CULICOIDES TRAPPING

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DISEASE WATCH HOTLINE: 1800 675 888

The Disease Watch Hotline is a toll-free telephone number that connects callers to the relevant state or territory officer to report concerns about any potential emergency disease situation. Anyone suspecting an emergency disease outbreak should use this number to get immediate advice and assistance.

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1 Introduction

1.1 This document

1.1.1 Purpose

As part of AUSVETPLAN (the Australian Veterinary Emergency Plan), this resource document has been developed to provide general information for personnel in the planning and surveillance functions of a local control centre when considering trapping procedures for *Culicoides* species.

Together with the other components of AUSVETPLAN, this resource document has been developed to help ensure that an efficient, effective and coherent response can be implemented consistently across Australia with minimal delay.

1.1.2 Scope

This resource document applies to personnel involved in the planning and surveillance functions of a local control centre when considering trapping procedures for *Culicoides* species.

1.1.3 Development

This resource document has been produced in accordance with the procedures described in the **AUSVETPLAN *Overview*** document and in consultation with Australian national, state and territory governments; the relevant livestock industries; nongovernment agencies; and public health authorities, where relevant.

In this document, text placed in square brackets [xxx] indicates that that aspect of the manual remains contentious or is under development; such text is not part of the endorsed document. The issues will be worked on by experts and relevant text included at a future date.

1.2 Other documentation

This guidance document should be read and implemented in conjunction with:

- Other AUSVETPLAN documents, including the response strategies; operational, enterprise and management manuals; and, any relevant guidance and resource documents. The complete series of manuals is available on the Animal Health Australia website.[1]
- Relevant nationally agreed standard operating procedures (NASOPs).[2] These procedures complement AUSVETPLAN and describe in detail specific actions undertaken during a response to an incident. NASOPs have been developed for use by jurisdictions during responses to emergency animal disease (EAD) incidents and emergencies.

[1] www.animalhealthaustralia.com.au/our-publications/ausvetplan-manuals-and-documents/
[2] www.animalhealthaustralia.com.au/what-we-do/emergency-animal-disease/nationally-agreed-standard-operating-procedures/

- Relevant jurisdictional or industry policies, response plans, standard operating procedures and work instructions
- Relevant Commonwealth and jurisdictional legislation; and, legal agreements (such as the EADRA,[3] where applicable).

1.3 Training resources

EAD preparedness and response arrangements in Australia

The EAD Foundation Online course[4] provides livestock producers, veterinarians, veterinary students, government personnel and emergency workers with foundation knowledge for further training in EAD preparedness and response in Australia.

[3] www.animalhealthaustralia.com.au/what-we-do/emergency-animal-disease/ead-response-agreement/
[4] www.animalhealthaustralia.com.au/emergency-animal-disease-training-program/

2 Decision making

2.1 Factors to consider

2.1.1 Vector identification

There is limited taxonomic expertise within Australia to identify emergency animal disease (EAD) insect vectors, especially where species differentiation is dependent upon minor anatomical details (e.g. *Culicoides*) and the examination of samples from one trap may take a number of hours.

The use of polymerase chain reaction (PCR) technology for vector identification may overcome this difficulty but will not identify vectors for which no molecular data exists. It is also possible that *Culicoides*-specific PCR technology will not be widely available at the start of an EAD outbreak.

Certain insect species may be known to be competent vectors for the EAD under consideration. However, in an area where an EAD is being investigated for the first time, it is feasible that an insect which has not been previously recognised as a vector could be wholly or partially responsible for disease spread.

Larval sampling is considerably more time consuming than adult sampling, and may not be as reliable an indicator of presence or prevalence as adult trapping. In addition, the breeding site of some vector species is unknown.

2.1.2 Disease agent identification

Recovering evidence of an EAD agent from a pool of suspected vectors can be carried out only by certain laboratories. The process is labour intensive and time consuming, and should only be used to establish:

- the presence of the agent
- the possible role of the vector.

The use of PCR technology for vector competency confirmation and virus identification will accelerate the process however it is also unlikely that testing will be widely available at the start of an outbreak.

2.2 Trap designs

A thorough knowledge of the ecology of known and potential vectors is essential in order to determine the most appropriate trapping technique. It is possible that a combination of different trapping techniques may need to be employed as vectors have different feeding habits. The following are potential sampling tools:

2.2.1 Light traps

Light traps are most commonly used to collect biting midges. These traps should be available from the respective National Arbovirus Monitoring Program (NAMP) Coordinator in each state and territory agriculture (or equivalent) department. The number of traps available nationally is limited and many are retained on properties as part of the NAMP. Sourcing of light traps from jurisdictions will take time. In the first instance traps already near the EAD could be examined for potential vectors.

2.2.2 Chemical attractant traps

Many local government medical authorities use carbon dioxide-baited light traps to collect mosquitoes and these could be adapted for biting midges, if necessary, however it should be noted that some species of *Culicoides* appear to be highly attracted to CO_2 and whereas others are not at all attracted, so it depends on the species involved.

Trials undertaken by the Tropical Population Health Unit, Cairns, have indicated that the addition of octenol[5] and carbon dioxide are useful attractants for biting midges when used with light traps,[6] however experience in the Northern Territory suggests that the use of octenol is not particularly beneficial in the collection of *Culicoides* species.

2.2.3 Truck traps

The Northern Territory is believed to have the only truck trap in Australia. Construction of new truck traps could be achieved in a very short time. A truck trap is most effective where there is adequate insect activity before dark and where the temperature is not low enough to reduce insect activity.

2.2.4 Aspiration

The use of modified leaf blowers, adapted to aspirate feeding vectors from the skin of sentinel animals, and other vacuum devices can be useful in situations where vectors are unlikely to be attracted to carbon dioxide or light traps, such as diurnally active species. These also have the advantage of providing data on what insects are actually feeding on hosts.

[5] 1-Octen-3ol

[6] Octenol appears to act as a synergist with carbon dioxide for certain species and may increase the number biting midges trapped thus improving the sensitivity of surveillance

2.2.5 Sweep netting

Entomological sweep nets can be used to sample insect populations around host animals during periods of peak activity. While sweep nets are unlikely to collect more insects than aspiration they offer a simple and economical means of collecting insects that are attracted to hosts.

2.2.6 Sticky traps

Sticky traps (yellow and blue) are routinely used to collect flying insects. They are indiscriminate and may collect numerous non-target species, but have the benefits of being readily available, cheap, and can be rapidly deployed in large quantities. There are few, if any, cases of their being used to monitor for biting midges and little work has been done to support the use of any particular colour. They also have the disadvantage of damaging specimens and being very difficult to sort and handle in the laboratory.

3 Trap placement

Siting of traps should be done with epidemiological input and in consultation with members of the NAMP Technical Committee.

At the start of an investigation, there will be limited capacity to trap insects especially if the insects under survey are not attracted to light or carbon dioxide traps and it may take some time before the capacity is developed.

The placement of insect traps will need to take into consideration:

- The need for trapping (i.e. vector identification, vector distribution and density, distribution of disease agent, presence of potentially competent vectors)
- the location of the primary case in relation to other infected premises
- known meteorological data (e.g. prevailing winds, temperature, rain and humidity) during the period prior to the first recorded disease outbreak
- life cycles and feeding preferences of known competent vectors
- the availability of traps
- the availability of suitably qualified and experienced staff to accurately identify specimens
- the distribution of susceptible livestock species.

4 Sample storage

Samples of potential vectors must be maintained in a quality state to enable either morphological or molecular identification. Storage solutions must also take into account the need to extract and identify the pathogen being vectored to confirm if the host insect is actually a vector. Consult with an expert or the taxonomists involved prior to storing samples but general methods include:

- Storage in alcohol – preference is 100% ethanol where molecular methods will be used. A lower percentage ethanol is suitable for morphological studies.
- Freezing – either through refrigeration or liquid nitrogen. The latter of which may not be readily available depending where the EAD occurs.
- Insect specimens need to be stored away from light. A dark area e.g. a cupboard, is the minimum requirement but refrigeration or freezing is much preferable.
- The ratio of insect material to ethanol is important as insects contain water which will leach into the ethanol solution and dilute the ethanol, potential affecting subsequent molecular or morphological analysis. A maximum ratio of 1:5 insects:ethanol is recommended.

Glossary

Standard AUSVETPLAN terms

Term	Definition
Animal byproducts	Products of animal origin that are not for consumption but are destined for industrial use (eg hides and skins, fur, wool, hair, feathers, hoofs, bones, fertiliser).
Animal Health Committee	A committee whose members are the chief veterinary officers of the Commonwealth, states and territories, along with representatives from the Australian Animal Health Laboratory (CSIRO) and the Department of Agriculture, Water and the Environment. There are also observers from Animal Health Australia, Wildlife Health Australia, and the New Zealand Ministry for Primary Industries. The committee provides advice to the National Biosecurity Committee on animal health matters, focusing on technical issues and regulatory policy. *See also* National Biosecurity Committee
Animal products	Meat, meat products and other products of animal origin (eg eggs, milk) for human consumption or for use in animal feedstuff.
Approved disposal site	A premises that has zero susceptible livestock and has been approved as a disposal site for animal carcasses, or potentially contaminated animal products, wastes or things.
Approved processing facility	An abattoir, knackery, milk processing plant or other such facility that maintains increased biosecurity standards. Such a facility could have animals or animal products introduced from lower-risk premises under a permit for processing to an approved standard.
At-risk premises	A premises in a restricted area that contains a live susceptible animal(s) but is not considered at the time of classification to be an infected premises, dangerous contact premises, dangerous contact processing facility, suspect premises or trace premises.
Australian Chief Veterinary Officer	The nominated senior veterinarian in the Australian Government Department of Agriculture, Water and the Environment who manages international animal health commitments and the Australian Government's response to an animal disease outbreak. *See also* Chief veterinary officer

Term	Definition
AUSVETPLAN	*Aus*tralian *Vet*erinary Emergency *Plan*. Nationally agreed resources that guide decision making in the response to emergency animal diseases (EADs). It outlines Australia's preferred approach to responding to EADs of national significance, and supports efficient, effective and coherent responses to these diseases.
Carcase	The body of an animal slaughtered for food.
Carcass	The body of an animal that died in the field.
Chief veterinary officer (CVO)	The senior veterinarian of the animal health authority in each jurisdiction (national, state or territory) who has responsibility for animal disease control in that jurisdiction. *See also* Australian Chief Veterinary Officer
Compartmentalisation	The process of defining, implementing and maintaining one or more disease-free establishments under a common biosecurity management system in accordance with OIE guidelines, based on applied biosecurity measures and surveillance, to facilitate disease control and/or trade.
Compensation	The sum of money paid by government to an owner for livestock or property that are destroyed for the purpose of eradication or prevention of the spread of an emergency animal disease, and livestock that have died of the emergency animal disease. *See also* Cost-sharing arrangements, Emergency Animal Disease Response Agreement
Consultative Committee on Emergency Animal Diseases (CCEAD)	The key technical coordinating body for animal health emergencies. Members are state and territory chief veterinary officers, representatives of CSIRO-AAHL and the relevant industries, and the Australian Chief Veterinary Officer as chair.
Control area (CA)	A legally declared area where the disease controls, including surveillance and movement controls, applied are of lesser intensity than those in a restricted area (the limits of a control area and the conditions applying to it can be varied during an incident according to need).
Cost-sharing arrangements	Arrangements agreed between governments (national and state/territory) and livestock industries for sharing the costs of emergency animal disease responses. *See also* Compensation, Emergency Animal Disease Response Agreement
Dangerous contact animal	A susceptible animal that has been designated as being exposed to other infected animals or potentially infectious products following tracing and epidemiological investigation.

Term	Definition
Dangerous contact premises (DCP)	A premises, apart from an abattoir, knackery or milk processing plant (or other such facility) that, after investigation and based on a risk assessment, is considered to contain a susceptible animal(s) not showing clinical signs, but considered highly likely to contain an infected animal(s) and/or contaminated animal products, wastes or things that present an unacceptable risk to the response if the risk is not addressed, and that therefore requires action to address the risk.
Dangerous contact processing facility (DCPF)	An abattoir, knackery, milk processing plant or other such facility that, based on a risk assessment, appears highly likely to have received infected animals, or contaminated animal products, wastes or things, and that requires action to address the risk.
Declared area	A defined tract of land that is subjected to disease control restrictions under emergency animal disease legislation. There are two types of declared areas: restricted area and control area.
Decontamination	Includes all stages of cleaning and disinfection.
Depopulation	The removal of a host population from a particular area to control or prevent the spread of disease.
Destroy (animals)	To kill animals humanely.
Disease agent	A general term for a transmissible organism or other factor that causes an infectious disease.
Disease Watch Hotline	24-hour freecall service for reporting suspected incidences of exotic diseases – 1800 675 888.
Disinfectant	A chemical used to destroy disease agents outside a living animal.
Disinfection	The application, after thorough cleansing, of procedures intended to destroy the infectious or parasitic agents of animal diseases, including zoonoses; applies to premises, vehicles and different objects that may have been directly or indirectly contaminated.
Disinsectation	The destruction of insect pests, usually with a chemical agent.
Disposal	Sanitary removal of animal carcasses, animal products, materials and wastes by burial, burning or some other process so as to prevent the spread of disease.

Term	Definition
Emergency animal disease	A disease that is (a) exotic to Australia or (b) a variant of an endemic disease or (c) a serious infectious disease of unknown or uncertain cause or (d) a severe outbreak of a known endemic disease, and that is considered to be of national significance with serious social or trade implications. *See also* Endemic animal disease, Exotic animal disease
Emergency Animal Disease Response Agreement	Agreement between the Australian and state/territory governments and livestock industries on the management of emergency animal disease responses. Provisions include participatory decision making, risk management, cost sharing, the use of appropriately trained personnel and existing standards such as AUSVETPLAN. *See also* Compensation, Cost-sharing arrangements
Endemic animal disease	A disease affecting animals (which may include humans) that is known to occur in Australia. *See also* Emergency animal disease, Exotic animal disease
Enterprise	*See* Risk enterprise
Enzyme-linked immunosorbent assay (ELISA)	A serological test designed to detect and measure the presence of antibody or antigen in a sample. The test uses an enzyme reaction with a substrate to produce a colour change when antigen–antibody binding occurs.
Epidemiological investigation	An investigation to identify and qualify the risk factors associated with the disease. *See also* Veterinary investigation
Epidemiology	The study of disease in populations and of factors that determine its occurrence.
Exotic animal disease	A disease affecting animals (which may include humans) that does not normally occur in Australia. *See also* Emergency animal disease, Endemic animal disease
Exotic fauna/feral animals	*See* Wild animals
Fomites	Inanimate objects (eg boots, clothing, equipment, instruments, vehicles, crates, packaging) that can carry an infectious disease agent and may spread the disease through mechanical transmission.

Term	Definition
General permit	A legal document that describes the requirements for movement of an animal (or group of animals), commodity or thing, for which permission may be granted without the need for direct interaction between the person moving the animal(s), commodity or thing and a government veterinarian or inspector. The permit may be completed via a webpage or in an approved place (such as a government office or commercial premises). A printed version of the permit must accompany the movement. The permit may impose preconditions and/or restrictions on movements. *See also* Special permit
In-contact animals	Animals that have had close contact with infected animals, such as noninfected animals in the same group as infected animals.
Incubation period	The period that elapses between the introduction of a pathogen into an animal and the first clinical signs of the disease.
Index case	The first case of the disease to be diagnosed in a disease outbreak. *See also* Index property
Index property	The property on which the index case is found. *See also* Index case
Infected premises (IP)	A defined area (which may be all or part of a property) on which animals meeting the case definition are or were present, or the causative agent of the emergency animal disease is present, or there is a reasonable suspicion that either is present, and that the relevant chief veterinary officer or their delegate has declared to be an infected premises.
Local control centre	An emergency operations centre responsible for the command and control of field operations in a defined area.
Monitoring	Routine collection of data for assessing the health status of a population or the level of contamination of a site for remediation purposes. *See also* Surveillance
Movement control	Restrictions placed on the movement of animals, people and other things to prevent the spread of disease.

Term	Definition
National Biosecurity Committee	A committee that was formally established under the Intergovernmental Agreement on Biosecurity (IGAB). The IGAB was signed on 13 January 2012, and signatories include all states and territories except Tasmania. The committee provides advice to the Agriculture Senior Officials Committee and the Agriculture Ministers' Forum on national biosecurity issues, and on the IGAB.
National Management Group (NMG)	A group established to approve (or not approve) the invoking of cost sharing under the Emergency Animal Disease Response Agreement. NMG members are the Secretary of the Australian Government Department of Agriculture, Water and the Environment as chair; the chief executive officers of the state and territory government parties; and the president (or analogous officer) of each of the relevant industry parties.
Native wildlife	*See* Wild animals
OIE Terrestrial Code	OIE *Terrestrial animal health code*. Describes standards for safe international trade in animals and animal products. Revised annually and published on the internet at: www.oie.int/international-standard-setting/terrestrial-code/access-online.
OIE Terrestrial Manual	OIE *Manual of diagnostic tests and vaccines for terrestrial animals*. Describes standards for laboratory diagnostic tests, and the production and control of biological products (principally vaccines). The current edition is published on the internet at: www.oie.int/en/standard-setting/terrestrial-manual/access-online.
Operational procedures	Detailed instructions for carrying out specific disease control activities, such as disposal, destruction, decontamination and valuation.
Outside area (OA)	The area of Australia outside the declared (control and restricted) areas.
Owner	Person responsible for a premises (includes an agent of the owner, such as a manager or other controlling officer).
Polymerase chain reaction (PCR)	A method of amplifying and analysing DNA sequences that can be used to detect the presence of viral DNA.
Premises	A tract of land including its buildings, or a separate farm or facility that is maintained by a single set of services and personnel.

Term	Definition
Premises of relevance (POR)	A premises in a control area that contains a live susceptible animal(s) but is not considered at the time of classification to be an infected premises, suspect premises, trace premises, dangerous contact premises or dangerous contact processing facility.
Prevalence	The proportion (or percentage) of animals in a particular population affected by a particular disease (or infection or positive antibody titre) at a given point in time.
Proof of freedom	Reaching a point following an outbreak and post-outbreak surveillance when freedom from the disease can be claimed with a reasonable level of statistical confidence.
Quarantine	Legally enforceable requirement that prevents or minimises spread of pests and disease agents by controlling the movement of animals, persons or things.
Resolved premises (RP)	An infected premises, dangerous contact premises or dangerous contact processing facility that has completed the required control measures, and is subject to the procedures and restrictions appropriate to the area in which it is located.
Restricted area (RA)	A relatively small legally declared area around infected premises and dangerous contact premises that is subject to disease controls, including intense surveillance and movement controls.
Risk enterprise	A defined livestock or related enterprise that is potentially a major source of infection for many other premises. Includes intensive piggeries, feedlots, abattoirs, knackeries, saleyards, calf scales, milk factories, tanneries, skin sheds, game meat establishments, cold stores, artificial insemination centres, veterinary laboratories and hospitals, road and rail freight depots, showgrounds, field days, weighbridges and garbage depots.
Sensitivity	The proportion of truly positive units that are correctly identified as positive by a test. *See also* Specificity
Sentinel animal	Animal of known health status that is monitored to detect the presence of a specific disease agent.
Seroconversion	The appearance in the blood serum of antibodies (as determined by a serology test) following vaccination or natural exposure to a disease agent.
Serosurveillance	Surveillance of an animal population by testing serum samples for the presence of antibodies to disease agents.

Term	Definition
Serotype	A subgroup of microorganisms identified by the antigens carried (as determined by a serology test).
Serum neutralisation test	A serological test to detect and measure the presence of antibody in a sample. Antibody in serum is serially diluted to detect the highest dilution that neutralises a standard amount of antigen. The neutralising antibody titre is given as the reciprocal of this dilution.
Slaughter	The humane killing of an animal for meat for human consumption.
Special permit	A legal document that describes the requirements for movement of an animal (or group of animals), commodity or thing, for which the person moving the animal(s), commodity or thing must obtain prior written permission from the relevant government veterinarian or inspector. A printed version of the permit must accompany the movement. The permit may impose preconditions and/or restrictions on movements. *See also* General permit
Specificity	The proportion of truly negative units that are correctly identified as negative by a test. *See also* Sensitivity
Stamping out	The strategy of eliminating infection from premises through the destruction of animals in accordance with the particular AUSVETPLAN manual, and in a manner that permits appropriate disposal of carcasses and decontamination of the site.
State coordination centre	The emergency operations centre that directs the disease control operations to be undertaken in a state or territory.
Surveillance	A systematic program of investigation designed to establish the presence, extent or absence of a disease, or of infection or contamination with the causative organism. It includes the examination of animals for clinical signs, antibodies or the causative organism.
Susceptible animals	Animals that can be infected with a particular disease.
Suspect animal	An animal that may have been exposed to an emergency disease such that its quarantine and intensive surveillance, but not pre-emptive slaughter, is warranted. or An animal not known to have been exposed to a disease agent but showing clinical signs requiring differential diagnosis.

Term	Definition
Suspect premises (SP)	Temporary classification of a premises that contains a susceptible animal(s) not known to have been exposed to the disease agent but showing clinical signs similar to the case definition, and that therefore requires investigation(s).
Swill	Also known as 'prohibited pig feed', material of mammalian origin, or any substance that has come in contact with this material; it does not include: • milk, milk products or milk byproducts, either of Australian provenance or legally imported for stockfeed use into Australia • material containing flesh, bones, blood, offal or mammal carcases that is treated by an approved process[1] • a carcass or part of a domestic pig, born and raised on the property on which the pig or pigs that are administered the part are held, that is administered for therapeutic purposes in accordance with the written instructions of a veterinary practitioner • material used under an individual and defined-period permit issued by a jurisdiction for the purposes of research or baiting. [1] Refer to jurisdictional legislation for approved processes. Jurisdictions may have approved processes that meet the following minimum standards: • rendering in accordance with the Australian Standard for the Hygienic Rendering of Animal Products • under jurisdictional permit, cooking processes subject to compliance verification that ensure that an internal temperature of at least 70 ºC for a minimum of 30 minutes, or equivalent, has been reached • treatment of cooking oil that has been used for cooking in Australia, in accordance with the National Standard for Recycling of Used Cooking Fats and Oils Intended for Animal Feeds • under jurisdictional permit, any other nationally agreed process approved by the Animal Health Committee for which an acceptable risk assessment has been undertaken and that is subject to compliance verification. This definition was endorsed by the Agriculture Ministers' Council through AGMIN OOS 04/2014.
Swill feeding	Also known as 'feeding prohibited pig feed', it includes: • feeding, or allowing or directing another person to feed, prohibited pig feed to a pig • allowing a pig to have access to prohibited pig feed • the collection and storage or possession of prohibited pig feed on a premises where one or more pigs are kept • supplying to another person prohibited pig feed that the supplier knows is for feeding to any pig. This definition was endorsed by the Agriculture Ministers' Council through AGMIN OOS 04/2014.

Term	Definition
Trace premises (TP)	Temporary classification of a premises that contains susceptible animal(s) that tracing indicates may have been exposed to the disease agent, or contains contaminated animal products, wastes or things, and that requires investigation(s).
Tracing	The process of locating animals, people or other items that may be implicated in the spread of disease, so that appropriate action can be taken.
Unknown status premises (UP)	A premises within a declared area where the current presence of susceptible animals and/or risk products, wastes or things is unknown.
Vaccination	Inoculation of individuals with a vaccine to provide active immunity.
Vaccine	A substance used to stimulate immunity against one or several disease-causing agents to provide protection or to reduce the effects of the disease. A vaccine is prepared from the causative agent of a disease, its products or a synthetic substitute, which is treated to act as an antigen without inducing the disease.
– adjuvanted	A vaccine in which one or several disease-causing agents are combined with an adjuvant (a substance that increases the immune response).
– attenuated	A vaccine prepared from infective or 'live' microbes that are less pathogenic but retain their ability to induce protective immunity.
– gene deleted	An attenuated or inactivated vaccine in which genes for non-essential surface glycoproteins have been removed by genetic engineering. This provides a useful immunological marker for the vaccine virus compared with the wild virus.
– inactivated	A vaccine prepared from a virus that has been inactivated ('killed') by chemical or physical treatment.
– recombinant	A vaccine produced from virus that has been genetically engineered to contain only selected genes, including those causing the immunogenic effect.
Vector	A living organism (frequently an arthropod) that transmits an infectious agent from one host to another. A *biological* vector is one in which the infectious agent must develop or multiply before becoming infective to a recipient host. A *mechanical* vector is one that transmits an infectious agent from one host to another but is not essential to the life cycle of the agent.

Term	Definition
Veterinary investigation	An investigation of the diagnosis, pathology and epidemiology of the disease. *See also* Epidemiological investigation
Viraemia	The presence of viruses in the blood.
Wild animals	
– native wildlife	Animals that are indigenous to Australia and may be susceptible to emergency animal diseases (eg bats, dingoes, marsupials).
– feral animals	Animals of domestic species that are not confined or under control (eg cats, horses, pigs).
– exotic fauna	Nondomestic animal species that are not indigenous to Australia (eg foxes).
Wool	Sheep wool.
Zero susceptible species premises (ZP)	A premises that does not contain any susceptible animals or risk products, wastes or things.
Zoning	The process of defining, implementing and maintaining a disease-free or infected area in accordance with OIE guidelines, based on geopolitical and/or physical boundaries and surveillance, to facilitate disease control and/or trade.
Zoonosis	A disease of animals that can be transmitted to humans.