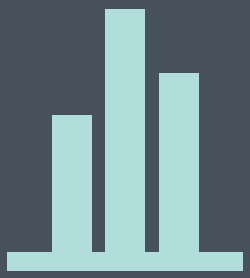

Quarterly Statistics

Endemic disease monitoring
Laboratory testing
Surveillance activities

Endemic disease monitoring

Johne's disease

In Australia, Johne's disease occurs primarily in dairy cattle and sheep and to a lesser extent in beef cattle, camelids, deer and goats. Infection in sheep occurs to varying extents across the sheep-producing regions of southern Australia. Investigations for Johne's disease in alpacas, cattle, deer, goats and sheep are reported in Table 16.

Approaches based on risk assessment and management have been developed to control Johne's disease in all affected species. Market Assurance Programs (MAPs) are in operation for alpacas, goats and sheep; the numbers of herds or flocks that have reached a status of Monitored Negative 1 or higher are shown in Table 3. For status definition, see the current MAP manual.[39] Lists of alpaca and goat herds and sheep flocks assessed in the MAPs are available on the Endemic Disease Information System website.[40] Herd or flock testing is undertaken by a MAP-approved veterinarian. The MAP for cattle ceased on 1 November 2016, with herds moving to industry-specific (beef or dairy) assurance scores. These risk-profiling tools have different levels of biosecurity and testing, with higher levels requiring veterinary supervision. Information about components of the National Johne's Disease Project can be found on Animal Health Australia's website.[41]

Table 3 Herds or flocks with a Johne's disease Market Assurance Program status of at least Monitored Negative 1, 1 July 2019 to 30 September 2020[a]

Quarter	Alpacas	Goats	Sheep	Total
Jul–Sep 2019	8	26	357	391
Oct–Dec 2019	8	26	360	394
Jan–Mar 2020	7	25	344	376
Apr–Jun 2020	5	23	338	366
Jul–Sep 2020				
ACT	0	0	0	0
NSW	0	3	139	142
Qld	0	8	1	9
SA	0	0	133	133
Tas.	0	1	9	10
Vic.	0	3	43	46
WA	0	0	4	4
National total	**0**	**15**	**329**	**344**

a There are no herds or flocks in the Northern Territory in the MAPs.

Ovine brucellosis

Brucella ovis is present in commercial sheep flocks at a low level that varies around the country. Voluntary accreditation programs (usually in stud flocks) for ovine brucellosis freedom operate in all states. Table 4 shows the number of accredited flocks at the end of the quarter.

Table 4 Ovine brucellosis-free accredited flocks[a], 1 July 2019 to 30 September 2020

State	Jul–Sep 2019	Oct–Dec 2019	Jan–Mar 2020	Apr–Jun 2020	Jul–Sep 2020
ACT	0	0	0	0	0
NSW	832	815	803	791	786
Qld	85	87	87	85	85
SA	464	463	467	464	462
Tas.	69	62	70	66	66
Vic.	444	464	443	413	412
WA	209	209	201	201	204
National total	**2103**	**2100**	**2071**	**2020**	**2015**

a There are no herds or flocks in the Northern Territory in the MAPs.

39 www.animalhealthaustralia.com.au/what-we-do/endemic-disease/maps/

40 edis.animalhealthaustralia.com.au/public.php?page=mapsearch&aha_program=3

41 www.animalhealthaustralia.com.au/what-we-do/endemic-disease/johnes-disease/national-johnes-disease-project/

Laboratory testing

Serological testing

Table 5 summarises the results of serological testing for two equine viruses on samples submitted to state and territory animal health laboratories during the quarter, including many submissions for export certification.

Table 5 Results of serological testing for two equine viruses, 1 July 2019 to 30 September 2020

Quarter	No. of tests (equine infectious anaemia)	Positive (equine infectious anaemia)	No. of tests (equine viral arteritis)	Positive (equine viral arteritis)
Jul–Sep 2019	552	0	390	20
Oct–Dec 2019	1442	0	520	12
Jan–Mar 2020	453	0	381	5
Apr–Jun 2020	392	0	470	5
Jul–Sep 2020				
ACT	0	0	0	0
NSW	234	0	236	3
NT	0	0	0	0
Qld	26	0	23	0
SA	0	0	0	0
Tas.	0	0	0	0
Vic.	218	0	161	1
WA	0	0	0	0
National total	**478**	**0**	**420**	**4**

Table 6 summarises the results of laboratory testing for equine herpesvirus type 1 on samples submitted to state and territory animal health laboratories during the quarter.

Table 6 Results of testing for equine herpesvirus type 1 (EHV-1), 1 July to 30 September 2020

Syndrome	Negative	Positive	Total
Abortion	68	18	86
Neurological	14	0	14
Other	10	0	10
Total	**92**	**18**	**110**

Table 7 summarises the results of serological testing for three arboviruses on samples submitted to state and territory animal health laboratories for the National Arbovirus Monitoring Program (NAMP).[42] Positive serological test results are not an indication of the presence of clinical disease.

Table 7 Results of serological testing for three arboviruses, 1 July 2019 to 30 September 2020

Quarter	No. of tests (Akabane)	Positive (Akabane)	No. of tests (BEF)	Positive (BEF)	No. of tests (BTV)	Positive (BTV)
Jul–Sep 2019	380	33	778	27	1054	71
Oct–Dec 2019	283	28	644	19	954	33
Jan–Mar 2020	450	63	786	58	1240	53
Apr–Jun 2020	459	52	930	68	1359	84
Jul–Sep 2020	**347**	**42**	**572**	**22**	**855**	**40**

BEF = bovine ephemeral fever virus; BTV = bluetongue virus

42 namp.animalhealthaustralia.com.au

Surveillance activities

Bovine brucellosis

Australia declared freedom from bovine brucellosis (caused by *Brucella abortus*) in 1989.[43] Surveillance is maintained through abortion investigations and additional testing of cattle for export or other reasons. Table 8 shows that 191 bovine abortion investigations and 398 investigations for other reasons were performed during the quarter; all were negative for bovine brucellosis.

Table 8 Bovine brucellosis testing, 1 July 2019 to 30 September 2020

Quarter	No. of tests (abortion)	Positive (abortion)	No. of tests (other reasons)[a]	Positive (other reasons)
Jul–Sep 2019	136	0	1397	0
Oct–Dec 2019	49	0	131	0
Jan–Mar 2020	107	0	451	0
Apr–Jun 2020	66	0	219	0
Jul–Sep 2020				
ACT	0	0	0	0
NSW	64	0	19	0
NT	0	0	0	0
Qld	16	0	0	0
SA	0	0	0	0
Tas.	1	0	0	0
Vic.	14	0	375	0
WA	96	0	4	0
National total	**191**	**0**	**398**	**0**

a Some of this test data comes from pre-export testing of cattle destined for live export markets where the importing country requires testing. The total number of tests each quarter might vary depending on total cattle exports to particular markets.

43 www.agriculture.gov.au/sites/default/files/sitecollectiondocuments/animal-plant/animal-health/pet-food-safety/brucella-abortus-colour.pdf

National Transmissible Spongiform Encephalopathies Surveillance Program

The National Transmissible Spongiform Encephalopathies Surveillance Program (NTSESP)[44] is an integrated national program jointly funded by industry and government to demonstrate Australia's ongoing freedom from bovine spongiform encephalopathy (BSE) and classical scrapie, and to provide early detection of these diseases should they occur. The program, based on the World Organisation for Animal Health (OIE) *Terrestrial Animal Health Code,*[45] involves testing of samples from cattle and sheep with clinical signs consistent with BSE or classical scrapie, respectively. Opportunistic sampling of fallen and casualty slaughter cattle and sheep is also undertaken. Cattle samples are 'scored' according to the animal's age and subpopulation category (i.e. the likelihood of detecting BSE). Australia's target is to achieve a minimum of 150 000 points over a rolling seven-year period. Table 9 shows the number of animals sampled for BSE and classical scrapie and the points tally for cattle in the NTSESP during the past 12 months. All samples tested were negative.

Table 9 Samples tested for transmissible spongiform encephalopathies (TSEs), 1 Oct 2019 to 30 September 2020

State	No. examined (cattle)	Points (cattle)	Positive (cattle)	No. examined (sheep)	Positive (sheep)
ACT	0	0	0	0	0
NSW	107	15 685.2	0	43	0
NT	23	5 275.1	0	0	0
Qld	155	40 840.1	0	17	0
SA	37	7 282.2	0	37	0
Tas.	19	276.4	0	4	0
Vic.	127	32 959.0	0	53	0
WA	26	11 291.5	0	72	0
National total	**494**	**113 609.5**	**0**	**226**	**0**

Avian influenza

An outbreak of avian influenza involving six properties and three different strains of avian influenza (H7N7 HPAI, H5N2 LPAI and H7N6 LPAI) occurred from July-August 2020. A number of low-pathogenic subtypes of AI were detected in wild bird faecal samples, as part of wild bird targeted surveillance activities. Please consult the Wildlife Health Australia (WHA) report in this publication for information on AI in wild birds. During the quarter, 770 birds from 142 laboratory submissions were tested for AI (excluding surveillance reported in the WHA report) (Table 10). Tests included competitive enzyme-linked immunosorbent assay (ELISA), haemagglutination inhibition, agar gel immunodiffusion (AGID), reverse-transcriptase polymerase chain reaction assay and virus isolation.

Table 10 Results of testing for avian influenza virus in domestic birds (poultry, aviary and caged birds), 1 July to 30 September 2020[a]

H5 positive	H7 positive	Positive for a non-H5, non-H7 strain
2	4	0

a Excludes surveillance reported in the Wildlife Health Australia and Northern Australia Quarantine Strategy reports and testing conducted for import purposes.

44 www.animalhealthaustralia.com.au/what-we-do/disease-surveillance/tse-freedom-assurance-program/surveillance-of-tses/

45 OIE 2018. Bovine spongiform encephalopathy. In: Terrestrial Animal Health Code, World Organisation for Animal Health, Paris, www.oie.int/index.php?id=169&L=0&htmfile=chapitre_bse.htm

Newcastle disease

Australia is currently free from virulent Newcastle disease or exotic Newcastle disease (caused by avian orthoavulavirus 1 [AOAV-1]) even though precursor and endemic avirulent viruses are present in Australia. Vaccination against virulent Newcastle disease using a combination of live lentogenic virus (V4) and a killed vaccine is required in commercial chicken flocks[46] in all Australian jurisdictions. Vaccination exemptions for broilers apply in Queensland, South Australia, Tasmania and Western Australia. During the quarter, 430 birds from 114 laboratory submissions were tested for Newcastle Disease (Table 11). Please consult the WHA report in this publication for information on avian orthoavulavirus in wild birds.

Table 11 Results of testing for Newcastle disease (ND) in domestic birds (poultry, aviary and caged birds), 1 July to 30 September 2020[a]

Virulent strain of ND virus positive	Peats Ridge strain of ND virus positive	Lentogenic V4 or V4-like strain of ND virus positive	Other paramyxovirus positive
0	0	8	0

a Excludes testing for import purposes.

Salmonella surveillance

The National Enteric Pathogen Surveillance Scheme (NEPSS)[47] is operated and maintained on behalf of the Australian Government and state and territory governments by the Microbiological Diagnostic Unit at the University of Melbourne. Data on isolates of *Salmonella* spp. and other pathogens are submitted to NEPSS from participating laboratories around Australia. Annual reports of both human and non-human isolates are available on request and detailed data searches are provided on request to NEPSS. Table 12 summarises *Salmonella* spp. isolations from animals reported to NEPSS.

Table 12 *Salmonella* notifications reported to the National Enteric Pathogen Surveillance Scheme (NEPSS), 1 July to 30 September 2020

Salmonella serovar	Birds[a]	Cats	Cattle	Dogs	Horses	Pigs	Sheep	Other	Total
Bovismorbificans	0	0	11	0	0	0	0	0	11
Dublin	0	0	17	0	0	0	0	0	17
Infantis	0	0	0	0	0	0	0	0	0
Typhimurium	2	0	9	4	2	1	1	1	20
Other	5	0	13	3	0	1	0	3	25
National Total	**7**	**0**	**50**	**7**	**2**	**2**	**1**	**4**	**73**

a Includes both poultry and wild birds.

46 Commercial chicken flocks' are defined in state and territory legislation.

47 www1.health.gov.au/internet/main/publishing.nsf/Content/cda-cdi3301r.htm

Northern Australia Quarantine Strategy

In recognition of the unique biosecurity risks associated with Australia's extensive and sparsely populated northern coastline, the Australian Government Department of Agriculture, Water and the Environment conducts an animal disease surveillance program as an integral component of its Northern Australia Quarantine Strategy (NAQS). This surveillance program aims to provide early detection of exotic and emerging pests and diseases of significance to agriculture, public health and the environment. Information is derived from the use of sentinel animals, structured surveys, vector trapping and community reporting projects. In addition to the National Animal Health Information Program (NAHIP), NAQS contributes surveillance data to the National Arbovirus Monitoring Program (NAMP) and the electronic Wildlife Health Information System (eWHIS). Table 13 summarises NAQS animal testing for specific target diseases in Australia during the past five quarters.

Table 13 Disease testing and pest surveillance under the Northern Australia Quarantine Strategy (NAQS), 1 July 2019 to 30 September 2020

Target disease	Jul–Sep 2019		Oct–Dec 2019		Jan–Mar 2020		Apr–Jun 2020		Jul–Sep 2020	
	Tested	Positive	Tested	Positive	Tested	Positive	Tested	Positive	Tested	Positive
African swine fever[a]	0	0	0	0	0	0	0	0	7[b]	0
Aujeszky's disease	0	0	127	0	37	0	346	0	50	0
Classical swine fever	0	0	127	0	37	0	346	0	50	0
Japanese encephalitis[c]	13	0	0	0	20	2[d]	18	2[e]	7	1[f]
Surra (*Trypanosoma evansi*)	38	0	137	0	45	0	410	0	72	0

a NAQS does not conduct routine testing for African swine fever as active surveillance is not considered a sensitive surveillance tool for this disease. However, routine molecular testing of samples is conducted for selected surveys to aid demonstration of disease freedom when warranted. Testing of pigs with pathology or clinical signs consistent with African swine fever is reported elsewhere (see Table 16), as is the case with all the diseases listed in this table.

b African swine fever testing was conducted on samples collected from pigs in Torres Strait, to help demonstrate freedom in this part of Australia, given the proximity to Papua New Guinea, where the disease has recently been detected.

c Japanese encephalitis virus (JEV) circulates in the Torres Strait–Northern Peninsula Area (TS–NPA) region of Queensland during the monsoonal season. No locally acquired human cases of clinical encephalitis associated with JEV infection have been confirmed in Australia since 1998. Surveillance of the susceptible animal population in the TS–NPA region will continue.

d Two pigs from the NPA region returned positive serological testing results for JEV, suggesting likely exposure to JEV. The pigs were all clinically healthy at the time of sampling.

e A cow from a sentinel cattle herd in the NPA region returned positive serological results for JEV in both April and May, after negative serological results in January and February (March sampling missed). These results are suggestive of exposure to JEV between February and April, with the positive result in May indicating a waning antibody titre. The cow was clinically healthy at all sample collections.

f A single domestic pig from Thursday Island, Torres Strait, returned a positive serological result for JEV, suggesting likely exposure to JEV. The pig was clinically healthy at the time of sampling.

Screw-Worm Fly Surveillance and Preparedness Program

The Old World screw-worm fly (OWS) and New World screw-worm fly (NWS), *Chrysomya bezziana* and *Cochliomyia hominivorax*, respectively, are exotic to Australia and suspicion of infestation in animals is notifiable under state and territory animal health legislation.[48] The OWS is a significant production disease of livestock throughout its range and is considered a greater threat to Australian livestock industries than NWS due to the proximity of its distribution to Australia (potential entry through the Torres Strait) and traffic of livestock export vessels returning from Asia to Australian ports. Surveillance is conducted by targeted fly-trapping and livestock myiasis monitoring in addition to unplanned investigations of myiasis (reported in 'National notifiable animal disease investigations' and Table 14). Fly trapping is conducted at locations suitable for local OWS establishment following a potential incursion: in areas neighbouring livestock export ports and the Northern Peninsula Area (NPA) of Queensland. Table 14 summarises fly-trapping events over the past year. Of the 59 trapping events undertaken in the July to September 2020 period, 58 trapping events did not detect screw-worm flies. The OWS polymerase chain reaction (PCR) result from one trapping event during the quarter was inconclusive. Further testing to resolve this status is pending. Further information on the screw-worm fly program is available on the Animal Health Australia website.[49]

Table 14 Summary of fly-trapping events conducted, 1 July 2019 to 30 September 2020

Risk entry pathway	Conducted by	Jul–Sep 2019	Oct–Dec 2019	Jan–Mar 2020	Apr–Jun 2020	Jul–Sep 2020
Torres Strait	NAQS	13	0[a]	30	15	0[b]
Livestock export ports	NT, Qld and WA governments	46	55	42	45	59[c]

NAQS = Northern Australia Quarantine Strategy
a No samples were able to be tested this quarter due to equipment failure. An additional collection was completed in the Jan-Mar 2020 quarter to compensate.
b Scheduled trapping in September was postponed to November due to operational constraints.
c The OWS PCR result from one trap was inconclusive, and further testing to resolve the status is pending.

Public health

The National Notifiable Diseases Surveillance System (NNDSS) coordinates the national surveillance of more than 50 communicable diseases or disease groups. Unit records of disease notifications made to the state or territory health authority, under the provisions of the public health legislation in their jurisdiction, are supplied daily to the Office of Health Protection, Australian Government Department of Health. The data are published weekly on the NNDSS website[50] and quarterly in the journal *Communicable Diseases Intelligence* and are replicated in the current publication (Table 15) for five important zoonoses.

Table 15 National notifications of five zoonotic infections in humans, 1 July 2019 to 30 September 2020

Quarter	Brucellosis[a]	Ornithosis[b]	Leptospirosis	Listeriosis	Q fever
Jul–Sep 2019	2	3	11	14	107
Oct–Dec 2019	3	8	12	11	138
Jan–Mar 2020	6	1	24	11	103
Apr–Jun 2020	4	15	24	5	116
Jul–Sep 2020					
ACT	0	0	0	0	0
NSW	2	3	1	4	37
NT	0	0	1	0	0
Qld	1	4	15	0	41
SA	0	0	0	0	2
Tas.	0	0	0	0	0
Vic.	0	5	0	4	2
WA	0	0	0	4	1
National total	**3**	**12**	**17**	**12**	**83**

a Bovine brucellosis (*Brucella abortus*) was eradicated from the Australian cattle herd in 1989 and is presently considered an exotic animal disease in Australia. Caprine and ovine brucellosis (caused by *B. melitensis*) has never been reported in Australian sheep or goats. Swine brucellosis (caused by *B. suis*) is prevalent in small areas of northern Australia and northern New South Wales where it occurs in feral pigs, with human cases predominantly seen in recreational feral pig hunters.
b Also known as 'psittacosis'.

48 Australian Government Department of Agriculture National List of Notifiable Animal Diseases www.agriculture.gov.au/pests-diseases-weeds/animal/notifiable (updated November 2015; cited 11 November 2019).

49 www.animalhealthaustralia.com.au/what-we-do/disease-surveillance/screw-worm-fly

50 www9.health.gov.au/cda/source/cda-index.cfm

National notifiable animal disease investigations

During the quarter, 1070 national notifiable animal disease investigations[51] were conducted into suspect disease events. National notifiable animal diseases include a subset of emergency diseases.[52] Table 16 lists the confirmed results of these disease investigations. Note that more than one disease may be investigated for a single disease event (an outbreak of morbidity or mortality). In addition, a single investigation may involve more than one animal.

Details about selected investigations are provided in the 'State and territory reports' section of this publication and are available by contacting the relevant state or territory NAHIP coordinator (see contact details on last page). Investigations involving free-ranging wildlife (native or feral species) are reported into eWHIS;[53] details about selected investigations are provided in the WHA report (page 15).

Information regarding Australia's emergency preparedness and outbreak response management is available from the Australian Government Department of Agriculture, Water and the Environment.[54]

Table 16 Investigations for suspected national notifiable animal diseases, 1 July to 30 September 2020

Disease	Species	Jurisdiction	No. of investigations	No. positive	No. negative
Bluetongue — clinical disease	**Cattle**	**National total**	**7**	**0**	**7**
		NSW	1	0	1
		Qld	4	0	4
		SA	1	0	1
		Vic.	1	0	1
	Goat	**National total**	**4**	**0**	**4**
		NSW	1	0	1
		Qld	3	0	3
	Sheep	**National total**	**14**	**0**	**14**
		NSW	6	0	6
		Qld	3	0	3
		SA	1	0	1
		Tas.	1	0	1
		Vic.	1	0	1
		WA	2	0	2
Contagious agalactia (clinical disease)	**Goat**	**National total**	**1**	**0**	**1**
		Qld	1	0	1
Encephalitides (tick-borne)	**Cattle**	**National total**	**1**	**0**	**1**
		WA	1	0	1
	Sheep	**National total**	**4**	**0**	**4**
		WA	4	0	4
Haemorrhagic septicaemia (Infection with *Pasteurella multocida* serotypes 6:b and 6:e)	**Cattle**	**National total**	**3**	**0**	**3**
		WA	3	0	3

Cont.

51 National List of Notifiable Animal Diseases at www.agriculture.gov.au/pests-diseases-weeds/animal/notifiable

52 Emergency Animal Disease Response Agreement, Schedule 3 at www.animalhealthaustralia.com.au/what-we-do/emergency-animal-disease/eadresponseagreement

53 wildlifehealthaustralia.com.au/ProgramsProjects/eWHIS-WildlifeHealthInformationSystem.aspx

54 www.agriculture.gov.au/animal/health/livestock-movement-australia

Disease	Species	Jurisdiction	No. of investigations	No. positive	No. negative
Infection of bees with *Melissococcus plutonius* (European foulbrood)	**Bees**	**National total**	**119**	**38**	**81**
		ACT	2	0	2
		NSW	74	21	53
		Qld	24	5	19
		SA	14	8	6
		Vic.	5	4	1
Infection of bees with *Paenibacillus larvae* (American foulbrood)	**Bees**	**National total**	**184**	**72**	**112**
		ACT	2	0	2
		NSW	74	38	36
		Qld	24	8	16
		SA	49	9	40
		Vic.	35	17	18
Infection with African horse sickness virus	**Horse**	**National total**	**4**	**0**	**4**
		NSW	1	0	1
		NT	1	0	1
		Qld	2	0	2
Infection with African swine fever virus	**Pig**	**National total**	**27**	**0**	**27**
		NSW	3	0	3
		Qld	8	0	8
		SA	7	0	7
		Vic.	1	0	1
		WA	8	0	8
Infection with alcelaphine herpesvirus-1 (malignant catarrhal fever, wildebeest-associated)	**Cattle**	**National total**	**2**	**0**	**2**
		Vic.	1	0	1
		WA	1	0	1
Infection with *Anaplasma marginale* (bovine anaplasmosis) in tick free areas	**Cattle**	**National total**	**16**	**0**	**16**
		NSW	16	0	16
Infection with Aujeszky's disease virus (pseudorabies virus)	**Cattle**	**National total**	**1**	**0**	**1**
		WA	1	0	1
	Pig	**National total**	**3**	**0**	**3**
		SA	1	0	1
		Vic.	1	0	1
		WA	1	0	1
	Sheep	**National total**	**4**	**0**	**4**
		Tas.	1	0	1
		WA	3	0	3

Cont.

Disease	Species	Jurisdiction	No. of investigations	No. positive	No. negative
Infection with Australian bat lyssavirus[a]	**Cattle**	**National total**	**1**	**0**	**1**
		Qld	1	0	1
	Donkey	**National total**	**1**	**0**	**1**
		NSW	1	0	1
	Horse	**National total**	**9**	**0**	**9**
		Qld	9	0	9
	Sheep	**National total**	**1**	**0**	**1**
		Tas.	1	0	1
Infection with *Babesia bovis*, *B. bigemina* or *B. divergens* (bovine babesiosis) in tick-free areas	**Cattle**	**National total**	**17**	**1**	**16**
		NSW	16	1	15
		WA	1	0	1
Infection with *Bacillus anthracis* (anthrax)	**Cattle**	**National total**	**35**	**0**	**35**
		NSW	23	0	23
		Qld	2	0	2
		Tas.	1	0	1
		Vic.	7	0	7
		WA	2	0	2
	Goat	**National total**	**1**	**0**	**1**
		NSW	1	0	1
	Horse	**National total**	**1**	**0**	**1**
		NSW	1	0	1
	Pig	**National total**	**2**	**0**	**2**
		NSW	2	0	2
	Sheep	**National total**	**36**	**0**	**36**
		NSW	18	0	18
		Vic.	18	0	18
Infection with Borna disease virus	**Cattle**	**National total**	**1**	**0**	**1**
		WA	1	0	1
	Sheep	**National total**	**3**	**0**	**3**
		WA	3	0	3
Infection with bovine leukaemia virus (enzootic bovine leucosis)	**Cattle**	**National total**	**1**	**0**	**1**
		Qld	1	0	1
Infection with bovine virus diarrhoea virus (type 2)	**Cattle**	**National total**	**6**	**0**	**6**
		WA	6	0	6
Infection with *Brucella abortus*	**Cattle**	**National total**	**33**	**0**	**33**
		NSW	6	0	6
		Qld	5	0	5
		Tas	1	0	1
		Vic.	11	0	11
		WA	10	0	10
	Goat	**National total**	**4**	**0**	**4**
		Qld	4	0	4
	Sheep	**National total**	**1**	**0**	**1**
		NSW	1	0	1

a Australian bat lyssavirus testing in bats is reported on a 6-monthly basis in the Wildlife Health Australia report of AHSQ.

Cont.

Disease	Species	Jurisdiction	No. of investigations	No. positive	No. negative
Infection with *Brucella canis*	**Dog**	**National total**	**1**	**0**	**1**
		NT	1	0	1
Infection with *Brucella melitensis*	**Sheep**	**National total**	**2**	**0**	**2**
		WA	2	0	2
Infection with *Brucella suis*	**Dog**	**National total**	**58**	**10**	**48**
		NSW	51	9	42
		NT	1	0	1
		Qld	4	0	4
		Vic.	2	1	1
	Pig	**National total**	**6**	**2**	**4**
		NSW	6	2	4
Infection with *Chlamydophila abortus* (enzootic abortion of ewes, ovine chlamydiosis)	**Sheep**	**National total**	**15**	**0**	**15**
		NSW	13	0	13
		WA	2	0	2
Infection with classical swine fever virus	**Pig**	**National total**	**26**	**0**	**26**
		NSW	3	0	3
		Qld	8	0	8
		SA	7	0	7
		Vic.	1	0	1
		WA	7	0	7
Infection with Eastern, Western or Venezuelan equine encephalomyelitis viruses	**Horse**	**National total**	**3**	**0**	**3**
		Qld	1	0	1
		WA	2	0	2
Infection with *Ehrlichia canis* (Ehrlichiosis)	**Dog**	**National total**	**490**	**170**	**320**
		NSW	2	0	2
		NT	228	85	143
		Qld	19	0	19
		SA	8	0	8
		WA	233	85	148
Infection with *Ehrlichia ruminantium* (heartwater)	**Cattle**	**National total**	**2**	**0**	**2**
		WA	2	0	2
Infection with equine arteritis virus	**Horse**	**National total**	**1**	**0**	**1**
		NSW	1	0	1
Infection with equine herpesvirus-1 (EHV-1)	**Horse**	**National total**	**103**	**18**	**85**
		NSW	73	15	58
		Qld	19	0	19
		SA	1	0	1
		Tas.	1	1	0
		Vic.	7	2	5
		WA	2	0	2
Infection with equine infectious anaemia virus	**Horse**	**National total**	**1**	**0**	**1**
		NSW	1	0	1
Infection with equine influenza virus	**Horse**	**National total**	**1**	**0**	**1**
		NSW	1	0	1

Cont.

Disease	Species	Jurisdiction	No. of investigations	No. positive	No. negative
Infection with foot and mouth disease virus	**Cattle**	**National total**	**22**	**0**	**22**
		NSW	3	0	3
		Qld	7	0	7
		SA	6	0	6
		Tas.	1	0	1
		Vic.	2	0	2
		WA	3	0	3
	Goat	**National total**	**1**	**0**	**1**
		Qld	1	0	1
	Sheep	**National total**	**9**	**0**	**9**
		NSW	2	0	2
		Qld	2	0	2
		SA	1	0	1
		Vic.	2	0	2
		WA	2	0	2
Infection with Hendra virus	**Donkey**	**National total**	**1**	**0**	**1**
		NSW	1	0	1
	Horse	**National total**	**233**	**0**	**233**
		NSW	56	0	56
		NT	1	0	1
		Qld	167	0	167
		Vic.	6	0	6
		Tas.	1	0	1
		WA	2	0	2
Infection with influenza A virus in birds	**Bird***	**National total**	**141**	**6**	**135**
		ACT	1	0	1
		NSW	44	0	44
		NT	7	0	7
		Qld	12	0	12
		SA	10	0	10
		Tas.	9	0	9
		Vic.	44	6	38
		WA	14	0	14
Infection with influenza A virus in swine	**Pig**	**National total**	**7**	**2**	**5**
		Vic.	2	2	0
		WA	5	0	5
Infection with Japanese encephalitis virus	**Horse**	**National total**	**2**	**0**	**2**
		Qld	1	0	1
		WA	1	0	1
Infection with louping ill virus	**Sheep**	**National total**	**3**	**0**	**3**
		WA	3	0	3
Infection with *Mycobacterium avium* (avian tuberculosis) in birds	**Bird***	**National total**	**1**	**0**	**1**
		WA	1	0	1

*Bird = domestic birds (poultry, aviary and caged birds)

Cont.

Disease	Species	Jurisdiction	No. of investigations	No. positive	No. negative
Infection with *Mycoplasma capricolum* subsp. *capripneumoniae* (contagious caprine pleuropneumonia)	**Goat**	**National total**	**1**	**0**	**1**
		Qld	1	0	1
Infection with *Mycoplasma mycoides* subsp. *mycoides* SC (contagious bovine pleuropneumonia)	**Cattle**	**National total**	**2**	**0**	**2**
		WA	2	0	2
Infection with Newcastle disease virus (virulent)	**Bird***	**National total**	**113**	**0**	**113**
		ACT	1	0	1
		NSW	46	0	46
		NT	7	0	7
		Qld	11	0	11
		SA	13	0	13
		Tas.	6	0	6
		Vic.	16	0	16
		WA	13	0	13
Infection with porcine epidemic diarrhoea virus	**Pig**	**National total**	**7**	**0**	**7**
		SA	5	0	5
		Vic.	1	0	1
		WA	1	0	1
Infection with porcine reproductive and respiratory syndrome virus	**Pig**	**National total**	**6**	**0**	**6**
		Qld	2	0	2
		Vic.	1	0	1
		WA	3	0	3
Infection with rabies virus	**Horse**	**National total**	**1**	**0**	**1**
		Tas.	1	0	1
Infection with Rift Valley fever virus	**Alpaca**	**National total**	**1**	**0**	**1**
		WA	1	0	1
	Cattle	**National total**	**1**	**0**	**1**
		Qld	1	0	1
	Goat	**National total**	**2**	**0**	**2**
		Qld	2	0	2
	Sheep	**National total**	**3**	**0**	**3**
		WA	3	0	3
Infection with *Salmonella abortus-ovis* (salmonellosis)	**Sheep**	**National total**	**2**	**0**	**2**
		WA	2	0	2
Infection with *Salmonella* Enteritidis in poultry	**Chicken**	**National total**	**40**	**3**	**37**
		Vic.	40	3	37
Infection with *Salmonella* Gallinarum (fowl typhoid)	**Chicken**	**National total**	**2**	**0**	**2**
		WA	2	0	2
Infection with sheep pox virus or goat pox virus	**Sheep**	**National total**	**1**	**0**	**1**
		WA	1	0	1
Infection with Teschovirus A (porcine enteroviral encephalomyelitis)	**Pig**	**National total**	**3**	**0**	**3**
		SA	3	0	3

*Bird = domestic birds (poultry, aviary and caged birds)

Cont.

Disease	Species	Jurisdiction	No. of investigations	No. positive	No. negative
Infection with *Theileria parva* (East Coast fever) or *T. annulata* (Mediterranean theileriosis)	**Cattle**	**National total**	**1**	**0**	**1**
		WA	1	0	1
Infection with transmissible gastroenteritis coronavirus	**Pig**	**National total**	**7**	**0**	**7**
		SA	5	0	5
		Vic.	1	0	1
		WA	1	0	1
Infection with vesicular stomatitis virus	**Cattle**	**National total**	**18**	**0**	**18**
		NSW	2	0	2
		Qld	4	0	4
		SA	6	0	6
		Tas.	1	0	1
		Vic.	2	0	2
		WA	3	0	3
	Goat	**National total**	**1**	**0**	**1**
		Qld	1	0	1
	Sheep	**National total**	**8**	**0**	**8**
		NSW	2	0	2
		Qld	2	0	2
		SA	1	0	1
		Vic.	2	0	2
		WA	1	0	1
Infection with Wesselsbron virus	**Alpaca**	**National total**	**1**	**0**	**1**
		WA	1	0	1
	Sheep	**National total**	**1**	**0**	**1**
		WA	1	0	1
Infestation with *Chrysomya bezziana* (Old World screw-worm)	**Dog**	**National total**	**1**	**0**	**1**
		NT	1	0	1
	Primate[b]	**National total**	**1**	**0**	**1**
		NT	1	0	1
	Sheep	**National total**	**2**	**0**	**2**
		WA	2	0	2
Infestation with *Cochliomyia hominivorax* (New World screw-worm)	**Dog**	**National total**	**1**	**0**	**1**
		NT	1	0	1
	Primate[b]	**National total**	**1**	**0**	**1**
		NT	1	0	1
	Sheep	**National total**	**1**	**0**	**1**
		WA	1	0	1
Infestation with warble-fly (warble-fly myiasis)	**Sheep**	**National total**	**1**	**0**	**1**
		WA	1	0	1
Maedi-visna	**Sheep**	**National total**	**4**	**0**	**4**
		Tas.	1	0	1
		WA	3	0	3

Cont.

b Investigation occurred in a human

Disease	Species	Jurisdiction	No. of investigations	No. positive	No. negative
Paratuberculosis (Johne's disease)	**Alpaca**	**National total**	**1**	**0**	**1**
		Vic.	1	0	1
	Cattle	**National total**	**54**	**7**	**47**
		NSW	6	5	1
		Qld	8	0	8
		Vic.	11	2	9
		WA	29	0	29
	Goat	**National total**	**2**	**0**	**2**
		NSW	1	0	1
		Qld	1	0	1
	Sheep	**National total**	**33**	**11**	**22**
		NSW	4	0	4
		Vic.	11	2	9
		WA	18	9	9
Transmissible spongiform encephalopathies (bovine spongiform encephalopathy, chronic wasting disease of deer, feline spongiform encephalopathy, scrapie)	**Cat**	**National total**	**1**	**0**	**1**
		Vic.	1	0	1
	Cattle	**National total**	**64**	**0**	**64**
		NSW	12	0	12
		NT	6	0	6
		Qld	18	0	18
		SA	2	0	2
		Tas.	1	0	1
		Vic.	17	0	17
		WA	8	0	8
	Sheep	**National total**	**50**	**0**	**50**
		NSW	11	0	11
		Qld	5	0	5
		SA	6	0	6
		Tas.	3	0	3
		Vic.	17	0	17
		WA	8	0	8
West Nile Virus (clinical disease)	**Cattle**	**National total**	**1**	**0**	**1**
		WA	1	0	1
	Horse	**National total**	**17**	**0**	**17**
		NSW	12	0	12
		Qld	1	0	1
		WA	4	0	4
	Sheep	**National total**	**3**	**0**	**3**
		WA	3	0	3