shown no evidence of infection in sheep
Classical scrapie	Free	1952. The National Transmissible Spongiform Encephalopathies Freedom Assurance Program includes surveillance. Atypical scrapie has been detected several times
Sheep pox and goat pox	Free	Never occurred

### Equine diseases

African horse sickness virus (infection with)	Free	Never occurred. Australia is officially recognised by the OIE as free
Contagious equine metritis	Free	1980
Dourine	Free	Never occurred
Equid herpesvirus 1 (equine rhinopneumonitis) (infection with)	Present	–
Equine encephalomyelitis (western)	Free	Never occurred
Equine infectious anaemia	Present	Limited distribution and sporadic occurrence
Equine influenza virus (infection with)	Free	Australia's first outbreak occurred between 24 August and 25 December 2007. Australia declared freedom according to OIE standards on 25 December 2008
Equine piroplasmiasis	Free	1976
Equine viral arteritis (infection with)	Serological evidence	–
Glanders	Free	1891
Venezuelan equine encephalomyelitis	Free	Never occurred

### Swine diseases

African swine fever	Free	Never occurred
Classical swine fever virus (infection with)	Free	1962. Australia is officially recognised by the OIE as free
Nipah virus encephalitis	Free	Never occurred
Porcine cysticercosis	Free	Never occurred
Porcine reproductive and respiratory syndrome	Free	Never occurred

cont.

Disease	Status	Date of last occurrence and notes
Transmissible gastroenteritis	Free	Never occurred

#### Avian diseases

Avian chlamydiosis	Present	–
Avian infectious bronchitis	Present	–
Avian infectious laryngotracheitis	Present	–
Avian mycoplasmosis ( <i>Mycoplasma gallisepticum</i> )	Present	–
Avian mycoplasmosis ( <i>M. synoviae</i> )	Present	–
Duck virus hepatitis	Free	Never occurred
Fowl typhoid	Free	1952
Highly pathogenic avian influenza virus (infection with)	Free	2013
Infectious bursal disease (Gumboro disease)	Present	Infectious bursal disease occurs in a mild form and was last reported in 2004. Very virulent strains are not present
Low pathogenicity avian influenza virus (poultry) (infection with H5 or H7 viruses)	Occasional	2013
Newcastle disease virus in poultry (infection with)	Lentogenic viruses present	Virulent Newcastle disease last occurred in poultry in 2002. In August 2011, a paramyxovirus not previously reported in Australia was detected in hobby pigeons in Victoria. Disease caused by this virus has not spread to poultry
Pullorum disease	Not reported	Last reported in 1992. <i>Salmonella pullorum</i> has been eradicated from commercial chicken flocks
Turkey rhinotracheitis	Free	Never occurred

#### Lagomorph diseases

Myxomatosis	Present	Used as a biological control agent for wild rabbits
Rabbit haemorrhagic disease	Present	Used as a biological control agent for wild rabbits. A new strain was detected in 2015 <sup>a</sup> and another released in 2017 <sup>b</sup>

#### Bee diseases

<i>Acarapis woodi</i> (infestation of honey bees with)	Free	Never occurred
<i>Paenibacillus larvae</i> (American foulbrood) (infection of honey bees with)	Present	–
<i>Melissococcus plutonius</i> (European foulbrood) (infection of honey bees with)	Present	–
<i>Aethina tumida</i> (small hive beetle) (infestation with)	Present	Restricted distribution

cont.

Disease	Status	Date of last occurrence and notes
<i>Tropilaelaps</i> spp. (infestation of honey bees with)	Free	Never occurred
<i>Varroa</i> spp. (varroosis) (infestation of honey bees with)	Present?	<i>Varroa destructor</i> has never been reported in Australia. Incursion of <i>Varroa jacobsoni</i> was identified in June 2016 and the response is currently in proof-of-freedom phase

#### Other diseases

Camel pox	Free	Never occurred
Leishmaniasis	Australian variant, <i>Leishmania macropodum</i> , present	Rare. Australian variant was first isolated in 2000 from macropods and occurs infrequently in a small region near Darwin. In 2017, it was isolated in a new species, captive Nabarlek (pygmy rock wallaby, <i>Petrogale concinna</i> ), in the Northern Territory

OIE = World Organisation for Animal Health

a [www.oie.int/wahis\\_2/public/wahid.php/Reviewreport/Review?page\\_refer=MapFullEventReport&reportid=18075](http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=18075)

b [www.oie.int/wahis\\_2/public/wahid.php/Reviewreport/Review?page\\_refer=MapFullEventReport&reportid=23377](http://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=23377)

The National List of Notifiable Animal Diseases<sup>32</sup> of terrestrial animals facilitates disease reporting and control. It is based on the list of diseases that are notifiable to the OIE and also includes endemic diseases of national significance. Occurrences of diseases on this list must be reported to government authorities and this requirement is contained in state and territory legislation. Producers and veterinarians are also encouraged to report any unusual incidents involving animal mortality or sickness to ensure that any diseases of terrestrial or public health significance are

investigated. The list is reviewed biennially by the AHC and was last reviewed in early 2015. A review has been underway in 2017 and will be finalised in 2018. Table 3.2 shows Australia's status for diseases on the National List of Notifiable Diseases of Terrestrial Animals that are not reportable to the OIE, for 2017.

States and territories also have their own lists of notifiable diseases which contain all the diseases on the national list, as well as others that are of particular interest to an individual state or territory.

**Table 3.2 Australia's status for diseases on the National List of Notifiable Diseases of Terrestrial Animals, 2017 (not reportable to the OIE)**

Australian bat lyssavirus	Present	–
<i>Brucella canis</i>	Free	Never reported
Borna disease virus (infection with)	Free	Never reported
Bungowannah virus (porcine myocarditis) (infection with)	Present	2003. Restricted distribution, one piggery
Devil facial tumour disease	Present	Restricted distribution
Duck herpesvirus 1 (duck viral enteritis/duck plague) (infection with)	Free	Never reported
Encephalitides (tick-borne)	Free	Never reported
Equine encephalosis virus (infection with)	Free	Never reported
Getah virus (infection with)	Free	Never reported
Hendra virus (infection with)	Present	Sporadic occurrence (see Figure 3.1)

cont.

<sup>32</sup> [www.agriculture.gov.au/pests-diseases-weeds/animal/notifiable](http://www.agriculture.gov.au/pests-diseases-weeds/animal/notifiable)

Disease	Status	Date of last occurrence and notes
<i>Histoplasma farciminosum</i> (epizootic lymphangitis) (infection with)	Free	Never reported
Influenza A viruses in swine (infection with)	Present	–
Jembrana disease virus (infection with)	Free	Never reported
Louping ill	Free	Never reported
Malignant catarrhal fever (wildebeest-associated)	Free	Never reported
Menangle virus (infection with)	Present	1997
<i>Mycobacterium avium</i> (avian tuberculosis) (infection with)	Present	–
<i>Neorickettsia risticii</i> (Potomac horse fever) (infection with)	Free	Never reported
Porcine epidemic diarrhoea virus (infection with)	Free	Never reported. National survey conducted in 2016 with negative results
Post-weaning multi-systemic wasting syndrome	Free	Never reported
<i>Psoroptes ovis</i> (sheep scab) (infection with)	Free	1896
Pulmonary adenomatosis (jaagsiekte)	Free	Never reported
<i>Salmonella Abortusequi</i> (infection with)	Free	Never reported
<i>Salmonella</i> Enteritidis in poultry (infection with)	Present	National Salmonella Enteritidis Monitoring and Accreditation Program available for commercial egg producers
Swine vesicular disease virus (infection with)	Free	Never reported
<i>Taenia saginata</i> (cysticercus bovis) (infection with)	Present	–
Teschovirus A (porcine enteroviral encephalomyelitis) (infection with)	Free	Never reported
Transmissible spongiform encephalopathies (chronic wasting disease of deer, feline spongiform encephalopathy)	Free	Two cases of feline spongiform encephalopathy have been diagnosed in imported animals in Australian zoos in 1992 (cheetah) and 2002 (Asiatic golden cat), where exposure before importation to feeds derived from bovine spongiform encephalopathy-affected cattle are thought to have caused the disease
<i>Trypanosoma cruzi</i> (Chagas disease) (infection with)	Free	Never reported
Vesicular exanthema	Free	Never reported
Vesicular stomatitis virus (infection with)	Free	Never reported
Warble fly infestation	Free	Never reported
Wesselsbron virus (infection with)	Free	Never reported

## 3.2 National reporting system for animal diseases in Australia

Australia's disease surveillance includes targeted and general activities delivered under the authority of the Australian Government and state and territory governments (jurisdictions). Each jurisdiction is required to comply with legislated obligations to detect the occurrence and prevalence of notifiable diseases. Data on disease investigations are held in jurisdictional field and laboratory databases, enabling disease control programs to be informed by property, regional and jurisdictional intelligence on diseases.

A subset of jurisdiction-held disease investigation data are collated nationally in Australia's National Animal Health Information System (NAHIS). NAHIS is a web-based database management system enabling online submission to discrete data

projects, automation of data analysis and summary, and provision of customised output reports. NAHIS makes a current, consistent national dataset of important surveillance information available to the Australian Government Department of Agriculture and Water Resources for reporting to the OIE, for substantiating Australian claims to disease occurrence status and for trade negotiations.

NAHIS is managed by Animal Health Australia and governed by an ongoing collaboration of its member representatives: governments, livestock industries and Wildlife Health Australia. The NAHIS Advisory Committee facilitates effective cooperation for identifying needs and priorities for collating and reporting summary animal health information and required enhancements to NAHIS.

NAHIS data are routinely reported, together with topical surveillance-related news and case reports of veterinary investigations, in the *Animal health surveillance quarterly* newsletter,<sup>33</sup> and annually in this report (*Animal health in Australia*).

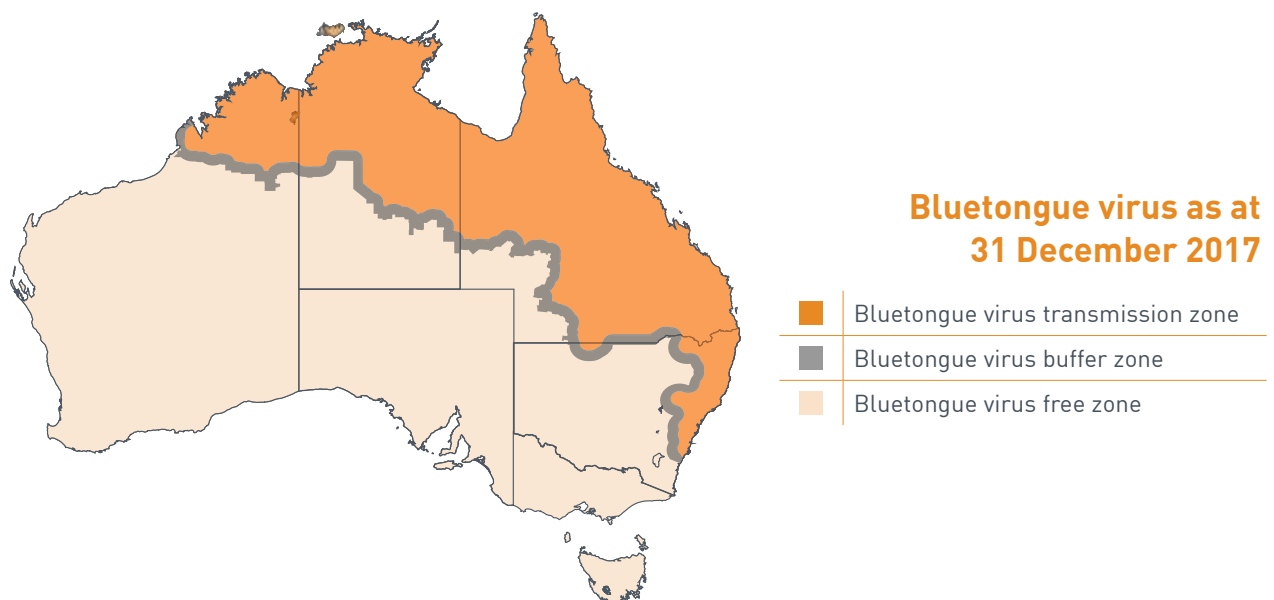
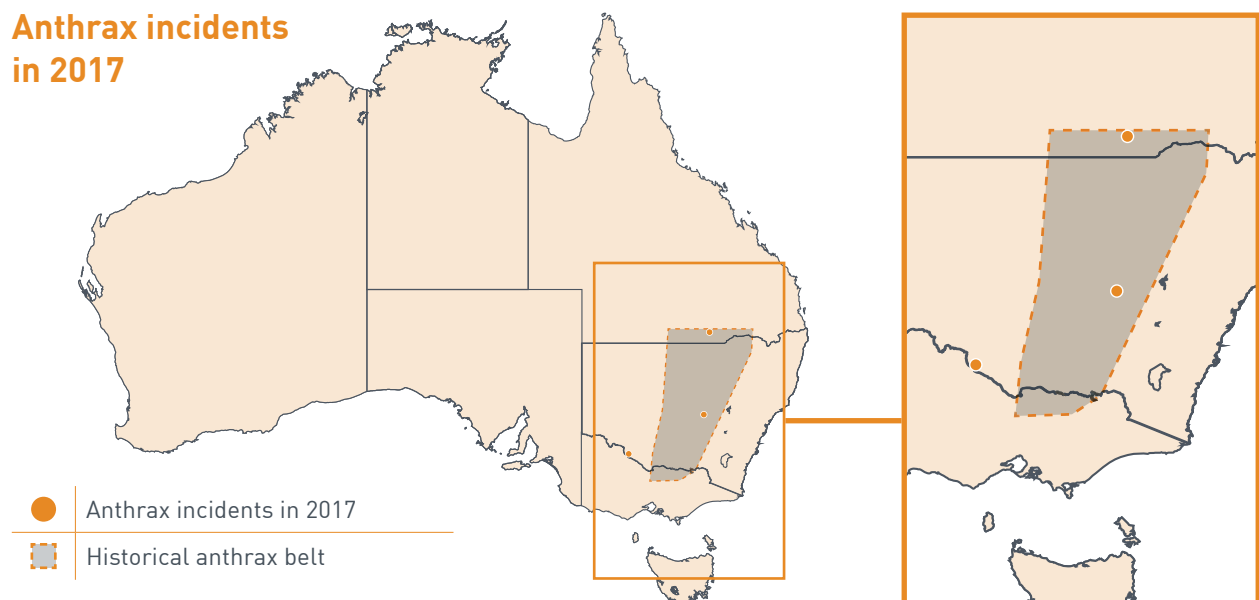


Image credit: iStock

33 [www.animalhealthaustralia.com.au/our-publications/animal-health-surveillance-quarterly](http://www.animalhealthaustralia.com.au/our-publications/animal-health-surveillance-quarterly)



### Anthrax incidents in 2017



### Hendra virus incidents

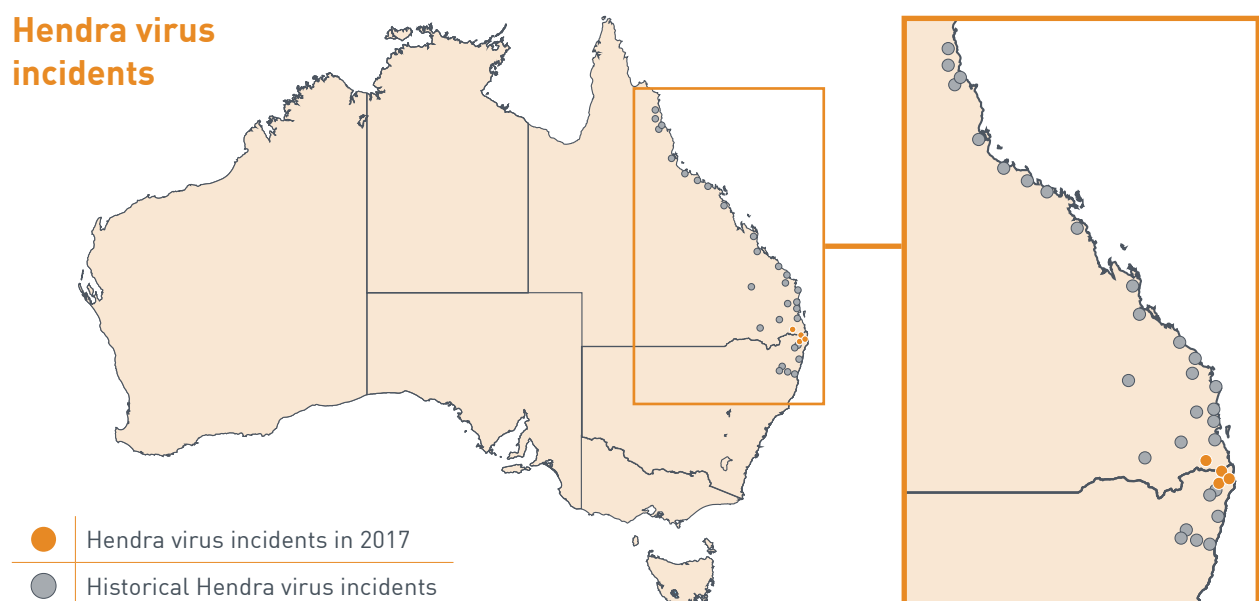


Figure 3.1 Distribution of selected terrestrial animal diseases in Australia