

# AUSVETPLAN Guidance Document

## Risk-based assessment of disease control options for rare and valuable animals

### Background

AUSVETPLAN Disease Strategies address foreseeable disease risks and provide a framework for policy development for unforeseen risks that occur during an emergency animal disease (EAD) response. AUSVETPLAN Guidance Documents provide overarching principles for developing, reviewing and interpreting policy.

Consistent application of disease control policy is a key component of successful emergency responses. However, it is also prudent to accommodate, where possible, variations in policy to mitigate social and political risks to the overall outcomes of the response. For example, destroying a small group of animals that are critical to the recovery of an endangered species without objective consideration of other options indicates an unnecessarily rigid response.

Rare and valuable animals (RVAs) are afforded a special status by their owners or the community in general. RVAs may not pose the same risks of exposure to, and transmission of, disease as other animals. They may also be managed differently from other susceptible animals. RVAs represent a specific area of risk that, if not addressed sensitively and with apparent fairness, can undermine a local response and have wider ramifications that are greater than the disease risk posed by the animals themselves.

Owners and managers of RVAs need to be aware of the disease risks their animals pose. Owners should implement appropriate contingency measures and biosecurity to mitigate risks to the individual animal, and to wider animal and human health.

Owners of RVAs may be aligned with industry organisations that contribute to a cost-shared EAD response. These organisations need to consider their response to what may be seen by their mainstream members as special treatment and a potential threat to the success of an EAD response.

### Scope

This Guidance Document provides the principles for defining RVAs, and assessing the risks of disease exposure and transmission for diseases that are listed in the Emergency Animal Disease Response Agreement (EADRA).<sup>1</sup> The document may also provide useful principles for responses to new and emerging diseases.

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<sup>1</sup> Government and Livestock Industry Cost Sharing Deed in Respect of Emergency Animal Disease Responses ([www.animalhealthaustralia.com.au/programs/emergency-animal-disease-preparedness/ead-response-agreement](http://www.animalhealthaustralia.com.au/programs/emergency-animal-disease-preparedness/ead-response-agreement))

This document only applies to EAD responses and not to any other situation where regulatory measures may be imposed (eg issues arising from animals legally or illegally imported into Australia).

Where appropriate technologies exist, such as frozen semen or embryos, breeders of RVAs are encouraged to put in place appropriate genetic contingencies. It is recognised that assisted reproductive technologies are not widely applicable to nondomestic species, thus placing greater value on the live animal.

## **Application**

This guidance is to be applied to:

- reviews of existing AUSVETPLAN Disease Strategies and Response Policy Briefs
- development of new AUSVETPLAN Disease Strategies and Response Policy Briefs
- development and review of EAD response policies, particularly in the areas of movement control, destruction and vaccination
- development of biosecurity plans and other risk mitigation strategies by owners of RVAs and associated interest groups.

## **Assessment principles**

- Management of RVAs must not pose an unacceptable risk to human or animal health during an EAD response, to disease control or to proof-of-freedom surveillance.
- The owner of the RVA is responsible for applying for assessment of variation of the disease control measures to be applied to the animals during the response.
- Although applications for variations to disease control measures for RVAs will be considered during an EAD response, this guidance does not guarantee that all applications for such variations on the grounds of RVA status will be successful.
- The outcomes of assessments conducted on similar animals and situations may change during the course of a response.
- Because disease responses differ, the assessments and procedures detailed in this guidance are not prescriptive and do not necessarily represent policy for EAD control.
- Demonstration of infection status and immunity involves a great deal of uncertainty, and may require expert advice on the availability of diagnostic tests and their validity in the species under consideration.
- Assessment for protective vaccination will be progressed only if the vaccine required is currently permitted for use in Australia.
- The outcome of assessment of an RVA application for variation to disease control measures may be subject to higher-level agreement by the Consultative Committee on Emergency Animal Diseases (CCEAD). Where disease control measures are time critical and a final approval for their variation has not been received at the relevant control centre by the time the measures must be implemented, the measures should proceed.

## Definition of rare and valuable animals

The classification ‘rare and valuable animal’ applies to the following susceptible animals:

- breeding nuclei<sup>2</sup> of rare domesticated animal breeds that are listed on the Rare Breeds Trust of Australia priority list; this does not include nonbreeding individuals (eg wethers or steers, or individuals too old to breed)
- threatened species and subspecies; this includes species listed by the Convention on International Trade in Endangered Species (CITES); species on the International Union for the Conservation of Nature Red List of Threatened Species; and species listed under the *Environment Protection and Biodiversity Conservation Act 1999*, and in complementary state or territory threatened species lists
- species on the managed species program list of the Zoo and Aquarium Association
- irreplaceable animals — individuals of high monetary value or other unique status (such as genetic value) whose replacement cannot reasonably be achieved because of limited global availability or import restrictions (eg research animal colonies)
- famous or socially iconic individual animals, as requested by a recognised organisation at the state or territory jurisdictional level that has a demonstrated interest in the animal (eg famous race horses, as requested by the jurisdictional racing authority)
- animals with demonstrable specialised skills or attributes (eg animal actors, airport bird control raptors, public performance animals, detection dogs), as requested by a recognised organisation that has a demonstrated interest in the animal (eg with regard to detection dogs, the jurisdictional border protection authority or police)
- assistance animals that fulfil the criteria of the *Disability Discrimination Act 1992*, or have been trained under a program accredited with recognised organisations<sup>3</sup> or recognised under state or territory legislation.

Individual companion animals may be assessed on a case-by-case basis, depending on available resources.

## Example scenarios where RVA status may be relevant

- Where protective vaccination is not part of the agreed control strategy but is considered to be relevant to the protection of nondomestic species in a regional managed breeding program.
- Where a destruction order has been issued for animals on a premises that holds recognised rare livestock breeds.
- Where the application of prevention measures such as vaccination or restrictions on specific food components cannot be practically implemented without significant risk to the health and welfare of an RVA population.

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<sup>2</sup> A breeding nucleus is the number of animals required to ensure a sustainable population for the premises. See Appendix 1 for definitions of breeding nuclei for the major livestock genera.

<sup>3</sup> Recognised organisations include the International Guide Dog Federation and Assistance Dogs International.

## Risk factors to consider

Table 1 summarises the risk factors that are expected to affect whether alternative management to that agreed for non-RVAs (eg as recommended in the relevant AUSVETPLAN Disease Strategy) may be accepted. The list addresses risks associated with the animal, the disease agent, operational issues and protective vaccination.

**Table 1 Risk factors to consider**

<b>Factor</b>	<b>Favours alternative management</b>	<b>Does not favour alternative management</b>
<b>Animal factors</b>		
Infection status of animals	Animals are demonstrated not to be infected	Animals are demonstrated to be infected
Likelihood of exposure and infection	Animals have a low likelihood of exposure and infection	Animals have a high likelihood of exposure and infection
Susceptibility of species — relevant where agreed policy applies to genera or broader taxonomic classifications	Species is known not to be susceptible to infection	Species is known to be susceptible to infection, or susceptibility of species is not known
Epidemiological role of species in disease transmission	If infected, species is unlikely to transmit infection	Species is known to transmit infection
Number and location of animals	Individual animal, or in a region with low density of animals	Large numbers of animals, or in a region with high density of animals
Presence of concurrent disease	No significant concurrent disease	Concurrent disease present
Clinical disease exhibited	Clinical disease is easy to detect in the species	Clinical disease is inapparent in the species
<b>Disease agent factors</b>		
Infects humans	Disease is not a risk to public health	Disease is a significant public health risk
Mode of transmission	Disease is not spread by direct contact or fomites (eg vector-borne diseases)	Disease is spread by direct contact and fomites
Incubation period	Long	Short
Infectious period	Short	Long
<b>Operational factors</b>		
AUSVETPLAN status of premises	Animals are on 'low-risk premises' (ie premises of relevance or at-risk premises)	Animals are on 'high-risk premises' (ie infected premises, dangerous contact premises, suspect premises or trace premises)

<b>Factor</b>	<b>Favours alternative management</b>	<b>Does not favour alternative management</b>
Ability to monitor and conduct surveillance on the animals	Animals are under regular observation	Animals are not under regular observation
Availability of appropriate diagnostic tests	Diagnostic tests have been validated in the species, with appropriate sensitivity and specificity	Diagnostic tests have not been validated in the species, or have low sensitivity and specificity
Ability to identify animals in the short and long term	Animals are permanently identifiable	Animals are not identifiable
Traceability	Animals can be recorded in a national traceability system (eg NLIS, stud book, zoo information management system)	No national traceability system exists
Biosecurity on premises	High	Low
Availability of resources for managing movement controls, issuing permits, tracing and surveillance, and vaccination	Available	Limited
Stage of outbreak	Later in outbreak, when disease is under control, and extent and epidemiology are better understood	Earlier in outbreak, when disease is not under control, and extent and mode of transmission are uncertain
Proof-of-freedom surveillance and risk to Australia's market access	Alternative management of RVAs would not affect Australia's proof-of-freedom-status and market access	Alternative management of RVAs may affect Australia's proof-of-freedom status and market access
Willingness and capacity of RVA owner or manager to comply	Owner or manager is willing and able to fully participate and comply	Owner or manager is not willing or has limited capacity to comply
<b>Factors specific for protective vaccination</b>		
Availability of vaccine	Sufficient supplies of vaccine are available and permitted for use in Australia	Insufficient supplies of vaccine are available, or vaccine is not permitted for use in Australia
Human resources to vaccinate and manage other requirements	Sufficient human resources are available	Insufficient human resources are available
Resources to support additional surveillance requirements	Sufficient resources are available	Insufficient resources are available
Effectiveness of vaccine	Vaccination is likely to be effective in the species	Vaccination is unlikely to be effective in the species

<b>Factor</b>	<b>Favours alternative management</b>	<b>Does not favour alternative management</b>
Risks of administration to animal or humans (eg injury through handling)	Administration can be done safely	Administration poses an unacceptable risk of injury to the animal or humans
Ability to detect infection in vaccinated animals	Infection is likely to be detected in the vaccinated animals (eg through clinical surveillance, virological monitoring or serology). This should be documented in a surveillance and monitoring plan	Infection is unlikely to be detected in the vaccinated animals
Management of biosecurity for vaccination team	Biosecurity risks can be managed appropriately	Biosecurity risks cannot be managed appropriately
Ability to achieve desired herd immunity	Desired herd immunity can be achieved in the vaccinated population. This may require post-vaccination monitoring	Desired herd immunity is unlikely to be achieved in the vaccinated population

NLIS = National Livestock Identification System; RVA = rare and valuable animal

## Decision tool

### General assumptions

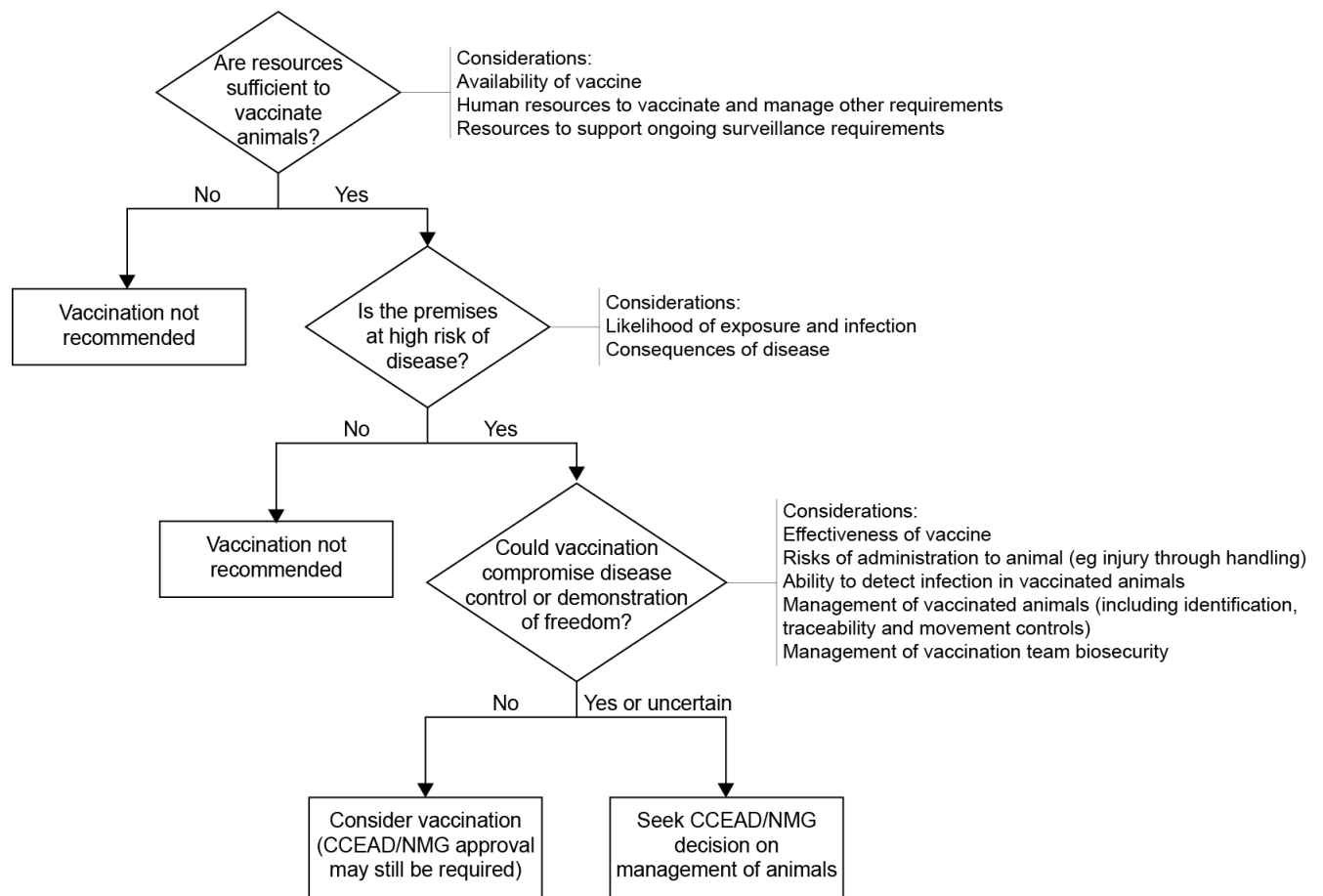
- The application has been deemed eligible — that is, the animals involved are accepted to be RVAs and are subject to disease control measures.
- Variations to nationally agreed disease control strategies may require CCEAD endorsement and National Management Group (NMG) approval.

### Assessment specific to request for protective vaccination

It is assumed that an effective vaccine exists, and its practical application to, and safety for, the species involved have been considered by the owner.

Protective vaccination may be requested for RVAs to minimise illness, death or negative welfare resulting from the disease or the standard disease control measures. An important consideration will be the impact of use of vaccine on the broader response, including subsequent surveillance and proof-of freedom testing. Other important factors will be vaccine availability and registration, and the availability of resources to manage and administer vaccines.

Figure 1 shows a decision tree for protective vaccination of RVAs in an EAD outbreak.



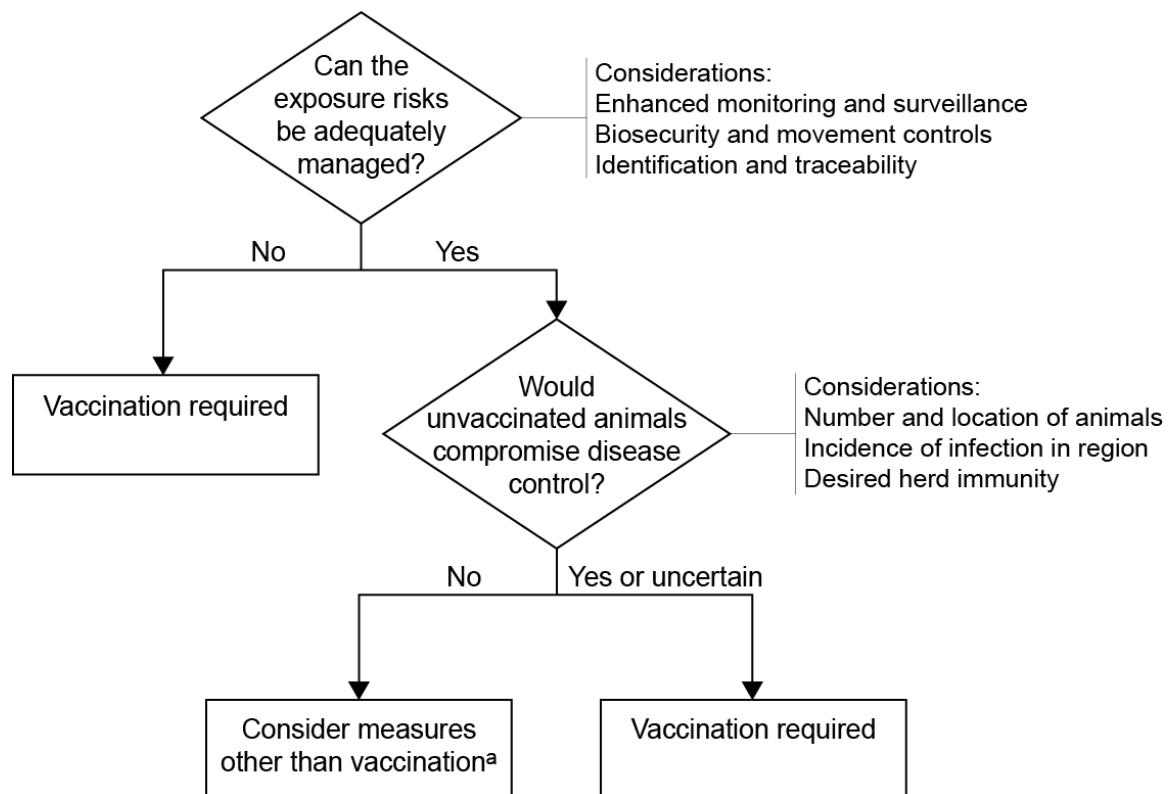
CCEAD = Consultative Committee on Emergency Animal Diseases; NMG = National Management Group

**Figure 1 Decision tree for protective vaccination of rare and valuable animals in an emergency animal disease outbreak**

### Assessment specific to vaccination exemption for threatened species RVAs

Exemption from compulsory vaccination may be requested because of practicalities or animal welfare considerations relating to vaccination of RVAs. Factors to consider include the impacts of a nonimmune population within a vaccinated area on the vaccination strategy, ongoing surveillance activities and management of stakeholder perceptions. There may also be ramifications for proof of freedom and subsequent market access.

Figure 2 shows a decision tree for exemption from vaccination for RVAs.



**a** Alternative measures may include enhanced monitoring and surveillance, biosecurity and movement controls, and identification and traceability.

**Figure 2 Decision tree for exemption from vaccination of rare and valuable animals in an emergency animal disease outbreak**

### Assessment specific to exemption from destruction

A prioritised set of RVAs considered essential for the enterprise or breed may be nominated for exemption from destruction. The RVAs would be on an infected premises or dangerous contact premises. Any exemption should not jeopardise future proof of freedom.

The objective of the assessment is to establish whether the population, either directly or after reasonable conditions are imposed, represents an ongoing risk to the response. Disease transmission risk is the key technical consideration; others include ongoing surveillance requirements and the practicalities of maintaining any conditions imposed on the exempted RVAs. Any exemption will also require careful communication and management of stakeholder perceptions on an ongoing basis.

Figure 3 shows a decision tree for exemption from destruction for RVAs.



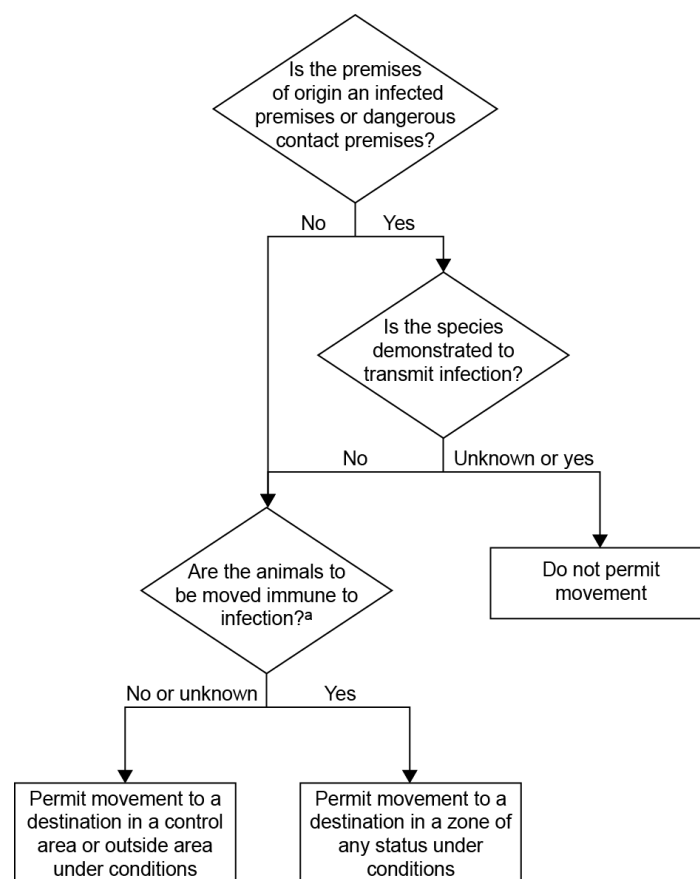


permits are issued on a case-by-case basis under the authorisation of the relevant chief veterinary officer.

### *Assumptions*

- The proposed movement must not affect the status of declared areas and the outside area for both the origin and the destination.
- The proposed movement must not affect proof of freedom or market access.
- The proposed movement must not put the animal(s) in question at greater risk of infection, or negative impacts of control measures that may be imposed at the destination.
- The applicant must demonstrate that the movement is necessary for animal welfare or for breeding purposes that are essential to the functioning of regional captive breeding programs, where alternative measures are currently not available.
- The application will not be progressed if there are insufficient resources for drafting specific conditions for the movement or managing the movement (eg its preparation, the movement itself, monitoring at the destination) as required by the conditions.

Figure 4 shows a decision tree for variation to movement controls for RVAs.



**a** Vaccinated or recovered animals may fall in this category. Supporting information may be required, including vaccination history, laboratory testing and expert advice. It can be difficult to demonstrate immunity in particular species using unvalidated tests.

**Figure 4** Decision tree for issuing permits for movement of rare and valuable animals in an emergency animal disease outbreak

## Further information

Animal Health Australia (2014). Enterprise manual: Zoos (Version 3.0). Australian Veterinary Emergency Plan (AUSVETPLAN), Edition 3, Agriculture Ministers' Forum, Canberra, ACT. <https://www.animalhealthaustralia.com.au/our-publications/ausvetplan-manuals-and-documents/>

Department for Environment, Food and Rural Affairs (2004). *Emergency vaccination protocol*, Government of the United Kingdom. <http://webarchive.nationalarchives.gov.uk/20130402151656/http://archive.defra.gov.uk/foodfarm/farmanimal/diseases/atoz/fmd/documents/vacprotocol.pdf>

Department for Environment, Food and Rural Affairs, and Animal and Plant Health Agency (2014). *Culling during a disease outbreak: animals that may be spared*, Government of the United Kingdom. [www.gov.uk/culling-during-a-disease-outbreak-animals-that-may-be-spared](http://www.gov.uk/culling-during-a-disease-outbreak-animals-that-may-be-spared)

National Avian Influenza Vaccine Expert Group (2010). *National operating policy and procedures for the use of avian influenza (AI) vaccine in the event of an AI outbreak in Australia*, Annex 2: Guidelines for applicants: Proposal to vaccinate birds in zoos and collections against avian influenza outside an approved emergency animal disease response plan. [www.animalhealthaustralia.com.au/wp-content/uploads/2011/04/Guidance-AI.pdf](http://www.animalhealthaustralia.com.au/wp-content/uploads/2011/04/Guidance-AI.pdf)

OIE (World Organisation for Animal Health) (2014). *Terrestrial animal health code*, OIE, Paris. [www.oie.int/international-standard-setting/terrestrial-code/access-online](http://www.oie.int/international-standard-setting/terrestrial-code/access-online)

Reiss AE and Woods RW (2011). *National zoo biosecurity manual*, Australian Government Department of Agriculture, Fisheries and Forestry, Canberra. <http://www.zooaquarium.org.au/wp-content/uploads/2011/10/National-Zoo-Biosecurity-Manual-March-2011.pdf>

## Abbreviations

CCEAD	Consultative Committee on Emergency Animal Diseases
EAD	emergency animal disease
NMG	National Management Group
RVA	rare and valuable animal

## Glossary – in addition to standard AUSVETPLAN terms

Term	Definition
Breeding nucleus	The number of animals required to ensure a sustainable population for the premises (see Appendix 1).
Managed breeding program	A program in which an animal population is managed to maximise its genetic health. This includes individual identification, a robust recording system and regular external auditing of the program against its stated aim.
Poultry	<p>All domesticated birds, including backyard poultry, used for the production of meat or eggs for consumption, for the production of other commercial products, for restocking supplies of game, or for breeding these categories of birds, as well as fighting cocks used for any purpose.</p> <p>Birds that are kept in captivity for any reason other than those reasons referred to in the preceding paragraph, including those that are kept for shows, races, exhibitions, competitions or for breeding or selling these categories of birds as well as pet birds, are not considered to be poultry.<sup>4</sup></p>

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<sup>4</sup> World Organisation for Animal Health (OIE) (2014). *Terrestrial animal health code*, [www.oie.int/international-standard-setting/terrestrial-code/access-online](http://www.oie.int/international-standard-setting/terrestrial-code/access-online)

# Appendix 1

Breeding nuclei for the major livestock species are defined as follows:

- cattle: 8 cows and 1 bull (or artificial insemination (AI))<sup>5</sup>
- goats: 6 does and 1 buck<sup>5</sup>
- pigs: 3 sows and 1 boar (or AI)<sup>5</sup>
- sheep: 16 ewes and 1 ram<sup>5</sup>
- poultry: 5 hens and 2 cock birds
- horses: 6 mares and 1 stallion.

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<sup>5</sup> UK FMD Breeds at Risk Register ([www.ryelandfbs.com/RBST\\_brochure.pdf](http://www.ryelandfbs.com/RBST_brochure.pdf))