EMERGENCY ANIMAL DISEASE RESPONSE

TRAINERS MANUAL

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GLOSSARY

Animal Health Australia	Animal Health Australia is a not-for-profit public company that facilitates partnerships between governments, major livestock industries and other stakeholders to protect animal health and the sustainability of Australia's livestock industry. Animal Health Australia's programs improve animal and human health, biosecurity, food safety and quality, market access, animal welfare and livestock productivity.
Approved Processing Facility	An Approved Processing Facility is a 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	An At-Risk Premises is 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.
AUSVETPLAN	The Australia Veterinary Emergency Plan is a comprehensive series of manuals that sets out the various roles, responsibilities and policy guidelines for organisations involved in an Emergency Animal Disease response. The AUSVETPLAN manuals are also used for training to ensure that the plans will be effective and that personnel are trained in advance of an Emergency Animal Disease event.
Chief Veterinary Officer	The Chief Veterinary Officer of a state or territory, or the Australian Chief Veterinary Officer.
Control Area	A Control Area provides a buffer between the Restricted Area and areas free from disease. Multiple Restricted Areas may exist within one Control Area. Restrictions in the Control Area will reduce the chance of the disease spreading further. The Control Area should reduce in size as the extent of the outbreak becomes clearer. In principle, animals and specified product will only be able to be moved out of the Control Area into the free area by permit.
Dangerous Contact Premises	A Dangerous Contact Premises is 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) 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	A Dangerous Contact Processing Facility is 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.
Emergency Animal Disease	Emergency Animal Diseases are mostly exotic to Australia (do not occur here), although some Emergency Animal Diseases are emerging or endemic diseases of special significance to Australia's livestock industries, environment or people. Animal Health Australia maintains the Emergency Animal Disease Response Agreement within which four categories of Emergency Animal Diseases are described.
Emergency Animal Disease Response Agreement	The Emergency Animal Disease Response Agreement is an agreement between the Australian Government, state and territory governments and Australia's livestock industries to provide a cost-sharing approach to combat emergency animal diseases.
Infected Premises	An Infected Premises is 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 Disease Control Centre	In an Emergency Animal Disease event, each state or territory is responsible for its own disease control activities under the direction of the state or territory Chief Veterinary Officer. A Local Disease Control Centre will be established and will be responsible for all activities within the declared areas, including disease investigation, collection of specimens, quarantine of properties, valuation, slaughtering and disposal of livestock, and decontamination of properties. A table of movement controls will also be released, and will detail what is or is not allowed. This will be the key reference for all enterprises, including meat processing facilities. The Local Disease Control Centre will play a key role in coordinating the activities undertaken within individual meat processing plants.
Premises of Relevance	A Premises of Relevance is 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.

Resolved Premises	A Resolved Premises is 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	A Restricted Area is a relatively small area around an Infected Premises that is subject to intense surveillance and movement controls. Movement out of a Restricted Area will, in general, be prohibited, while movement into the area would only be by permit. Movement into the Restricted Area of significant numbers of susceptible species is unlikely to be permitted. If a meat processing establishment is in a Restricted Area, it is likely that it will only be used for the slaughter of animals of a species susceptible to the disease for disease control purposes, and not to produce product for human or pet consumption.
Suspect Premises	Suspect Premises is the term used for 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).
Trace Premises	Trace Premises is the term used for 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).
Unknown Status Premises	An Unknown Status Premises is a premises within a Declared Area where the current presence of susceptible animals or risk products, wastes or things is unknown.
Zero Susceptible Species Premises	A Zero Susceptible Species Premises is a premises that does not contain any susceptible animals or risk products, wastes or things.

COURSE INTRODUCTION

Welcome to Emergency Animal Disease Response Training for Australia's Red Meat Processing Industry.

Australia is free from many of the world's most significant animal diseases. This enables animal production to be more efficient and underpins both domestic and global trade. Australia's enviable animal health status is protected by the 'Australian animal health system'. This is a collaborative arrangement involving Commonwealth, state and territory governments and each of Australia's animal industries.

The system is led by policy and regulation but relies on the ongoing vigilance of individual producers and livestock industry enterprises.

The meat processing industry plays a particularly important role in Australia's animal health system, as it brings together animals from farms and sale yards across a wide geographic area. This provides an invaluable opportunity for animal disease surveillance and means that new diseases are likely to be first noticed in meat processing plants. The meat processing industry will also commonly play an important role in the control or eradication of animal diseases. Surveillance will again be important, but particular plants may be required to slaughter affected livestock for disease control or animal welfare reasons. The practice of salvage slaughter at abattoirs will be beneficial to the processing sector because it will allow abattoirs to continue to operate during an Emergency Animal Disease event, providing continued employment for plant personnel.

It is because the meat processing sector is so important to Australia's animal health system that those who work within it should be familiar with the policy and regulatory framework and way in which industry works with the Commonwealth, state and territory governments to respond to Emergency Animal Disease.

This course has been developed to provide the meat processing industry with the tools and information needed for individual abattoirs to respond efficiently and effectively to an Emergency Animal Disease. Five key roles have been identified, and checklists for the individuals in these roles have been provided. These include the:

// Plant Manager

// On-Plant Veterinarian or Senior Meat Inspector

// Stockyards Manager

// Plant Engineer

// Infected Premises Site Supervisor

However, it is important that all personnel understand the core principles of responding to an Emergency Animal Disease event and that those individuals who will be responsible for one of the key roles are familiar with the tasks that will be undertaken by the remaining four key individuals. This will allow tasks to be delegated and will mean that individual plant workers can support each other.

Outline and Assessment

This course includes the following six modules:

// Module 1: Emergency Animal Diseases in Red Meat and Products

// Module 2: AUSVETPLAN - Australia's Veterinary Emergency Plan

// Module 3: Emergency Animal Disease Site Response Plans

// Module 4: Operating Scenarios in an Emergency Animal Disease Event

// Module 5: Roles and Responsibilities in an Emergency Animal Disease Event

// Module 6: Animal Welfare in an Emergency Animal Disease Response

It is recommended that the modules be completed in this order.

Most of the modules include a short quiz. It is recommended that participants complete this quiz and score at least 80% or more before attempting the next module. Participants may attempt all quizzes as many times as needed.

Learning Objectives

The overarching objective of this course is to provide participants with the understanding of their role in the management of an Emergency Animal Disease event.

The course material in this Trainers Manual follows the principles of Australia's Veterinary Emergency Plan (AUSVETPLAN) and adheres as closely as possible to other key Australian programs in biosecurity preparedness and response. In particular, these include Animal Health Australia's Accreditation Program for Australian Veterinarians and Emergency Animal Disease Foundation Course; as well as the Australian Government Department of Agriculture and Water Resources' Emergency Animal Disease Preparedness at Abattoirs.

Each module begins with specific learning objectives. References for further reading are provided throughout the manual.

Delivery

The course can be delivered as a face-to-face training exercise, or through online learning. The course has two key parts: (a) instructive material about the ways a meat processing plant can plan for and respond to an emergency animal disease; and (b) practical 'breakout' sessions where groups of individuals (ideally from different plants) carry out an exercise. If the course is delivered through online learning, then provision should be made to ensure that participants complete the practical exercises.

Breakout session 1 occurs after completion of Module 3 (Site Response Plans). Participants compare their plant's Site Response Plan with the checklist provided. Once completed, participants discuss the comparison focusing on areas in which their Site Response Plans could be improved.

Breakout session 2 occurs at the close of the course. Participants are again assembled in groups,

with each group assigned to an 'operating scenario' (see Module 4). The groups are then asked to discuss a number of questions related Foot-and-Mouth Disease, their operating scenario and the roles and responsibilities checklists for their scenario. Having completed these questions, each group is then asked to present and discuss the five key points that arose from the exercise. Handouts for this breakout session are included in Appendix 1.

BACKGROUND

Australia's Animal Health System

Effective national surveillance and control of animal diseases in Australia requires cooperative partnerships among government agencies, organisations, commercial companies and individuals involved in animal industries.

The Australian Government advises on and coordinates national animal health policy. It is responsible for international animal health matters, including biosecurity, export certification and trade, and disease reporting to the World Organisation for Animal Health (OIE).

Under the Australian constitution, individual state and territory governments are responsible for animal health matters within their boundaries. Such matters include disease surveillance and control, emergency preparedness and response, chemical residues in animal products, livestock identification and traceability, and animal welfare. National decision making and coordination for animal health matters occurs through Animal Health Committee, which includes the Australian Chief Veterinary Officer and chief veterinary officers from all states and territories.

Australia's animal health system encompasses this arrangement and includes the organisations, government agencies, commercial companies, universities and individuals involved in animal health and the livestock production chain. Links are maintained with human health agencies, particularly for zoonoses (diseases that are transmissible between animals and humans), antimicrobial resistance, One Health issues and food safety issues.

Organisations and Agencies

Brief notes about some of the key organizations and agencies are provided below. Further details can be found on their respective websites.

State and Territory Animal Health Services: under the Australian constitution, state and territory governments are responsible for animal health services within their respective borders. The state and territory governments develop and administer legislation relating to pest and disease surveillance, control, investigation and reporting; chemical residues and contaminants; and animal welfare. They deliver these services through government-appointed or government-accredited animal health personnel (for example, district veterinarians, regional veterinary officers and local biosecurity officers) who administer the relevant state and territory legislation and provide extension services to industry and the community.

Australian Government Department of Agriculture and Water Resources: under the Australian constitution, the Australian Government is responsible for quarantine and international animal health matters, including disease reporting, export certification and trade negotiation. It also provides national coordination of Emergency Animal Disease response activities, and gives advice on national policy about animal health and welfare. In some circumstances, the Australian Government provides financial assistance for national animal disease control programs.

Animal Health Australia: Animal Health Australia is a not-for-profit public company that facilitates partnerships between governments, major livestock industries and other stakeholders to protect animal health and the sustainability of Australia's livestock industry. Animal Health Australia's

programs improve animal and human health, biosecurity, food safety and quality, market access, animal welfare and livestock productivity.

CSIRO and the Australian Animal Health Laboratory: the CSIRO Australian Animal Health Laboratory is located in Geelong and regarded as one of the world's most sophisticated laboratories for the safe handling and containment of animal diseases. It provides testing for the diagnosis of Emergency Animal Diseases, carries out research, provides training, maintains the National Animal Serum Bank and is a global reference laboratory for a number of important diseases.

State and Territory Animal Health Laboratories: a range of laboratories provide a diagnostic and investigation service for state and territory governments. They also undertake applied research and work closely with field veterinary staff. Some of these laboratories are national or global reference laboratories for important animal diseases.

SAFEMEAT: is the Australian Government and industry partnership body established to ensure that red meat products achieve the highest standards of safety and hygiene from farm to consumer, and to provide strategic direction and policy advice to the red meat industry. Every sector of the red meat production chain in Australia is represented on SAFEMEAT, from cattle and sheep producers, to processors, to meat and livestock exporters, to government representatives.

High-Level Committees

Australia's animal health system is served by a range of government and government-industry committees. Some of these play an important role in the day-to-day administration of animal health. Others are convened primarily to address animal health events or emergencies.

Agriculture Ministers' Forum: the Agriculture Ministers' Forum facilitates collaboration between the Australian, state and territory, and New Zealand governments on issues of national significance. Membership includes ministers with portfolio responsibility for primary industries (including fisheries and forestry). It is chaired by the Australian Government Minister for Agriculture and Water Resources. A communiqué outlining key discussion points is published after each meeting.

Agriculture Senior Officials Committee: the Agriculture Senior Officials Committee focuses on issues of national significance that require joint collaboration and, where appropriate, it progresses issues to the Agriculture Ministers' Forum. Membership includes the heads of the Australian, state and territory, and New Zealand government departments with responsibility for primary industries (including fisheries and forestry). It is chaired by the Australian Government member. The CSIRO and the Bureau of Meteorology are invited to participate in meetings as observers.

National Biosecurity Committee: the National Biosecurity Committee is chaired by the Secretary of the Department of Agriculture and Water Resources and includes senior officials from the state and territory government departments with responsibility for primary industries. The National Biosecurity Committee provides advice to the Agriculture Senior Officials Committee and the Agriculture Ministers' Forum on national biosecurity, and on progress in implementing the Intergovernmental Agreement on Biosecurity. It is also responsible for managing a national, strategic approach to biosecurity threats relating to plant and animal pests and diseases, and pests and diseases of marine animals and aquatics, where such pests and diseases impact on agricultural production, the environment, community well-being and social amenity.

Animal Welfare Task Group: the Animal Welfare Task Group reports to Agriculture Senior Officials Committee on national animal welfare policy issues. The Animal Welfare Task Group identifies key strategic issues for consideration by Agriculture Senior Officials Committee.

Animal Health Committee: the main purpose of the Animal Health Committee is to develop science-based and nationally-consistent policy on animal health issues, and to provide advice to the National Biosecurity Committee. The members of Animal Health Committee include Australian and state and territory chief veterinary officers, as well as representatives from the CSIRO Australian Animal Health Laboratory, the Australian Government Department of Agriculture and Water Resources and the Australian Government Department of the Environment. There are also observers from Animal Health Australia, Wildlife Health Australia and the New Zealand Ministry for Primary Industries.

National Management Group: the National Management Group is responsible for the evaluation and approval of cost-sharing arrangements enacted under the Emergency Animal Disease Response Agreement. In the event of an incident involving a disease covered by this Agreement, the National Management Group will provide policy advice to the Agriculture Ministers' Forum. Membership of the National Management Group includes the Secretary of Department of Agriculture and Water Resources, heads of the departments of agriculture from affected states and territories, and the President (or analogous officer) of each of the industry organizations that are a party to Emergency Animal Disease Response Agreement affected by the particular disease.

Consultative Committee on Emergency Animal Diseases: the Consultative Committee on Emergency Animal Diseases is the coordinating body providing the technical link between industry, the Australian Government and the state and territory governments for decision making during an Emergency Animal Disease event. The Consultative Committee on Emergency Animal Diseases reports to the National Management Group. Membership includes the Australian and state and territory Chief Veterinary Officers, as well as representatives from the Department of Agriculture and Water Resources, the CSIRO Australian Animal Health Laboratory, industry and Animal Health Australia.

Emergency Animal Disease Response Agreement

The Emergency Animal Disease Response Agreement is an agreement between the Australian Government, state and territory governments and Australia's livestock industries. It provides a cost-sharing approach to combat Emergency Animal Diseases. The Agreements sets out commitments by the affected parties to:

- // Participate in an Emergency Animal Disease response
- // Manage the risks of Emergency Animal Diseases through the development and implementation of biosecurity plans
- // Maintain the capability to ensure early detection of, and an effective response to, an Emergency Animal Disease
- // Contribute to funding the eligible costs of responding to an Emergency Animal Disease by which they are affected (cost sharing)
- // Train personnel who take part in an Emergency Animal Disease response

Key Surveillance Activities

Animal health surveillance in Australia is undertaken through collaboration between the Australian Government, the state and territory governments and Australia's livestock industries. Some programs are coordinated by these parties, while others are managed by Animal Health Australia. Animal Health Australia maintains the National Animal Health Information System. This provides a repository for animal health surveillance data and periodic reporting to Animal Health Australia's members. Animal Health Australia also produces the annual Animal Health in Australia Report, with contributions from government and industry.

Some of Australia's key animal health surveillance initiatives that abattoirs are involved in are summarized below.

Establishment Production and Condemnation Statistics database: the numbers and types of animals slaughtered, as well as information on any carcases that are condemned, are recorded in the Establishment Production and Condemnation Statistics database by the On-plant Veterinarians at export abattoirs around Australia.

National Sheep Health Monitoring Project: the National Sheep Health Monitoring Project collects abattoir data for sheep health conditions that reduce farm profit through productivity losses, or through carcase or offal wastage. Accredited meat inspectors have a key role in this program as they record information about diseases and carcass conditions observed during inspection.

South Australian Enhanced Abattoir Surveillance Program: The South Australian Enhanced Abattoir Surveillance Program is funded by the South Australian Sheep Industry Fund with some national assistance provided by Animal Health Australia. The program provides feedback to South Australian producers about carcass conditions and diseases detected at slaughter. Data is collected for the program by accredited meat inspectors at participating slaughtering establishments. Direct consignments of more than 100 animals (per source), and market consignments of more than 50 animals (per source), are monitored. The data recorded provide an estimate of the prevalence of carcase conditions and diseases in 5% increments (staring at 5%) within a line or consignment.

Transmissible Spongiform Encephalopathy Freedom Assurance Program: the Transmissible Spongiform Encephalopathy Freedom Assurance Program delivers nationally-integrated risk minimization measures to help keep Australian animals and their products free from the group of disease called Transmissible Spongiform Encephalopathies (i.e. bovine spongiform encephalopathy, or BSE, and scrapie). Abattoir personnel collect samples for the Transmissible Spongiform Encephalopathy Freedom Assurance Program.

State and Territory Legislation

State and territory governments are responsible for animal health services within their respective borders.

The state and territory governments develop and administer legislation relating to pest and disease surveillance, control, investigation and reporting; chemical residues and contaminants; and animal welfare. They deliver these services through government-appointed or government-accredited animal health personnel (for example, district veterinarians, regional veterinary officers and local

biosecurity officers) who administer the relevant state and territory legislation and provide extension services to industry and the community.

Although this legislation varies amongst states and territories, the instruments are broadly termed 'Stock Diseases Acts' (or a similar title) and have provisions for the following:

- The appointment of inspectors under the Act
- The powers of inspectors
- The diseases that are notifiable in that state or territory
- Regulations for intra- and inter-state livestock movement
- Quarantine of diseased livestock and farms

You should be familiar with the relevant state or territory Stock Diseases Act for the States in which you will be delivering training. If you do not have a copy, then please go the websites for the agencies listed below:

New South Wales – Stock Diseases Act 1923 No 34

Victoria – Livestock Disease Control Act 1994

Queensland – Biosecurity Act 2014

South Australia – Livestock Act 1997

Western Australia – Biosecurity and Agriculture Management Act 2007

Northern Territory – Livestock Act 2016

Tasmania – Animal Health Act 1995

Australian Government Legislation

The Australian Government is responsible for quarantine and international animal health matters, including disease reporting, export certification and trade negotiation. It also provides national coordination of Emergency Animal Disease response activities, and gives advice on national policy about animal health and welfare. In some circumstances, the Australian Government provides financial assistance for national animal disease control programs.

Australian Government legislation with special relevance to animal health includes:

- Quarantine Act 1908 and Biosecurity Act 2015
- Export Control Act 1982
- Australian Meat and Live-stock Industry Act 1997

Quarantine Act 1908 and Biosecurity Act 2015: in June 2016 the Biosecurity Act 2015 replaced the Quarantine Act 1908. As with the Quarantine Act, the Biosecurity Act is co-administered by the Australian Government Ministers responsible for Agriculture and Water Resources, and for Health.

The Biosecurity Act sets up the requirements and regulatory powers that determine how the Australian Government manages the biosecurity risks associated with goods, people and conveyances entering Australia. It is based on the principle of achieving the best biosecurity outcome while minimizing the impact of regulation on domestic and international trade.

Export Control Act 1982: this Act sets the rules and standards that are applied to all agricultural exporters, including exports of meat and meat products. It gives authorized officers the legal power to perform duties that ensure every consignment of Australian produce satisfies the requirements of the country it is going to. Authorized officers must apply these rules consistently when performing their duties to ensure the fair and equitable treatment of all exporters. This helps to guarantee that decisions made under export regulation can withstand external scrutiny. Export regulation is provided under the Export Control Act and subordinate Orders and Regulations.

Australian Meat and Live-Stock Industry Act 1997: this Act provides for the licensing of exporters of meat and live animals, a function administered by Meat and Livestock Australia (MLA).

Regulation of Animal Welfare in Australia

Animal Welfare Legislation: Australia's Commonwealth, state and territory governments each have animal welfare responsibilities, which vary by jurisdiction.

Legislative responsibility for animal welfare in Australia is primarily the responsibility of state and territory governments in partnership with the Royal Society for the Prevention of Cruelty to Animals (RSPCA). The Australian Government has specific powers in relation to external trade and treaties that encompass some animal welfare issues.

The requirements for animal welfare are described in various legislation and laws, including state and territory legislation, Commonwealth legislation, the Australian Animal Welfare Standards and Guidelines, and industry Quality Assurance programs.

Within Australian abattoirs, state and territory legislation, the Australian Animal Welfare Standards and Guidelines, the Export Control Act and the Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS 4696:2007) describe the key compulsory animal welfare requirements.

Each state and territory government has its own acts and regulations and abattoirs must comply with their relevant state or territory legislation:

- Australian Capital Territory – Animal Welfare Act 1992
- New South Wales – Animals Act 1997, Exhibited Animals Protection Act 1986, Animal Research Act 1985
- Victoria – Prevention Cruelty to Animals Act 1986
- Queensland – Animal Care and Production Act 2001
- South Australia – Prevention of Cruelty to Animals Act 1985
- Western Australia – Animal Welfare Act 2002

- Northern Territory – Animal Welfare Act 2001
- Tasmania – Animal Welfare Act 1993

The Australian Standard for the Hygienic Production and Transportation of Meat and Meat Products for Human Consumption (AS 4696:2007) includes animal welfare standards that must also be met. The Standard refers to the Australian Code of Practice for the Welfare of Animals No. 10: Livestock (including poultry) at Slaughtering Establishments (Abattoirs, Abattoirs and Knackeries).

Under the Export Control Act, all registered export abattoirs must include animal welfare in their Approved Arrangements.

Animal Welfare Standards and Guidelines: developing nationally consistent animal welfare arrangements for various industry sectors is a welfare priority that has been identified by all levels of government, industry and welfare organisations. Enhanced national harmonization of regulation and sustainable improvements in animal welfare based on science, national and international benchmarks and changing community standards are areas of priority effort.

In 2005, it was proposed that existing 'Model Codes of Practice' for animal welfare be revised into a new format, to incorporate both national welfare standards and industry recommended guidelines for each species or enterprise. The new Australian Animal Welfare Standards and Guidelines provide a basis for achieving livestock welfare outcomes to meet community and international expectations and reflect Australia's position as a leader in modern, sustainable and scientifically based welfare practice. Although the Model Codes of Practice still underpin some current state and territory animal welfare legislation for the prevention of cruelty to animals, the various Acts will gradually be updated to reflect the new Australian Animal Welfare Standards and Guidelines.

Within the Australian Animal Welfare Standards and Guidelines, the Animal Welfare Standards use the word 'must'. The standards will provide the basis for developing and implementing consistent legislation and enforcement across Australia. When setting standards, industry and government have used decision-making principles to ensure the standards are desirable for livestock welfare, feasible for industry and government to implement, important for the livestock-welfare regulatory framework and achieve the intended outcome for livestock welfare. Once legislated, non-compliance with one or more the standards will constitute an offence under law.

The Animal Welfare Guidelines are the recommended practices to achieve desirable livestock welfare outcomes. Guidelines use the word 'should' and are designed to complement the standards. Non-compliance with one or more guidelines will not constitute an offence under law.

The Australian Animal Welfare Standards and Guidelines for the Land Transport of Livestock have been endorsed by the Primary Industries Ministerial Committee for Legislation and legislated by all state and territory governments except the Australian Capital Territory and Western Australia. The Australian Animal Welfare Standards and Guidelines for the Land Transport of Livestock include standards and guidelines of direct relevance to abattoirs as the receiver of transported livestock.

The Australian Animal Welfare Standards and Guidelines for Cattle and Sheep have been agreed by State and Territory governments and are being regulated into law by most State and Territory governments.

Australian Industry Standards and Guidelines for Goats have been developed. Although these industry standards and guidelines are voluntary, they are intended to eventually replace the Model Code of Practice for the Welfare of Animals: Goats. The Industry Standards and Guidelines for Goats are also intended to be used as the basis for developing consistent goat welfare management approaches across Australia. The standards are based on scientific knowledge, recommended industry practice and community expectations.

Australian Livestock Processing Industry Animal Welfare Certification System: The Australian Livestock Processing Industry Animal Welfare Certification System (AAWCS) is an audited certification program developed to demonstrate compliance with the Industry Animal Welfare Standards for Livestock Processing Establishments Preparing Meat for Human Consumption. AUS-MEAT administers and manages the certification program on behalf of Australian Meat Industry Language and Standards Committee (AMILSC). The AAWCS is voluntary and open to all processing plants in Australia that process cattle and calves, sheep, pigs, goats, deer, buffalo and horses (excluding poultry).

The Industry Animal Welfare Standards were developed by the Australian Meat Industry Council (AMIC) to help Australian processing plants demonstrate high levels of animal welfare management at Australian Livestock processing establishments. The Industry Animal Welfare Standards include Australia's current minimum regulated standards at meat processing plants, and also include international and commercial company requirements. The Industry Animal Welfare Standards cover all activities that impact animal welfare from unloading of livestock to the point of slaughter.

- **Standard 1** (Management Procedures and planning): standard operating procedures for the management of livestock are developed, implemented and include contingency procedures to prevent and mitigate possible risks to animal welfare.
- **Standard 2** (Design and maintenance of facilities and equipment): facilities and equipment are designed and maintained to ensure minimal interference of stress is incurred by livestock.
- **Standard 3** (Staff competency): all personnel responsible for the handling of livestock are competent in their tasks consistent with the requirements of these.
- **Standard 4** (Management and humane destruction of weak, ill or injured livestock): weak, ill or injured livestock are identified and promptly treated in a humane manner.
- **Standard 5** (Management of livestock to minimise stress and injuries): livestock are routinely managed to minimise stress and injuries.
- **Standard 6** (Humane slaughter procedures): restraint, stunning and slaughter procedures are carried out in a humane and effective manner.

For plants participating in the Australian Livestock Processing Industry Animal Welfare Certification System (AAWCS), the six Industry Animal Welfare Standards must be incorporated into the establishment's Quality Management Systems or Approved Arrangements.

MODULE 1: EMERGENCY ANIMAL DISEASES IN RED MEAT AND PRODUCTS

Learning Objectives

After completing this module, participants should:

- Understand what constitutes an Emergency Animal Disease
- Be broadly familiar with the Emergency Animal Diseases that affect cattle, sheep or goats and that can be transmitted through meat or meat products
- Understand that all Emergency Animal Diseases don't have the same impact
- Be able to list the four Categories of Emergency Animal Diseases in Australia and give examples of each

Course Material

Definition of an Emergency Animal Disease

Emergency Animal Diseases are mostly exotic to Australia (do not occur here), although some Emergency Animal Diseases are emerging or endemic diseases of special significance to Australia's livestock industries, environment or people. Animal Health Australia maintains the Emergency Animal Disease Response Agreement, within which four categories of Emergency Animal Diseases are described.

Category 1: These are Emergency Animal Diseases that mainly seriously affect human health and/or the environment (depletion of native fauna), but may only have minimal direct consequences to the livestock industries. If a Category 1 disease occurs in Australia, the cost of eradicating or controlling it will be funded 100% from Government.

Category 2: These are Emergency Animal Diseases that have the potential to cause major national socio-economic consequences through very serious international trade losses, national market disruptions and very severe production losses in the livestock industries that are involved. This category includes diseases that may have slightly lower national socio-economic consequences, but also have significant public health and/or environmental consequences. If a Category 2 disease occurs in Australia, the cost of eradicating or controlling it will be funded 80% from Government and 20% from the affected industry(s).

Category 3: These are Emergency Animal Diseases that have the potential to cause significant (but generally moderate) national socio-economic consequences through international trade losses, market disruptions involving two or more states and severe production losses to affected industries, but have minimal or no effect on human health or the environment. If a Category 3 disease occurs in Australia, the cost of eradicating or controlling it will be funded 50% from Government and 50% from the affected industry(s).

Category 4: These are Emergency Animal Diseases that could be classified as being mainly production loss diseases. While there may be international trade losses and local market disruptions, these Diseases would not be of a magnitude that would be expected to significantly affect the national economy. The main beneficiaries of a successful emergency response to an outbreak of such a

disease would be the affected livestock industry(s). If a Category 4 disease occurs in Australia, the cost of eradicating or controlling it will be funded 20% from Government and 80% from the affected industry(s).

Diseases of Concern

Of the 29 Emergency Animal Diseases that affect cattle, sheep or goats and are currently identified as serious enough to require a disease strategy manual, the following ten diseases affect one or more of the red meat species (cattle, sheep or goats) and can be transmitted in meat products.

You will find a fact sheet about each of these diseases in Appendix 3 of this Training Manual.

Category 1 Diseases

(i) Rabies

Category 2 Diseases

(i) Bovine spongiform encephalopathy (BSE)

(ii) Foot-and-mouth disease

(iii) Peste des petits ruminants

(iv) Rift Valley fever

(v) Sheep pox and goat pox

(vi) Vesicular stomatitis

Category 3 Diseases

(i) Anthrax

(ii) Lumpy skin disease

(iii) Scrapie

Assessment Exercises

1. Define an Emergency Animal Disease by selecting the correct answer from the choices provided. For this question there can be more than one correct answer.

☐ Emergency Animal Diseases are mostly exotic to Australia

☐ Some Emergency Animal Diseases are emerging or endemic diseases of special significance to Australia's livestock industries

☐ None of the Emergency Animal Diseases of importance to the livestock industries are endemic to Australia

☐ All of the above

☐ None of the above

2. How many Emergency Animal Disease Categories are there in Australia?

☐ One

☐ Two

☐ Three

☐ Four

☐ Five

3. Match the Emergency Animal Disease to its correct disease Category

a) Anthrax

☐ One

☐ Two

☐ Three

☐ Four

b) Foot and Mouth Disease

☐ One

☐ Two

☐ Three

☐ Four

c) Bovine Spongiform Encephalopathy

☐ One

☐ Two

☐ Three

☐ Four

MODULE 2: AUSVETPLAN - AUSTRALIA'S VETERINARY EMERGENCY PLAN

Learning Objectives

Effective responses to an Emergency Animal Disease requires planning at national, state/territory and district levels, as well as the involvement of animal health authorities, livestock industries (including abattoirs) and emergency management organisations.

Animal Health Australia works in consultation with its members to prepare and review the AUSVETPLAN (Australian Veterinary Emergency Plan) manuals and supporting documents that guide governments and industry in the management of an Emergency Animal Disease event. Although the term 'Australian Veterinary Emergency Plan' includes the word 'Veterinary', the AUSVETPLAN manuals and supporting documents are designed to be used by both veterinary and non-veterinary industry and government personnel. In addition, AUSVETPLAN includes an Enterprise Manual for meat processing facilities.

After completing this module participants should:

- Have a broad understanding of the components of AUSVETPLAN
- Know who manages AUSVETPLAN
- Understand why AUSVETPLAN is important to the red meat processing sector
- Know where to find AUSVETPLAN
- Know how to use the relevant AUSVETPLAN manuals if required

Course Material

AUSVETPLAN Overview

AUSVETPLAN includes a comprehensive set of manuals that describe the various roles, responsibilities and policy guidelines for organisations involved in an Emergency Animal Disease response. The AUSVETPLAN manuals are also used for training to ensure that the plans will be effective and that personnel are trained in advance of an Emergency Animal Disease event.

AUSVETPLAN includes the seven groups of documents.

(i) Disease strategy manuals

(ii) Response policy briefs

(iii) Operational manuals

(iv) Management manuals

(v) Guidance documents

(vi) Resource documents

(vii) Enterprise manuals

In the sections below we will talk about each group of manuals in turn. All the AUSVETPLAN manuals

are available on the Animal Health Australia website.

Disease Strategy Manuals

AUSVETPLAN has a Disease Strategy Manual for each of 29 major Emergency Animal Diseases that might affect cattle, sheep or goats.

Each Disease Strategy Manual is the authoritative reference to the Australian management policy for that particular Emergency Animal Disease. It provides information about the nature of the disease, principles of control and eradication, policy and rationale and recommended quarantine and movement controls.

More recent Disease Strategies also indicate how that particular disease is categorised under the government-industry cost-sharing Emergency Animal Disease Response Agreement.

Response Policy Briefs

Response Policy Briefs cover the Emergency Animal Diseases that are subject to cost sharing between governments and livestock industries, but are not given full Disease Strategy Manuals because they have a lower likelihood of entry and any consequences are likely to be less severe. Each Response Policy Brief provides sufficient information about the nature of the disease, the principles of its control and control policies for authorities to make informed decisions if an Australian outbreak occurs.

Operational Manuals

Operational Manuals describe in detail the recommended operational procedures for different aspects of an Emergency Animal Disease response. There is a separate Operational Manual for each of the following procedures:

- Decontamination
- Destruction of animals
- Disposal procedures
- Livestock welfare and management
- Valuation and compensation
- Wild animal response strategy

Of these, the Decontamination, Destruction of Animals, Disposal Procedures, and Livestock Welfare and Management Operational Manuals are of special relevance to an Emergency Animal Disease response in a meat processing facility and will be discussed below.

Decontamination Operational Manual

The Decontamination Operational Manual (2008) is a detailed and comprehensive publication that provides users with an overview of the properties of common decontamination agents. It also provides information on the approved procedures for personal decontamination and the decontamination of premises, vehicles and machinery, animal effluent, dairy equipment and milk

storage tanks, animal feed, specialised equipment, wool, and water tanks and dams.

The Manual also summarises the properties of common disease agents, and makes recommendations as to appropriate chemicals and decontamination procedures.

There is no need for course participants to commit the detail within the Decontamination Manual to memory. However, it will be important that course participants are familiar with the Manual's structure and content. Participants should also be confident that they could use the Manual as a reference in the event of an Emergency Animal Disease.

Destruction of Animals Operational Manual

The Destruction of Animals Operational Manual describes approved methods for the humane destruction of animals in an Emergency Animal Disease event. The Manual also provides technical detail and diagrammatic guidance on the procedures that should be followed for common livestock species, including cattle, sheep and goats.

Importantly, the Manual includes methods for the destruction of animals that are not acceptable in Australia, whether for welfare, occupational health and safety or other reasons.

Disposal Procedures Operational Manual

The Disposal Procedures Operational Manual addresses the matters to be considered when disposing of waste, including animal carcasses and animal products, for disease control purposes.

The Manual describes a range of methods for disposal, including burial, burning, rendering, composting and anaerobic digestion. Importantly, the Manual also provides a decision-making framework that allows decisions on disposal methods to be assessed using weighted factors such as current legislation, operator safety, community concern, international acceptance, availability of transport, industry standards, local environment, cost-effectiveness, resource availability and speed of resolution. The importance of each factor will vary with each animal health emergency. The approach allows logical, defensible and transparent decisions to be made on disposal of waste from an animal health emergency, using one method or a combination of methods.

The Manual references Nationally-Agreed Standard Operating Procedures have been developed for use by jurisdictions during responses to Emergency Animal Disease events. The following Nationally-Agreed Standard Operating Procedures are relevant to this course:

// Personal decontamination: entry and exit procedures

// Loading and unloading of carcasses and materials for biosecure transport

// Decontamination of large equipment

// Decontamination of groups of people: entry and exit procedures

// Biosecure movement of contaminated carcasses and materials: during road transport.

It is important that course participants are familiar with the existence and content of these Nationally-Agreed Standard Operating Procedures, as well as where to find them.

Livestock Welfare and Management Operational Manual

The Livestock Welfare and Management Operational Manual describes animal welfare in the context of an Emergency Animal Disease response. The Manual includes some now-outdated references to animal welfare policy in Australia, but is otherwise a helpful reference for species-specific considerations about the management of animals.

Of particular reference to this course are the sections on the welfare of bobby calves sent to abattoirs, and the sections that describe the reasoning behind sending animals for emergency slaughter on welfare grounds. The Manual also indicates that, wherever possible, animals will be sent for salvage slaughter at abattoirs rather than being slaughtered on farm. Slaughtering large numbers of animals on farm is likely to have significant animal welfare restraints and be unacceptable to the public.

Management Manuals

AUSVETPLAN includes a Management Manual (in two parts) for the administration of Control Centres during an Emergency Animal Disease event, and a separate Laboratory Preparedness Manual.

Control Centres Management Manual: this provides a management structure and an information flow system for handling an Emergency Animal Disease at national, state/territory and local levels. Part 1 of the manual describes the operations of the National Coordination Centre, the State Disease Control Headquarters and the Local Disease Control Centre and the principles of the chain of responsibility. Part 2 of the manual details the roles and responsibilities of personnel within these Centres.

Laboratory Preparedness Manual: this assists veterinary laboratories to prepare a contingency plan for an Emergency Animal Disease event.

Guidance Documents

AUSVETPLAN includes Guidance Documents to help personnel involved in an Emergency Animal Disease event understand relevant policies and procedures. The Guidance Documents are not endorsed AUSVETPLAN manuals, but support the manuals and provide additional information to stakeholders.

The following five Guidance Documents are available:

(i) Use of avian influenza (AI) vaccine in the event of an AI outbreak in Australia

(ii) Declared areas and the allocation of premises definitions in an Emergency Animal Disease response

(iii) Management of pandemic (H1N1) 2009 in pig enterprises

(iv) Risk-based assessment for disease control options for rare and valuable animals

(v) Tracing and surveillance

The Guidance Document on Declared Areas and the Allocation of Premises Definitions in an Emergency Animal Disease response is of key relevance to this course. This is because the way in

which a meat processing facility will operate in the event of an Emergency Animal Disease will be dictated largely by:

(i) Whether it lies within a Declared Area and, if so, whether that is a Control Area or a Restricted Area

(ii) How the premises itself has been classified

These considerations are explored in the following three sections.

It is important that course participants are aware of the Guidance Document on Declared Areas and the Allocation of Premises Definitions in an Emergency Animal Disease response. They should also know where to find the Guidance Document so they look up the definition of the classification applied to their plant.

Declared Areas and the Classification of Premises

AUSVETPLAN terminology is that a Declared Area is a clearly-defined tract of land that is subject to disease control restrictions under Emergency Animal Disease legislation. The two key types of Declared Area are Restricted Areas and Control Areas. The designation of Declared Areas will be set by the Local Disease Control Centre. Definitions for each of these terms are given below.

Local Disease Control Centre: in the event of an Emergency Animal Disease event, each state or territory is responsible for its own disease control activities under the direction of the state or territory Chief Veterinary Officer. A Local Disease Control Centre will be established and will be responsible for all activities within the declared areas, including disease investigation, collection of specimens, quarantine of properties, valuation, slaughtering and disposal of livestock, and decontamination of properties. A table of movement controls will also be released, and will detail what is or is not allowed. This will be the key reference for all enterprises, including meat processing facilities. The Local Disease Control Centre will play a key role in coordinating the activities undertaken within individual meat processing plants.

Restricted Area: a Restricted Area is a relatively small area around an Infected Premises that is subject to intense surveillance and movement controls. Movement out of a Restricted Area will, in general, be prohibited, while movement into the area would only be by permit. Movement into the Restricted Area of significant numbers of susceptible species is unlikely to be permitted. If a meat processing establishment is in a Restricted Area, it is likely that it will only be used for the slaughter of animals of a species susceptible to the disease for disease control purposes, and not to produce product for human or pet consumption.

Control areas: a Control Area provides a buffer between the Restricted Area and areas free from disease. Multiple Restricted Areas may exist within one Control Area. Restrictions in the Control Area will reduce the chance of the disease spreading further. The Control should reduce in size as the extent of the outbreak becomes clearer. In principle, animals and specified product will only be able to be moved out of the Control Area into the free area by permit.

Classification of Premises in Declared Areas

Within a Declared Area (a Control Area or a Restricted Area, as discussed in the previous section), an

individual premises – such as a meat processing facility – will be classified according to the terms and definitions given below. Transitions from one classification to another are explained in the following section.

Approved Processing Facility: a 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.

Dangerous Contact Premises: 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) 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: 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.

Infected Premises: 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.

Premises of Relevance: 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.

Resolved Premises: 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.

Suspect Premises: 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).

Trace Premises: 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).

Unknown Status Premises: a premises within a declared area where the current presence of susceptible animals or risk products, wastes or things is unknown.

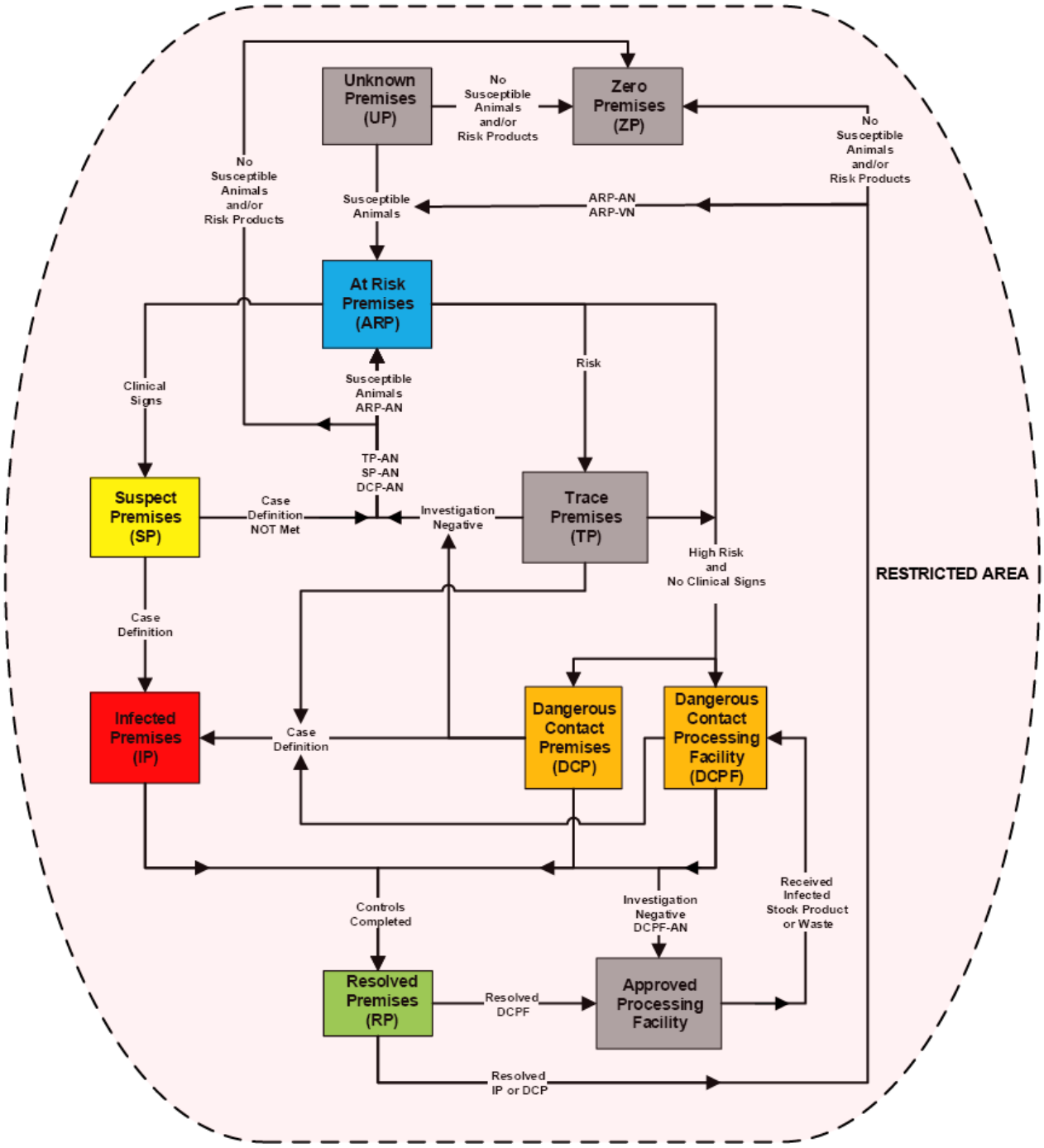
Zero Susceptible Species Premises: a premises that does not contain any susceptible animals or risk products, wastes or things.

Transition of Classifications for Premises in Declared Areas

Many of the classifications for premises in a Declared Area are not permanent. Transitions from one classification to another will be at the discretion of the Chief Veterinary Officer of the affected state or territory, and administered through the Local Disease Control Centre, and will follow the rules outlined in Figure 1 and Figure 2.

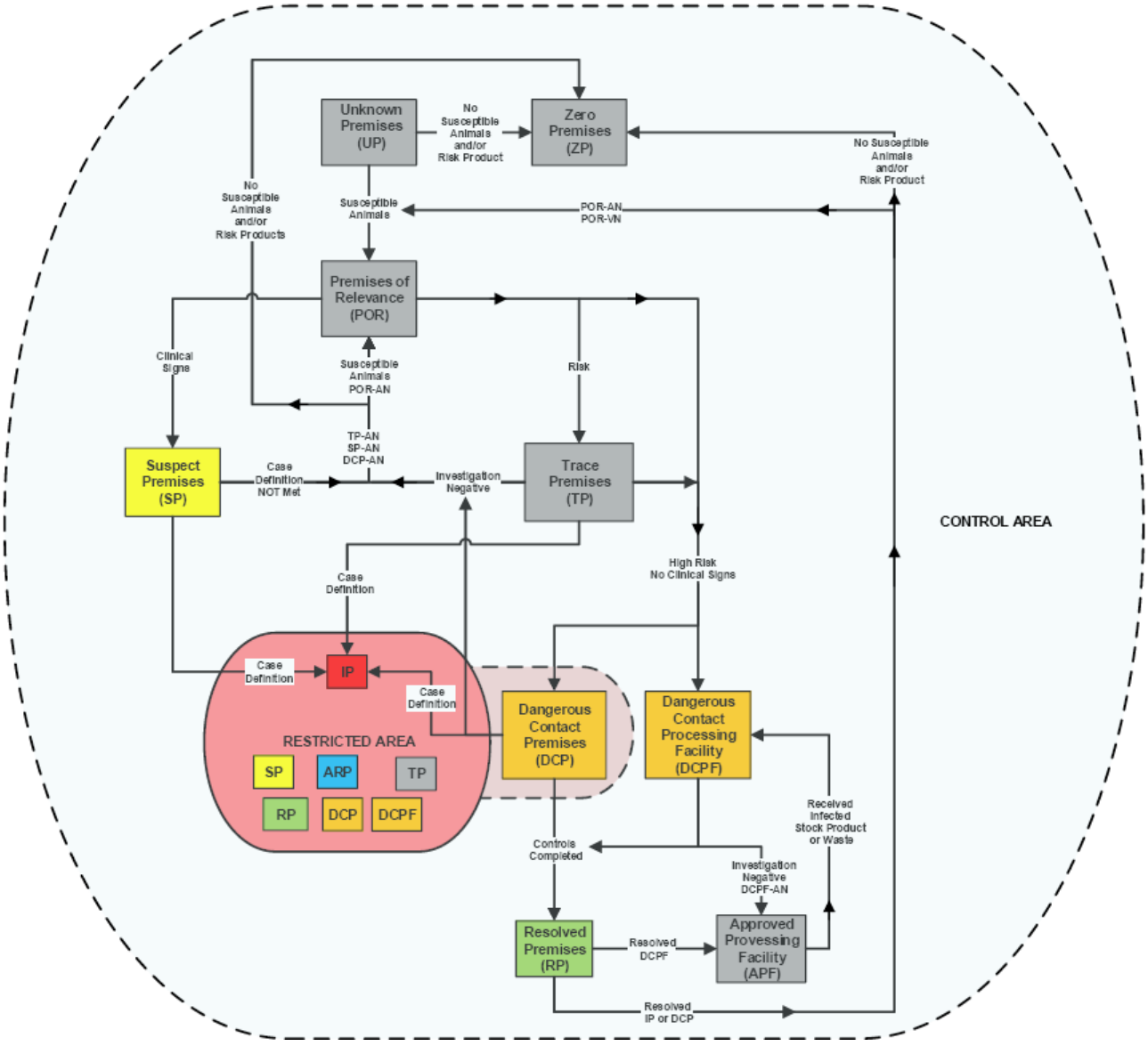
Although it will not be necessary to learn the detail of these transition plans, course participants should be able to correlate the premises classifications with the definitions in the previous section and, by doing so, follow the logic of each diagram.

Figure 1: Transitions for premises in a Restricted Area



Source: AUSVETPLAN Guidance Document on Declared Areas and the Allocation of Premises Definitions in an Emergency Animal Disease Response

Figure 2: Transitions for premises in a Control Area



Source: AUSVETPLAN Guidance Document on Declared Areas and the Allocation of Premises Definitions in an Emergency Animal Disease Response

Resource Documents

Resource Documents provide information of a general technical nature to stakeholders both during an Emergency Animal Disease event, as well as during 'peacetime'. These resource documents are not endorsed AUSVETPLAN manuals, but support the manuals and provide additional information to stakeholders.

None of the currently available Resource Documents are directly relevant to red meat processing establishments.

Enterprise Manuals

Enterprise Manuals provide information and guidance to two key target groups:

(i) Government personnel involved in Emergency Animal Disease preparedness who may be unfamiliar with the operations of the industry of which the enterprise is part

(ii) Industry personnel and veterinarians who need information on strategies that may be adopted to improve preparedness (in the form of contingency plans) and guidance on the operational procedures that may be applied in Emergency Animal Disease event

An Enterprise Manual is available for each of the following industries. The Enterprise Manual Meat Processing (2007) is of key importance to this course.

- // Artificial breeding centres
- // Feedlots
- // Meat processing
- // Pig industry
- // Poultry industry
- // Saleyards and transport
- // Wool industry
- // Zoos

Enterprise Manual Meat Processing

The Enterprise Manual Meat Processing includes some preliminary discussion about the structure of the meat processing industry, the relevant legislation covering animal health and welfare and the diseases of greatest concern to meat processing plants. There is then more specific guidance on:

- // Risk reduction and contingency planning
- // Response plans in a declared area
- // Response plans for an infected or Dangerous Contact Premises

A series of technical appendices provides a list of the diseases covered under the Emergency Animal Disease Response Agreement, and the codes of practice that might be relevant in an Emergency Animal Disease event. The appendix also provides details as to the effective rendering of material for decontamination and some examples of trace-back systems. Of particular importance to this course, however, is the appendix that details procedures for key roles for meat processing staff in the event of an Emergency Animal Disease.

Assessment Exercises

Select the correct answer from the choices provided. For these questions there can be only one correct answer.

4. None of the Australian Veterinary Emergency Plan manuals are relevant to abattoir personnel (True or False)

   ☐ True

   ☐ False

5. A Restricted Area

   ☐ Is a defined tract of land that is subject to disease control restrictions under Emergency Animal Disease legislation

   ☐ Is a type of Declared Area defined under Emergency Animal Disease legislation

   ☐ Is a relatively small area around an Infected Premises that is subject to intense surveillance and movement controls

   ☐ All of the above

   ☐ None of the above

6. A Control Area

   ☐ Is a defined tract of land that is subject to disease control restrictions under Emergency Animal Disease legislation

   ☐ Is a type of Declared Area under Emergency Animal Disease legislation

   ☐ Provides a buffer between the Restricted Area and areas free from the disease

   ☐ All of the above

   ☐ None of the above

7. An Approved Processing Facility is

   ☐ A facility that maintains increased biosecurity standards and could have animals or animal products introduced from lower risk premises under a permit for processing to an approved standard

   ☐ 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 products, wastes or things, and that requires action to address the risk

   ☐ A 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

   ☐ A processing facility that does not contain any susceptible animals or risk products, wastes or things

8. A Dangerous Contract Processing Facility is

   ☐ A facility that maintains increased biosecurity standards and could have animals or animal

products introduced from lower risk premises under a permit for processing to an approved standard

☐ 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 products, wastes or things, and that requires action to address the risk

☐ A 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

☐ A processing facility that does not contain any susceptible animals or risk products, wastes or things

MODULE 3 EMERGENCY ANIMAL DISEASE SITE RESPONSE PLAN

Learning Objectives

After completing this module, participants should:

- Know what is meant by an Emergency Animal Disease Site Response Plan
- Understand the key components of an abattoir Emergency Animal Disease Site Response Plan
- Understand the importance of developing the Emergency Animal Disease Site Response Plan as a collaborative exercise involving key personnel within the plant
- Understand the importance of testing the Emergency Animal Disease Site Response Plan through desktop and on-site simulation exercises
- Be able to undertake a desktop audit of the Emergency Animal Disease Site Response Plan using the checklist provided in this module

Course Material

Introduction

The Emergency Animal Disease Site Response Plan is a plan that sets out the procedures for how an abattoir will respond in an Emergency Animal Disease event.

Every abattoir should have an Emergency Animal Disease Site Response Plan. This plan should be developed as a collaborative exercise involving the Plant Manager, the On-Plant Veterinarian or Senior Meat Inspector, the Stockyards Manager and (if not one of the above) the person likely to be assigned the role of Infected Premises Site Supervisor. In this way, key personnel will have a clear understanding of their roles and responsibilities during an Emergency Animal Disease event.

The plan should be tested using desktop or on-site simulation exercises, to ensure that it is complete and that the staff understand their roles and can carry them out competently. The plan should also be reviewed periodically as the site itself changes or changes occur within the regulatory environment.

Components of a Site Response Plan

With the above in mind, the Emergency Animal Disease Site Response Plan should include the following elements.

1. A current copy of the following Australian Veterinary Emergency Plan documents
   - Enterprise Manual Meat Processing (current version 2007)
   - Operational Manual: Decontamination
   - Operational Manual: Disposal procedures
   - Guidance Document: Declared Areas and the Allocation of Premises Definitions in an Emergency Animal Disease Response

2. An up-to-date list of relevant state/territory notifiable diseases

3. A map of the plant including:

- ☐ Perimeter fence showing gates
- ☐ A drainage plan
- ☐ Numbered yards
- ☐ Numbered chillers and freezers
- ☐ Adjoining premises with susceptible stock
- ☐ Suitable areas for burial pits
- ☐ Ponds and waste water disposal

4. A list of contact numbers, including:

- ☐ Local state or territory government veterinarian
- ☐ Abattoir management including Plant Manager, On-Plant Veterinarian or Senior Meat Safety Inspector, Stockyards Manager and Plant Engineer
- ☐ Area Technical Manager (Export Plants)
- ☐ Local Police
- ☐ Emergency Animal Disease HOTLINE 1800-675-888

5. Check lists (actionable job cards) for the following personnel at a minimum under the three broad emergency animal disease scenarios (Plant is not located within in a Declared Area (that is, a Restricted Area or a Control Area; 2) Plant is located within Declared Area, but is not itself affected; 3) Plant is located within a Declared Area, and is either an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises)

- ☐ Plant Manager
- ☐ On-Plant Veterinarian or Senior Meat Safety Inspector
- ☐ Stockyards Manager
- ☐ Plant Engineer

6. Action lists for other appropriate personnel

- ☐ Australian Government Authorised Officers
- ☐ Other _____

7. A flow chart that shows the steps to be taken if an Emergency Animal Disease is suspected at the plant

- ☐ Flow chart

8. The location of up-to-date lists of personnel who do and don't have access to susceptible livestock (cattle, sheep or goats) outside the plant

- ☐ Personnel lists

9. The location and amount of soda ash (sodium carbonate) held on-site

- ☐ Location _____
- ☐ Amount _____

10. Note if the company stores hold any of the following disinfectants in sufficient amount for use in decontamination

- ☐ Soaps and detergents
- ☐ Oxidising agents
    i. Calcium hypochlorite
    ii. Virkon
- ☐ Alkalis
    i. Sodium hydroxide (caustic soda) (NaOH)
    ii. Sodium carbonate: anhydrous (Na_2CO_3), washing soda (Na_2CO_3 $10H_2O$)
- ☐ Acids
    i. Hydochloric acid
    ii. Citric acid
- ☐ Aldehydes
    i. Glutaraldehyde
    ii. Formalin
    iii. Formaldehyde gas
- ☐ Insecticides
    i. Organophosphates
    ii. Synthetic pyrethroids
    iii. Ivermectin
    iv. Aluminum phosphide
- ☐ Other chemical agents
    i. Quicklime / chloride of lime

ii. Sodium dishlorisochyanurate

iii. Activate chloramine

iv. Hydrogen peroxide

v. Peractic acid

vi. Biquanides

vii. Iodophors

viii. Quaternary ammonium compounds

ix. Phenolics

Assessment Exercise

Compare your Emergency Animal Disease Site Response Plan with the checklist provided above and identify any strengths of the existing plan and any weaknesses or gaps.

MODULE 4: OPERATING SCENARIOS IN AN EMERGENCY ANIMAL DISEASE EVENT

Learning Objectives

After completing this module, participants should:

- Understand the three scenarios under which a meat processing plant may operate during an Emergency Animal Disease event
- Understand what should be the focus of plants operating outside the Declared Area(s)
- Understand what will happen in uninfected plants operating inside the Declared Area(s)
- Know what is meant by an Approved Processing Facility
- Understand the four stages of response in a plants operating inside the Declared Area and thought to be infected

Course Material

During an Emergency Animal Disease event, an individual meat processing plant may be placed in one (or more) of the following situations:

1. Plant is not located within in a Declared Area (that is, a Restricted Area or a Control Area)
2. Plant is located within Declared Area, but is not itself affected
3. Plant is located within a Declared Area, and is either an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises

These three situations (termed here, 'scenarios') are illustrated in Figure 3. In this example, an outbreak has occurred in New South Wales. A small Restricted Area has been declared around the town of Glenn Innes and the balance of the Northern Tablelands region has been declared a Control Area.

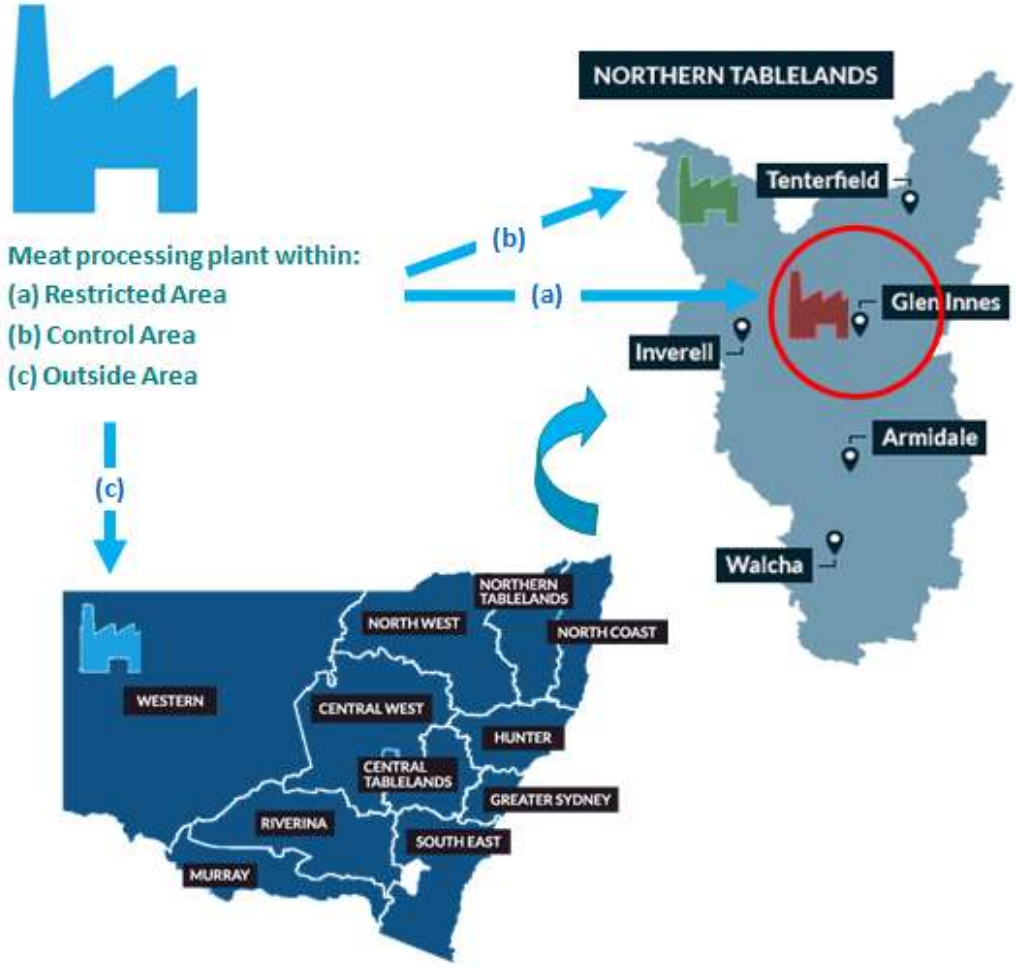
Definitions for Declared Areas and premises classifications, as well as rules governing the transitions between premises classifications, were given in Module 2. Declared Areas and premises classifications will be designated by the Chief Veterinary Officer of the affected state or territory, and administered by the Local Disease Control Centre. The policy underpinning these decisions will be drawn from the relevant the AUSVETPLAN Disease Strategy Manual, as discussed in Module 2. Decisions made about an extremely infectious and high-consequence disease, such as foot-and-mouth disease, will be substantially more severe than would be the case for diseases that are slower-moving and have a lesser impact.

In the balance of this module we explain some of the practical considerations for a meat processing facility operating in each of the three scenarios above. In Module 5 we explore the roles and responsibilities of individuals for each scenario, and how these are integral to each facility's Site Response Plan.

The Enterprise Manual Meat Processing provides further information for meat processing facilities

operating in each of the three scenarios above.

Figure 3: Operating scenarios in an Emergency Animal Disease event



Scenario 1: Operating when Not in a Declared Area

In the event of an Emergency Animal Disease, the key considerations for a facility that is not within a Declared Area (that is, a Restricted Area or a Control Area) are risk reduction and contingency planning. Individual plants may also experience restrictions on the supply of livestock or the closure of some domestic or export markets.

The Enterprise Manual Meat Processing provides guidance as to how each of the following can be used to ensure that a meat processing facility minimises the risk that it will be directly affected, and the impacts (or consequences) if it does become directly affected:

- // Design of the enterprise
- // Procedures for early detection of disease
- // Training of staff
- // Good work procedures and staff hygiene

- Internal quarantine
- Veterinary services
- Disposal methods
- Records
- Water supply
- Wild and feral animal control

Scenario 2: Operating in a Declared Area

This section describes the scenario where a meat processing facility is located within a Declared Area (that is, a Restricted Area or a Control Area), but is not itself affected.

Whether a meat processing facility is permitted to operate within a Control Area or a Restricted Area, and the conditions under which this can occur, will be determined by the Chief Veterinary Officer of the affected state or territory and administered through the Local Disease Control Centre. Whether a meat processing facility is permitted to operate will depend largely on the disease and the stage and characteristics of the response. The abattoir will receive direction from the Local Disease Control Centre on what it is permitted to do.

Where permitted, slaughter may be undertaken for a range of reasons, including:

- Reducing the population of susceptible animals to help control a local outbreak
- Processing large numbers of animals for welfare reasons in a livestock standstill
- Processing large numbers of animals as a part of a slaughter-out strategy (for example, the slaughter of high-risk animals)
- Continuance of economic activity
- Provision of meat for domestic or export markets

A number of considerations will help a Chief Veterinary Officer decide whether a plant's ability to contain the disease is sufficient to permit or direct it to slaughter livestock when it is located within a Declared Area. These considerations may include the presence or adequacy of:

- Security measures for animals, people, products and things
- Rendering facilities
- Laundry facilities
- Effluent control facilities
- Stock-truck washing facilities
- Paved lairages
- Supplies of hot and cold water and disinfectant

Routine operations may also be affected by:

- Self-imposed quarantine
- Ability to satisfy disease restrictions for export requirements
- Sourcing stock for slaughter, given that saleyards may not be operating and buyers may be discouraged from visiting farms
- Ability of staff who have contact with other susceptible animals to come to work

The Enterprise Manual Meat Processing provides essential information about on the ways in which meat processing facilities can configure their operations to minimise the risks associated when operating within a Declared Area. This includes controls at the facility border to separate incoming livestock from personnel, stores, equipment and outgoing product.

Although the detail of the procedures set in place in response to an Emergency Animal Disease will be dictated to a large extent by the nature of the disease, and its underpinning Disease Strategy Manual, the Enterprise Manual Meat Processing gives some overarching principles in respect of the management of:

- Live animals
- Animal products
- Treatment of product
- Animal by-products
- Effluent
- Vehicles
- Equipment and materials
- Personnel
- Visitors and service personnel
- Vermin and feral animals
- Buildings and structures

Scenario 3: Operating when an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises

Principles

This, and the following five sections, concern the scenario where a meat processing facility lies within a Declared Area (that is, a Restricted Area or a Control Area), and is itself either an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises.

A facility may be classified as an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises because it has received infected or high-risk stock or has otherwise been exposed

to the disease in question or been placed at risk. Classification is made by the Chief Veterinary Officer of the state or territory concerned and is administered by the Local Disease Control Centre.

The ways in which a facility will adjust to accommodate its status will also depend on the disease, such that the measures put in place for extremely infectious and high-consequence diseases, like foot-and-mouth disease, will be substantially more severe than would be the case for diseases that are slower-moving and have a lesser impact. The policy underpinning this process is given in the relevant AUSVETPLAN Disease Strategy Manual.

The abattoir will receive direction from the Local Disease Control Centre on what it can and can't do.

Eradication of the disease

Not all Emergency Animal Diseases can be eradicated – and nor is eradication in all cases the primary objective of a control program. That said, where eradication is to be pursued, then the objective of measures taken within a meat processing facility that is also an Infected Premises will be to:

- Stop production of the disease agent
- Prevent spread
- Decontaminate to destroy the agent

Some general notes about the destruction of animals and the salvage of products are given below.

Please remember that these are general principles only, and that:

- The measures to be followed in the event of an Emergency Animal Disease will be given in the relevant Disease Strategy Manual
- Operational detail will be given in the Destruction Manual and the Disposal Procedures Manual (Module 2)

Destruction of animals

For most serious Emergency Animal Diseases, infected or dangerous contact animals will be destroyed and disposed of by burning or burying. Rendering may be an option in certain circumstances, and the resulting product may be permitted for disposal as fertiliser. If the location of the enterprise makes on-site disposal inappropriate, carcases may be able to be taken to an alternative site, provided that the site, and the route taken to it, do not pose an unacceptable risk to susceptible animals and the vehicles and personnel involved are decontaminated. Personnel involved in these activities must not come into contact with any animals susceptible to the disease in question. The Local Disease Control Centre will directly supervise and advise on these actions. Records must be kept for valuation and compensation.

Salvage of animals or product

The decision to allow the salvage of product from particular animals in an Emergency Animal Disease event will in general depend on whether:

- The disease can be transmitted through the product concerned;

- The animals were sourced from an Infected Premises, Suspect Premises or Dangerous Contact Premises
- Processing is likely to destroy the disease agent

Decontamination

In an Emergency Animal Disease event, the decontamination program will be informed by the site's Emergency Animal Disease response plan (Module 3), and will comply with the AUSVETPLAN Decontamination Manual (Module 2).

Notwithstanding this, the principles of decontamination and the methods applied in an Emergency Animal Disease event will be similar to those that are embedded in routine operations. The key concern will be that the chemicals used are appropriate for the disease agent and comply with the Instrument of Approval and the Material Safety Data Sheet for use in an abattoir (if the establishment is permitted to remain operational).

Although procedures will vary according to the disease involved, they will include:

- A thorough clean-down, with all effluent treated or appropriately handled before it is discharged into the environment
- A decontamination program, ensuring that all organic material is removed
- The treatment or removal of all product
- If necessary, a plan for the use of sentinel animals

Clean (unlikely to be infected) and dirty (potentially or actually infected) areas will need to be established, with controlled perimeters and differing restrictions on personnel movement.

Building on these principles, Chapter 4.4 of the Enterprise Manual Meat Processing gives guidance as to the principles underpinning decontamination of each of the following:

- Livestock
- Products and by-products
- Discharges
- Vehicles
- Equipment and materials
- Personnel
- Buildings and structures

Tracing Livestock

All stock entering a meat processing facility for slaughter should be identifiable to property of origin through National Livestock Identification Scheme numbers, tattoos, ear tags or some form of identification, with documentation as required by state or territory authorities.

During an Emergency Animal Disease event, at-risk lots of animals will be identified. Records should be made of all National Livestock Identification Scheme numbers, ear tags or other identifications on the animals. Any documents, such as national vendor declarations, waybills or the like, should be examined to obtain names of owners, carriers (vehicle registration numbers), agents and routes of travel. This information should be provided to state or territory authorities, who will use it for tracing stock to property of origin and to identify possible contacts.

Documentation covering the arrival of stock must comply with state or territory requirements and be retained by management in a system that allows correlation of stock with product batches. The receival docket should contain (at a minimum) the following fields:

- Date
- Received from (owner and address)
- Time loaded
- Delivered by (truck driver and company)
- Registration number of vehicle and trailer
- Species of stock
- Class of stock (sex, age)
- Numbers of stock
- Identification (tail tags, brands, tattoos, ear marks)

Tracing Product

Processing plants should have in place a system to trace product in chillers or freezers in case product is or might be contaminated with the disease agent.

Products that need to be considered for tracing purposes include:

- Meat (chilled, frozen, bone-in, boneless)
- Offal
- Processed and cooked products
- Canned product
- Pet food
- Pharmaceuticals
- Blood
- Hides
- Tail pieces

- Horns
- Tallow
- Meatmeal
- Paunch screenings, manure and fertilisers
- Bile
- Gallstones
- Foetal blood
- Slink skins
- Bones and fat sent off the premises for rendering
- Biological specimens for schools and universities
- Casings
- Calf vells
- Used wrappers and cartons

The product must be able to be traced to:

- Storage establishments/container terminals
- Further processing establishments
- Retail outlets
- Exporting vessels
- Overseas countries
- Local butcher shops
- Homes of staff who have obtained product directly from the facility

In some facilities, product in cartons can be correlated with the kill sheet. Meat transfer certificates, notices of intention, and health certificates and certification covering inedible product will be used for tracing product and the notification of overseas countries that import Australian products.

Because Australia may seek recognition for regional disease freedom, it will be important to be able to recognise the origins of all products in transit. Only one state or territory, or part of a state or territory, might be affected if it could be proven that the disease was only in that jurisdiction and that Australia had effective controls to ensure that the disease would not spread further.

Systems will be in place at beef-processing establishments to enable identification of product from tail tags and National Livestock Identification Scheme tags in yards to cartons, quarters, etc. These systems are useful when resolving a nonemergency issue, such as a residue violation, or tracing an

endemic disease with public health or trade implications. In an Emergency Animal Disease event, the system may enable the saving of unaffected product that would otherwise have to be destroyed because of its unknown disease status.

Sheep and goat processing establishments must also have in place verifiable systems to trace product from ear tags in yards to carcases, cartons, etc.

Assessment Exercises

Select the correct answer from the choices provided. For these questions there can be only one correct answer.

1. The Australian Veterinary Emergency Plan Enterprise Manual for Meat Processing (2007):

   ☐ Provides the agreed principles that will be used in meat processing facilities during an Emergency Animal Disease response

   ☐ Includes an appendix that provides information on effective rendering of material for decontamination

   ☐ Includes an appendix that describes the key roles of meat processing personnel in an Emergency Animal Disease event

   ☐ All of the above

   ☐ None of the above

2. In an Emergency Animal Disease event, the key considerations for a facility that is not within a Declared Area (that is, a Restricted Area or a Control Area) are risk reduction and contingency planning (True or False)

   ☐ True

   ☐ False

3. A processing plant is operating in a Control Area during an Emergency Animal Disease event, but is not itself infected. Whether the plant can continue to operate, and the conditions under which this can occur, will b

   ☐ Determined by the Chief Veterinary Officer of the state or territory the plant operates in and administered by the Local Disease Control Centre

   ☐ Depend largely on the disease and the stage and characteristics of the response

   ☐ Depend on the presence or adequacy of security measures for animals, people, products and things; rendering, laundering, effluent control and stock-truck washing facilities; paved lairages; and supplies of hot and cold water and disinfectant

   ☐ All of the above

   ☐ None of the above

4. Give three examples of products other than meat (chilled, frozen, bone-in, boneless) and offal that need to be considered for tracing purposes by processing plants during an Emergency Animal Disease response

☐

☐

☐

5. Give three examples of places product must be able to be traced during an Emergency Animal Disease response

☐

☐

☐

MODULE 5: ROLES AND RESPONSIBILITIES IN AN EMERGENCY ANIMAL DISEASE EVENT

Learning Objectives

After completing this module, participants should:

- Understand the key roles and responsibilities of individual staff when a meat processing plant is operating under each of the three Emergency Animal Disease scenarios
- Know which abattoir personnel require checklists (job cards)
- Know what all other personnel should do in during an Emergency Animal Disease event

Course Material

Introduction

In Module 4 we explained the general principles for plant operation under each of the following three broad Emergency Animal Disease scenarios:

1. Meat processing plant is not located within in a Declared Area (that is, a Restricted Area or a Control Area)
2. Plant is located within Declared Area, but is not itself affected
3. Plant is located within a Declared Area and is either an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises

In this module we revisit these scenarios and explain the roles that five key individuals within each facility will play. These five key individuals include the:

i. Plant Manager

ii. On-Plant Veterinarian or Senior Meat Inspector

iii. Stockyards Manager

iv. Plant Engineer

v. Infected Premises Site Supervisor

However, it will be important that all abattoir personnel understand the core principles of responding to an Emergency Animal Disease and that individuals who will be responsible for one of the key roles are familiar with the tasks that will be undertaken by the remaining four key individuals. This will enable tasks to be delegated to operational personnel and will mean that individual plant workers can support each other.

Throughout these discussions it is important to remember that in an Emergency Animal Disease event the designation of Declared Areas, and the classification of individual premises (including meat processing plants), will be at the discretion of the Chief Veterinary Officer of each affected state or territory, and that administration will be provided a Local Disease Control Centre. Plants will take direction from their state or territory government through the Local Disease Control Centre, and not

from the Australian Government.

Scenario 1: Operating when Not in a Declared Area

This is the time for refining Site Response Plans and for carrying out simulations in which the roles and responsibilities of individuals can be tested or rehearsed. It will also be important to ensure that those individuals that will be tasked with key roles during an Emergency Animal Disease event have received the necessary training.

Included in Appendix 2 are checklists that outline the important preparatory and risk-reduction tasks that should be carried when the meat processing plant is not within a Declared Area. These tasks will be led by the Plant Manager, with participation from the On-Plant Veterinarian or Senior Meat Inspector, Stockyards Manager and the Plant Engineer.

Scenario 2: Operating in a Declared Area

This is the time for further refining Site Response Plans. All individuals who will be tasked with key roles during an Emergency Animal Disease event should have received the necessary training and participated in simulations to ensure they fully understand their roles and responsibilities.

Appendix 2 includes checklists of the key tasks that should be carried when the meat processing facility is operating within a Declared Area (a Restricted Area or a Control Area), but is not itself affected. These tasks should be led by the Plant Manager. The Plant Manager will receive direction from the Local Disease Control Centre about what the abattoir can and can't do, including whether it can continue to operate as an Approved Processing Facility.

Scenario 3: Operating when an Infected Premises, a Suspect Premises or a Dangerous Contact Processing Facility

This is the situation where an Emergency Animal Disease event is occurring, and infection is suspected or has been confirmed within the meat processing facility. In this situation, the plant itself will be classified as an Infected Premises, a Suspect Premises or a Dangerous Contact Processing Facility.

The procedural activities undertaken in the event of an Emergency Animal Disease fall into four stages:

1. Investigation
2. Alert
3. Operational
4. Resumption of slaughter

Checklists for key personnel during each of these four stages are included in Appendix 2.

Investigation Stage

Any person suspecting an Emergency Animal Disease, either on the slaughter floor or in the yards, must immediately notify the On-Plant Veterinarian or the Senior Meat Inspector. In abattoirs operating under a quality assurance arrangement with no government officers on site, the

responsible company employee must be notified, and that employee must immediately notify the state authority. The On-Plant Veterinarian or the Senior Meat Inspector will be responsible for advice to the state or territory veterinary authorities, and will also facilitate communications with management and on-site personnel.

Alert Stage

If suspicion of an Emergency Animal Disease is confirmed, a state or territory veterinary officer, or an Australian Government veterinary officer, will notify the state or territory Chief Veterinary Officer. The state or territory Chief Veterinary Officer will then dispatch a diagnostic team for a detailed investigation.

The actions then taken by the Plant Manager, and the On-Plant Veterinarian or Senior Meat Inspector, will depend to an extent on the characteristics and seriousness of the Emergency Animal Disease. Any areas of uncertainty should be discussed with the Local Disease Control Centre.

Operational Stage

If an Emergency Animal Disease is identified and confirmed within a meat processing plant the Local Disease Control Centre (in conjunction with the Australian Government Department of Agriculture and Water Resources, for export plants) will appoint an Infected Premises Site Supervisor. The primary role of the Infected Premises Site Supervisor is to provide a formal conduit between the authorities managing the Emergency Animal Disease event and the Plant Manager.

The Infected Premises Site Supervisor will review the checklist of actions shown in Appendix 2 and undertake any that remain incomplete.

The Plant Manager, On-Plant Veterinarian or Senior Meat Inspector, Stockyards Manager and Plant Engineer will work closely with the Infected Premises Site Supervisor to ensure that tasks are carried out in accordance with the directions of the Local Disease Control Centre.

Resumption of Slaughter

The decision to permit a resumption of slaughter will be made by the state or territory Chief Veterinary Officer and communicated to the plant by the Local Disease Control Centre.

The Chief Veterinary Officer and the Local Disease Control Centre will also make a decision about the handling of any product that remains in storage. These decisions will be based on a number of factors, including characteristics of the disease concerned and its categorisation under the Emergency Animal Disease Response Agreement, and the adequate completion of decontamination and other tasks.

Once slaughtering resumes, the meat processing facility may be asked to carry out special tasks as a component of the overall disease control strategy, for example slaughter of animals for welfare reasons. On welfare grounds, slaughtering large numbers of animals in a meat processing facility is preferable to on-farm slaughter and disposal.

Assessment Exercises

Select the correct answer from the choices provided. For these questions there can be only one

correct answer.

1. Important preparatory and risk-reduction tasks should be carried out when there is an Emergency Animal Disease event underway in Australia, but the meat processing plant is not within a Declared Area. These tasks should be led by

   ☐ The On-Plant Veterinarian or Senior Meat Inspector

   ☐ The Stockyards manager

   ☐ The Plant Manager

   ☐ The Infected Premises Site Supervisor

2. There is an Emergency Animal Disease event underway in Australia and the meat processing plant is in a Control Area. The plant is not infected and has been issued with a permit to slaughter uninfected animals as part of a slaughter-out strategy. The plant manager must ensure that

   ☐ Facilities are available for the cleaning and disinfection of livestock vehicles immediately after unloading

   ☐ Paved holding yards are thoroughly cleaned and disinfected at least once every 24 hours

   ☐ That no animal product or waste is allowed to leave the abattoir without permission of the Local Disease Control Centre (LDCC)

   ☐ All of the above

   ☐ None of the above

3. An Emergency Animal Disease event is occurring, and infection is suspected or has been confirmed within the meat processing plant. The actions then taken by the Plant Manager, and the On-Plant Veterinarian or Senior Meat Inspector, will depend to an extent on the characteristics and seriousness of the Emergency Animal Disease (True or False)

   ☐ True

   ☐ False

4. The primary role of the Infected Premises Site Supervisor is to

   ☐ Act as the Plant Manager

   ☐ Act as a gatekeeper, and maintain a record (names, addresses and telephone numbers) of all visits and departures of personnel and contacts with animals inside the abattoir

   ☐ Provide a formal conduit between the Local Disease Conrtol Centre and the Plant Manager

   ☐ Replace the On-Plant Veterinarian or Senior Meat Inspector

5. The decision to allow a plant to resume slaughtering animals after an Emergency Animal Disease has been confirmed at a plant will be made by

☐ The Plant Manager

☐ The Infected Premises Site Supervisor

☐ The Australian Government Chief Veterinary Officer

☐ The Chief Veterinary Officer of the state or territory in which the plant is located

MODULE 6: ANIMAL WELFARE IN AN EMERGENCY ANIMAL DISEASE EVENT

Learning Objectives

After completing this module participants should:

- Be able to identify risks to animal welfare during an Emergency Animal Disease event
- Understand how abattoirs can take pre-emptive steps to prevent animal welfare risks when animals are sent for emergency slaughter

Course Material

Introduction

Within the Australian livestock industries, animal welfare is considered key to modern animal production. There is a strong link between animal welfare and livestock industry profitability that contributes to increased productivity and improved competitiveness and farm-gate returns.

Consumers and the Australian community expect high levels of animal welfare to be upheld at all stages of the supply chain and at all times. This expectation will continue during an Emergency Animal Disease event. Wherever possible during an Emergency Animal Disease event, animals will be sent for salvage slaughter at abattoirs rather than being slaughtered on farm. While this practice is greatly preferred from an animal welfare perspective, it is likely to result in increased media scrutiny of the abattoirs involved. In addition, abattoirs may be required to accept classes of stock not normally processed – for example, bobby calves or ewes with very young lambs at foot. It will be essential for abattoirs to have in place sound animal welfare practices that adhere to current animal welfare legislation, as well as the Australian Livestock Processing Industry Animal Welfare Certification System.

Animal Welfare in an Emergency Animal Disease Event

During an Emergency Animal Disease event it is essential that high standards of animal welfare are maintained. At a community level, animal suffering or the on-farm slaughter of large numbers of apparently healthy animals are likely to cause serious public concern and intense media scrutiny.

Where permitted, slaughter may be undertaken for a range of reasons, including:

// Reducing the population of susceptible animals to help control a local outbreak

// Processing large numbers of animals for welfare reasons in a livestock standstill

// Processing large numbers of animals as a part of a slaughter-out strategy (for example, the slaughter of high-risk animals)

// Continuance of economic activity

// Provision of meat for domestic or export markets

Wherever possible, animals will be sent for salvage slaughter at abattoirs rather than being slaughtered on farm. The latter is likely to have significant animal welfare restraints and be unacceptable to the public.

The practice of salvage slaughter at abattoirs will be beneficial to the processing sector because it will allow abattoirs to continue to operate during an Emergency Animal Disease event, providing continued employment for plant personnel. However, it could also attract increased media scrutiny of the abattoirs involved.

Animal welfare, as mandated in various state and territory legislation and laws, and in the Australian Animal Welfare Standards and Guidelines Industry Quality Assurance Programs should always remain a high priority. All livestock (including those that will be slaughtered) have basic welfare needs, including:

- Adequate feed and water
- Adequate space
- Freedom from pain, injury, disease and obvious discomfort
- Freedom from fear and distress
- The ability to express normal behaviour

In an Emergency Animal Disease event the speed of events can put pressure on everyone, people can become stressed and animal welfare is at greatest risk. Pre-emptive action should be taken before a welfare problem is allowed to develop. Sensible management strategies, information, rigorous risk assessment and timely, auditable decision-making can help to prevent welfare problems developing. High levels of stockmanship should be maintained and adequate labour provided to meet animal welfare needs, particularly when very young animals are being processed as part of emergency slaughter. As much as practical, experienced workers should not be diverted to other work.

Bobby Calves: A bobby calf is defined in the Australian Animal Welfare Standards and Guidelines for the Land Transport of Livestock as a calf not accompanied by its mother, less than 30 days of age, weighing less than 80 kg live weight. The young age and small size of bobby calves makes them particularly sensitive to adverse conditions during handling and transport.

The Australian Animal Welfare Standards and Guidelines for the Land Transport of Livestock, which have been adopted into legislation in most states and territory, include several standards directly applicable to bobby calves. During an Emergency Animal Disease event it is likely that plants that do not normally handle young calves could be asked to accept these animals for processing. The calves may, or may not, be accompanied by their mothers. The abattoir, as the receiver of the calves after unloading, will be responsible for providing adequate facilities and appropriate arrangements for their feeding and care in case of delay or emergency. Appropriate arrangements should be made in advance.

The Australian Animal Welfare Standards and Guidelines for the Land Transport of Livestock state that:

- Calves must be handled gently and with patience at all times. Do not throw, hit, drop or drag a calf at any time
- Calves must not be lifted by only the head, ears, neck, tail, hair or a single leg

- Calves must not be moved with dogs or electric prodders
- Calves must be slaughtered or fed within 30 hours from their last feed
- Water must be freely available
- Calves must be protected from cold and heat and taken care of in cases of delay or emergency
- Calves should be unloaded with care as they are easily fatigued and may not follow other animals. Ramps used for calves should not have a slope of more than 12 degrees
- Calves should be processed as soon as possible after arrival at a processor, with priority given to calves travelling over the longest distances or held overnight

During an Emergency Animal Disease event, if there is likely to be an extended delay before slaughter of bobby calves at an abattoir, the abattoir management should:

- Immediately inform the Local Disease Control Centre
- Re-direct any calves in transport back to the property of origin or an alternative abattoir if possible
- Give priority to any bobby calves already in lairage, to calves travelling over the longest distances or held overnight
- Inspect all calves at least every 12 hours
- Ensure that any calves held in lairage are fed with commercial milk replacer at least every 12 hours

Calves that become sick or injured must be treated or humanely euthanized as soon as possible to alleviate pain and suffering. Humane euthanasia should only be carried out by someone competent or under the supervision of a competent person. The recommended methods of humane euthanasia are firearm or captive bolt. Blunt trauma must only be used on calves that are less than 24 hours old and should only be used where the other recommended options are not available. (Note: The Australian Animal Welfare Standards and Guidelines for the Land Transport of Livestock state that all calves consigned to a saleyard or to a processor must be at least five days old).

Assessment Exercises

Select the correct answer from the choices provided. For these questions there can be only one correct answer.

1. Legislative responsibility for animal welfare in Australia is primarily the responsibility of

- ☐ The Australian Government
- ☐ The Australian Government in partnership with the Royal Society for the Prevention of Cruelty to Animals (RSPCA)
- ☐ State and territory governments in partnership with the Royal Society for the Prevention of Cruelty to Animals (RSPCA)

☐ The Royal Society for the Prevention of Cruelty to Animals (RSPCA) alone

2. The Animal Welfare Standards

   ☐ Use the word 'should'

   ☐ Are the recommended practices to achieve desirable livestock welfare outcomes

   ☐ Are designed to complement the Animal Welfare Guidelines

   ☐ Must be complied with by law throughout Australia

3. The Animal Welfare Guidelines

   ☐ Use the word 'must'

   ☐ Are the mandatory practices to achieve desirable livestock welfare outcomes

   ☐ Are designed to complement the Animal Welfare Standards

   ☐ Must be complied with by law throughout Australia

4. During an Emergency Animal Disease event

   ☐ Animal welfare practices can be relaxed

   ☐ Experienced animal handlers can be diverted to other work

   ☐ Consumers and the Australian community will continue to expect high levels of animal welfare to be upheld at all stages of the supply chain and at all times

   ☐ Wherever possible, animals will be slaughtered on-farm rather than being sent to an abattoir

5. Where permitted during an Emergency Animal Disease event, an abattoir may be asked to slaughter animals for a number of reasons, including to

   ☐ Reduce the population of susceptible animals to help control a local outbreak

   ☐ Process large numbers of animals for welfare reasons in a livestock standstill

   ☐ Process large numbers of animals as part of a slaughter-out strategy

   ☐ All of the above

   ☐ None of the above

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APPENDIX 1: BREAKOUT SESSION 2 (CLASS HANDOUT)

Each group should address each of the following questions:

1. Summarise briefly the features of Foot-and-Mouth disease that you think are most important in the context of your abattoir
   - How is the disease spread?
   - How might the abattoir be exposed?
   - What are the clinical signs in livestock that you will need to look out for?
   - Which products are affected?
   - Which waste streams are affected?
   - Which disinfectants will be needed?
   - Can people become infected?
   - How should infected carcasses or product be disposed of?
2. Describe your outbreak scenario
   - What will be your principle objective when operating under this scenario?
   - What do you see your key risks to be?
   - What do you see as the key opportunities
   - How are plant operations likely to be affected?
   - Is it likely that you could continue to process livestock?
   - Will there be restrictions on the movement of vehicles into and out of the plant?
   - Will you need to wash livestock trucks? If so, where and how will you do this? How will you collect the wash water?
   - Will there be restrictions on staff?
   - Will there be restrictions on public access to the plant (including contractors)?
   - Is it likely that you will need to trace product or livestock?
3. Locate the roles and responsibilities checklists for your outbreak scenario and assign a group member to each position
   - Work through the checklists as a group, drawing some conclusions about the following:
   - How would you approach each item on the checklists?
   - What are some of the key challenges you might face?

Having completed these questions, each group should then present and discuss the five key points that arose from the exercise.

APPENDIX 2: CHECKLISTS (JOB CARDS)

Scenario 1: Operating when Not in a Declared Area		
Plant Manager		**Completed** ☑
Review Site Response Plan	Ensure that the Site Response Plan is current and comprehensive.	☐
Review Relevant Disease Strategy Manual	Obtain the relevant AUSVETPLAN Disease Strategy Manual from Animal Health Australia's website, and ensure that the principles underlying containment and eradication (if feasible) are understood.	☐
Review Decontamination Procedures	Review the AUSVETPLAN Operational Manual on Decontamination and, in conjunction with the On-Plant Veterinarian, or state or territory veterinarian, ensure that the plant is provisioned with the necessary equipment and chemicals and able to perform appropriate decontamination procedures at each step of the livestock handling and meat processing chain. Develop checklists for operational personnel as required.	☐
Review Disposal Procedures	Review the AUSVETPLAN Operational Manual on Disposal and, in conjunction with the On-Plant Veterinarian or state or territory veterinarian, ensure that the plant has appropriate procedures in place to handle the disposal of livestock, product, manure and wastewater. These procedures should encompass the situations where(a) the plant is operating within a Control Area (but not directly affected); (b) the plant is operating within a Restricted Area (but not directly affected); and (c) the plant has been classified as an Infected Premises, a Suspect Premises or a Dangerous Contact Processing Facility. Develop checklists for operational personnel as required.	☐
Review Stock Handling Procedures	In conjunction with the Stockyards Manager, review livestock handling and on-site movement procedures. As far as practical, ensure that arrangements are in place to separate animals by lot or consignment and to ensure that movements are only from lower-risk to higher-risk areas. Develop checklists for operational personnel as required.	☐
Review Wild and Feral Animal Control Procedures	Review the site management plan for wild and feral animals, paying attention (in particular) to species known to be susceptible to the Emergency Animal Disease in question.	☐

Scenario 1: Operating when Not in a Declared Area		
Plant Manager		**Completed** ☑
Staff Information	Provide all staff with access to the fact sheet and AUSVETPLAN Disease Strategy Manual for the Emergency Animal Disease in question. Ensure that all staff understand that arrangements within the plant will change in the event that it is operating in a Declared Area (a Control Area or a Restricted Area) or is itself classified as an Infected Premises, a Suspect Premises or a Dangerous Contact Processing Facility. Ensure that all staff understand the principles of hand, clothing and equipment hygiene, and the need to minimise unnecessary movements between different parts of the plant.	☐
Staff Training	Ensure that all staff in a position of responsibility or supervision have completed this course and understand their roles.	☐
Site Risk Assessment and Risk Management Plan	In conjunction with the On-Plant Veterinarian or Senior Meat Inspector, the Stockyards Manager and the Plant Engineer, undertake a facilitated risk assessment. This assessment should identify the threats (and opportunities) facing the plant under the existing conditions – and in the event that the plant is operating in a Declared Area (a Control Area or a Restricted Area) or is itself classified as an Infected Premises, a Suspect Premises or a Dangerous Contact Processing Facility – and should lead to an actionable risk management plan.	☐
Review Additional Checklists	In conjunction with the risk assessment, review the checklists for the Plant Manager, the On-Plant Veterinarian or Senior Meat Inspector, the Stockyards Manager and the Plant Engineer. Ensure that (a) each individual understands and will be able to carry out the required tasks; and (b) understands the tasks that other individuals will be required to carry out. Develop checklists for operational personnel as required.	☐
Review Local Disease Control Centre Information Requirements	Review the information that will be required by an Local Disease Control Centre in the event that the plant is either operating in a Declared Area (a Control Area or a Restricted Area) or is itself classified as an Infected Premises, a Suspect Premises or a Dangerous Contact Processing Facility, and ensure that procedures are in place to record and convey this information if required.	☐

Scenario 1: Operating when Not in a Declared Area		
On-Plant Veterinarian or Senior Meat Inspector, Stockyards Manager and Plant Engineer		**Completed** ☑
Review Site Response Plan	Review the current Site Response Plan.	☐
Review AUSVETPLAN Documentation	Review the relevant Disease Strategy Manual and Operational Manuals (Decontamination and Disposal manuals).	☐
Review Checklists	Review checklists and ensure that you understand and are able to carry out the tasks that will be required in the event that the plant is operating in a Declared Area (a Control Area or a Restricted Area) or is itself classified as an Infected Premises, a Suspect Premises or a Dangerous Contact Processing Facility. As directed by the Plant Manager, develop checklists for operational personnel as required.	☐
Participate in Site Risk Assessment	In conjunction with the Plant Manager (as above), undertake a facilitated site risk assessment and formulate a site risk management plan.	☐

Scenario 2: Operating in a Declared Area		
Plant Manager		**Completed** ☑
Review Checklist from Scenario 1 (Not Operating in a Declared Area)	Ensure that the preparatory and risk-mitigation tasks scheduled under Scenario 1 have been completed and signed off.	☐
Livestock Movements	Ensure that livestock are only moved to the plant under permit issued by the Local Disease Control Centre. This permit may include restrictions – for example, animals might only be allowed to move directly from properties within the Control Area, and may need to be certified as free from the Emergency Animal Disease.	☐
Livestock Vehicles	Ensure that facilities are made available for the cleaning and disinfection of livestock vehicles immediately after unloading.	☐
Livestock Slaughter	Ensure that (as far as is practical) all stock on the premises are slaughtered before further animals are allowed into the paved holding pens. Paved yards for holding stock awaiting slaughter must be emptied systematically in the same order as they were filled. All paved yards should be thoroughly cleaned and disinfected at least once every 24 hours. (Note: this provision may restrict capacity to one day's kill.) Unloading bays and other paved areas must be hosed down regularly and kept clean at all times.	☐
Cleaning and Disinfection	Ensure that all parts of the plant that are soiled with faeces, flesh or fluid are cleaned at least daily and in accordance with the approved procedure and chemical disinfectant. This includes all walls and floors of hanging rooms, chill rooms, cold stores, boning and offal rooms, and rooms for the storage or processing of edible offals. Hide and skin rooms, or other areas where hides and skins are stored, should be cleaned in a similar manner immediately after the hides and skins have been collected. Slaughtering implements must be thoroughly cleaned and sterilised (using boiling water or another approved means) and all other equipment should be thoroughly cleaned and washed when slaughtering and dressing have been completed for the day.	☐
Disposal of Inedible Offals, Unprocessed Viscera and Refuse	Ensure that inedible offals, unprocessed viscera and refuse are removed using the approved method(s). Materials must be stored in leak-proof receptacles when on the premises. No animal product or waste may be removed from an abattoir in a declared area without permission from the	☐

Scenario 2: Operating in a Declared Area		
Plant Manager		**Completed** ☑
	Local Disease Control Centre. The rooms or bays where the receptacles are kept should be thoroughly cleaned and sanitised.	
Disposal of Manure	Ensure that all manure is disposed of in accordance with the approved procedures. No manure may be removed from an abattoir in a Declared Area without permission from the Local Disease Control Centre.	☐
Disposal of Wastewater	Ensure that wastewater is disposed of in accordance with the approved procedure.	☐
Staff	Ensure that appropriate arrangements are in place for staff hygiene, and for the provision, cleaning and disposal of protective clothing and headgear.	☐
Visitor Access	Ensure that only those working in the plant, or those having bona fide business at the plant, are granted access. If appropriate for the Emergency Animal Disease in question, ensure that facilities are provided for visitors (including stockmen and truck drivers) to disinfect boots before leaving. Truck drivers should remain in the cabs of their vehicles whenever possible. For some Emergency Animal Diseases it may also be necessary to ensure that drivers wear protective clothing if outside their trucks, and that this clothing is discarded or disinfected before drivers the plant.	☐
Records	Ensure that procedures are in place for product traceability, withdrawal and recall. The origin, destination, quantities and types of product entering and leaving the establishment must be documented. The storage place and intended further use of product must be also recorded. Documentation must provide an audit trail by which product can be traced from the live animal to storage, destination and end use of the final product.	☐

Scenario 2: Operating in a Declared Area		
On-Plant Veterinarian or Senior Meat Inspector, Stockyards Manager and Plant Engineer		**Completed** ☑
Support	Review the Plant Manager's tasks and provide support as required.	☐

Scenario 3: Operating when an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises (Investigation Stage)		
All Staff		**Completed** ☑
Reporting	Notify the On-Plant Veterinarian, Senior Meat Inspector or Plant Manager of any animals that display symptoms consistent with the Emergency Animal Disease in question.	☐

Scenario 3: Operating when an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises (Investigation Stage)		
Plant Manager		**Completed** ☑
Review Checklist from Scenario 1 (Not Operating in a Declared Area)	Ensure that the preparatory and risk-mitigation tasks scheduled under Scenario 1 have been completed and signed off.	☐
Review Checklist from Scenario 2 (Operating in a Declared Area)	Ensure that approved procedures for cleaning and disinfection (plant and vehicles); the disposal of inedible offals, unprocessed viscera and refuse; the disposal of manure; the disposal of wastewater; visitor access to the plant; and staff hygiene are in place and functional.	☐

Scenario 3: Operating when an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises (Investigation Stage)		
On-Plant Veterinarian or Senior Meat Inspector		**Completed** ☑
Review Checklist from Scenario 1 (Not Operating in a Declared Area)	Ensure that the preparatory and risk-mitigation tasks scheduled under Scenario 1 have been completed and signed off.	☐
Advice to Local Disease Control Centre	Provide advice to the state or territory veterinary authorities (Local Disease Control Centre) and facilitate communications with the Plant Manager and other staff.	☐
Isolation of Livestock	Isolate all animals that are suspected to be infected, or that may have had contact with suspect animals.	☐
Clinical Examination	Carry out a thorough clinical examination of suspect animal(s) and, in the case of a slaughtered animal, take all practical steps to recover any identifying tags, skin, hide or other parts that have been removed and examine all available organs and tissues.	☐
Cessation of Slaughter	Inform the Plant Manager of the possibility of a need to stop the kill and halt all movement into, out of and within the works. Loaded stock and meat products should remain on vehicles until inspected by a veterinarian.	☐
Records	Ensure that the details of lesions (including photographs) are recorded and that lesioned tissues are retained for examination and (if required) sampling by state or territory veterinarians. Records should also include the name and contact details of the owner of the affected animal(s) and the livestock transporter should be recorded, along with the number of animals in the lot or the number that have come from that owner.	☐
Dogs and Horses	Ensure that all dogs and working horses present on the establishment are properly restrained.	☐

Scenario 3: Operating when an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises (Investigation Stage)		
Stockyards Manager and the Plant Engineer		**Completed** ☑
Support	Review the tasks assigned to the Plant Manager and On-Plant Veterinarian or Senior Meat Inspector and provide support as required.	☐

Scenario 3: Operating when an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises (Alert Stage)		
Plant Manager		**Completed** ☑
Review Checklist from Scenario 1 (Not Operating in a Declared Area)	Ensure that the preparatory and risk-mitigation tasks scheduled under Scenario 1 have been completed and signed off.	☐
Review Checklist from Scenario 2 (Operating in a Declared Area)	Ensure that approved procedures for cleaning and disinfection (plant and vehicles); the disposal of inedible offals, unprocessed viscera and refuse; the disposal of manure; the disposal of wastewater; visitor access to the plant; and staff hygiene are in place and functional.	☐
Review Checklist from Investigation Stage	Ensure that the tasks assigned to the alert stage of Scenario 3 have been completed and signed off.	☐
Gatekeeper	Ensure that a gatekeeper is in place to maintain a record (names, addresses and telephone numbers) of all arrivals and departures of personnel. The record should also note whether visitors or personnel own, or are in contact with, susceptible animals outside the abattoir.	☐
Disinfection of Vehicles	All vehicles leaving the premises, including those owned by employees, should be cleaned and disinfected, paying particular attention to the tyres.	☐
Cessation of Slaughter	If not already actioned, facilitate the cessation of slaughtering and processing other than that necessary for the inspection of carcases of animals that have already been slaughtered.	☐
Management of Carcasses	If not already actioned, facilitate control over carcases, by-products, offal, bulk trimmings, blood, hides and any other possibly infected material by preventing access to those products by unauthorised personnel.	☐

Scenario 3: Operating when an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises (Alert Stage)		
On-Plant Veterinarian or Senior Meat Inspector		**Completed** ☑
Review Checklist from Scenario 1 (Not Operating in a Declared Area)	Ensure that the preparatory and risk-mitigation tasks scheduled under Scenario 1 have been completed and signed off.	☐
Review Checklist from Investigation Stage	Ensure that the tasks assigned to the investigation stage of Scenario 3 have been completed and signed off.	☐
Inspection	Place extra inspectors or company staff at points on the chain where suspect lesions can be detected before their removal. The chain speed may need to be slowed.	☐
Carcase Segregation	Segregate any dressed carcases that have not been exposed to suspect stock in a sealed chiller. Segregate the corresponding offal and, if possible, hides and other retained material. Where body parts (e.g. feet) cannot be positively correlated, a sufficiently large batch should be held.	☐
Isolation of Day's Kill	Isolate the day's kill and, where practical, lock and seal all chillers, freezers and other storage areas. Establish control over all carcases, by-products, offal, bulk trimmings, blood, hides and any other possibly infected material, and prevent access to those products by unauthorised personnel.	☐

Scenario 3: Operating when an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises (Alert Stage)		
Stockyards Manager and Plant Engineer		**Completed** ☑
Review Checklist from Scenario 1 (Not Operating in a Declared Area)	Ensure that the preparatory and risk-mitigation tasks scheduled under Scenario 1 have been completed and signed off.	☐
Liaison with Plant Manager	Work closely with the Plant Manager to ensure that all tasks that fall within your responsibility have been completed and signed off. These tasks may include the management of livestock and vehicles.	☐
Liaison with On-Plant Veterinarian or Senior Meat Inspector	Work closely with the On-Plant Veterinarian or Senior Meat Inspector to ensure that all tasks that fall within your responsibility have been completed and signed off. These may include aspects of livestock health and welfare.	☐
Dogs and Horses	Ensure that all dogs and working horses present on the establishment are properly restrained.	☐

Scenario 3: Operating when an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises (Operational Stage)		
Infected Premises Site Supervisor		**Completed** ☑
Review	Call a meeting with the Plant Manager and (at his or her discretion) plant staff to review the ramifications of the disease and the precautions that need to be taken.	☐
Quarantine Notice	If it has not already been done, serve a written quarantine notice on the premises. This will cover all animals, product, people and things (including vehicles) that will be subject to meeting conditions before moving off the premises.	☐
Eradication	Ensure that appropriate procedures are in place to undertake the tasks required for eradication. For some Emergency Animal Diseases, this may include slaughter of affected and at-risk livestock.	☐
Plant Access	Ensure that site access is restricted to a single point (or at the most two points), and that access is not granted to any unauthorised animals, vehicles and people.	☐
Gatekeeper	Ensure that a gatekeeper is installed to maintain a record (names, addresses and telephone numbers) of all visits and departures of personnel and contacts with animals outside the abattoir.	☐
Records	Ensure that record-keeping, as it relates to all tasks carried out at the plant, is appropriate to both disease control and (as relevant) compensation.	☐
Vehicle Cleaning and Disinfection	Ensure that appropriate procedures are in place for the cleaning and disinfection of vehicles before leaving the plant.	☐
Specimens	Liaise with the Local Disease Control Centre to ensure that appropriate procedures are in place for the collection of appropriate specimens from affected and at-risk livestock.	☐
Disposal	Ensure that appropriate procedures are in place for the disposal of carcases, meat, offal and by-products.	☐
Cleaning and Disinfection	Ensure that appropriate procedures are in place for plant cleaning and disinfection. This will include yards, the killing floor, meat processing and storage areas and all other parts of the plant.	☐

Scenario 3: Operating when an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises (Operational Stage)		
Infected Premises Site Supervisor		**Completed** ☑
Wastewater	Ensure that appropriate procedures are in place for the disposal of wastewater from the plant.	☐
Staff hygiene	Ensure that appropriate procedures are in place for staff hygiene and the management of protective and other clothing. Procedures for staff with susceptible livestock at home should also be reviewed.	☐

Scenario 3: Operating when an Infected Premises, a Dangerous Contact Processing Facility or a Suspect Premises (Operational Stage)		
Plant Manager, On-Plant Veterinarian or Senior Meat Inspector, Stockyards Manager and Plant Engineer		**Completed** ☑
Support	Work closely with the Infected Premises Site Supervisor to ensure that tasks are carried out in accordance with the directions of the Local Disease Control Centre	☐

APPENDIX 3: EMERGENCY ANIMAL DISEASE FACT SHEETS

Anthrax

Anthrax is a bacterial disease that can affect wide range of domestic and wild animals. Herbivores are the most susceptible to Anthrax, whereas pigs and carnivores are less susceptible.

In cattle, sheep and goats anthrax is usually peracute – infected animals are usually found dead rather than any clinical signs of the disease being observed.

Outbreaks of anthrax have also been reported in dingoes and kangaroos in zoological gardens.

Where the disease occurs

Anthrax occurs worldwide with only a few countries never having reported the disease.

Anthrax was introduced into Australia in 1847 near Sydney, and spread along stock routes throughout New South Wales and southern Queensland and later, into Victoria, South Australia and Tasmania. Currently, Anthrax occurs as uncommon sporadic outbreaks in New South Wales and Victoria. Cattle and sheep are more commonly affected than goats.

In 2002, after an absence of many years, Anthrax occurred on a property in southern Queensland near the New South Wales border. There have been no reports of Anthrax in Western Australia since 1994. Tasmania, South Australia and the Northern Territory are considered free of Anthrax.

Clinical signs

Cattle, sheep and goats with Anthrax are usually found dead rather than showing clinical signs of disease.

Spread of the disease

Anthrax is unusual because it is not spread between live animals. Instead, is spread when bacterial spores are released from the carcase of an animal that has died from the disease. Other animals eat or inhale the spores.

Anthrax bacteria can be transmitted mechanically by insects, including flies, mosquitoes and ticks. Blowflies play an important role in the transmission of Anthrax because their feeding and post-feeding habits (disgorging ingested carcass material on surfaces) provide a link between the carcase and its environment. In addition, blowflies can spread the bacteria over large distances.

Can the disease be transmitted to humans

Anthrax can occur in humans. Anthrax in humans can take an intestinal, respiratory or skin form following exposure to bacterial spores released form the carcase of an animal that has died from the disease. More than 95% of human cases worldwide are the skin form and this is the only form of anthrax that has been reported in Australia. Anthrax skin infections follow contamination of a pre-existing skin lesion with bacterial spores from a contaminated carcase and are mostly seen on exposed areas of the body (e.g. hands, arms, neck and face). Anthrax skin infections usually start with itchiness and progress to papules, which are followed by vesicle formation and then shedding of the affected area. Usually, anthrax skin lesions are not painful.

Risk of disease spread to susceptible animals through products, by-products and discharges from infected animals in meat processing plants

Bone in meat	Deboned meat	Hides	Offal (includes red and green)	Nervous tissue	Effluent (yards, slaughter floor)	Meat, blood and bone meal	Manure, paunch and visceral contents
+++	+++	++	+++	+	++	-	+

+ = definite risk / - = no known risk if processed adequately and the ban on feeding to ruminants is adhered to

Meat and meat products from animals that have died from Anthrax can spread the disease to animals and humans that eat untreated or insufficiently treated products. Humans handling such products can develop the skin form of Anthrax. Traditionally, meat-meal and bonemeal prepared from animals that had died from Anthrax was a common way of spreading Anthrax. However, adequate processing standards have eliminated this way of spreading Anthrax. The ban on feeding meat-meal and bonemeal to ruminants ensures that these products are not involved in the spread of Anthrax in Australia.

Information on how to decontaminate facilities contaminated with Anthrax bacteria, as well as the recommended method of disposing of infected carcases, and can be found in the AUSVETPLAN Operational Procedures Manual Decontamination. Additional information on the disease is available in the Anthrax Disease Strategy Manual on the Animal Health Australia website.

How the disease is controlled when outbreaks occur in Australia

In Australia, the strategy is to control any outbreaks of Anthrax as quickly as possible. Control involves:

- Prompt reporting and diagnosis of suspected cases
- Quarantine of infected premises to minimise the spread of infection with disposal of carcases to minimise the spread of infection
- Prompt vaccination and/or treatment of at-risk livestock
- Decontamination of the environment at death sites, and of facilities, products and equipment that may have been contaminated
- Investigations to promptly identify the source of infection and record where anthrax has occurred in livestock and to trace livestock movements in and out of infected premises
- Ensuring the safety of livestock products by preventing potentially infected livestock and livestock products from being processed for human or animal consumption, or industrial use
- Regular vaccination of susceptible livestock on sites with a known history of Anthrax, to prevent cases occurring

- A public awareness campaign to ensure reporting of sudden, unexplained deaths of livestock and to reduce the risk of human infection
- Liaising with health authorities in the event of a suspected or confirmed human Anthrax case
- Using recording systems to provide accurate data from investigations to assure area and farm freedom from anthrax, enabling accurate certification of livestock and livestock products
- Communicating Anthrax surveillance information to industry and trading partners
- In unusual outbreaks, establishing a vaccination area around infected premises, including premises with common circumstances to the infected premises, and placing premises under movement restrictions

Cost sharing

Major outbreaks of Anthrax are classified as a Category 3 Disease in the Emergency Animal Disease Response Agreement. When major outbreaks of Anthrax occur in Australia, the cost of control is funded 50% from Government and 50% from industry.

Bovine Spongiform Encephalopathy

Bovine Spongiform Encephalopathy is a fatal neurological disease of adult cattle. It has a long incubation period, which is then followed by progressive neurological degeneration. The disease can also occur in buffalo, wild ruminants and domestic and wild cats.

Where the disease occurs

Bovine Spongiform Encephalopathy was first recognised in the United Kingdom in 1986. It is thought that the disease occurred because changes were made to the way meat meal was processed.

Smaller scale outbreaks of Bovine Spongiform Encephalopathy have also occurred in Europe, Canada, Japan and Israel.

Two cases of feline Transmissible Spongiform Encephalopathy have been diagnosed in cats (Cheetah, Asiatic golden cat) imported to Australian zoos.

The World Animal Health Organisation (OIE) has assessed that there is a negligible risk that Bovine Spongiform Encephalopathy is present in Australia or that it has been introduced to cattle in Australia through the importation of commodities potentially contaminated with the disease agent.

There are three potential pathways for the introduction of Bovine Spongiform Encephalopathy into Australia:

(i) Cattle from affected countries

(ii) Contaminated feed or other materials from affected countries

(iii) Biologicals (i.e. vaccine) infected with the Bovine Spongiform Encephalopathy infective agent

It has been illegal to feed ruminant meat and bone meal to ruminants in all Australian states and territories since 1997. The ban is enforced by state and territory authorities, with support from quality assurance programs in the farming, feedlot, rendering and stockfeed manufacturing industries.

Clinical signs

The typical clinical signs of Bovine Spongiform Encephalopathy are:

- Abnormal posture
- Violent behaviour
- Increased sensory perception
- Decreased milk production
- Weight loss despite a good appetite
- Death

Spread of the disease

The main route of transmission of the Bovine Spongiform Encephalopathy infective agent is through young animals eating feed containing contaminated meat and bone meal.

Can the disease be transmitted to humans

The Bovine Spongiform Encephalopathy agent causes a disease in people similar to that in cattle. People become infected by eating meat and meat products contaminated with the Bovine Spongiform Encephalopathy agent. Bovine Spongiform Encephalopathy is therefore of concern for food safety as well as the welfare of cattle. People cannot become infected by touching or working with live cattle with Bovine Spongiform Encephalopathy.

Risk of disease spread to susceptible animals through products, by-products and discharges from infected animals in meat processing plants

Bone in meat	Deboned meat	Hides and skin	Offal (includes red and green)	Nervous tissue	Effluent (yards, slaughter floor)	Meat, blood and bone meal	Manure, paunch and visceral contents
?	-	-	++	++	-	+	-

+ = definite risk / - = no known risk, ? = not known or uncertain

Information on how to decontaminate facilities contaminated with the Bovine Spongiform Encephalopathy infective agent, as well as the recommended method of disposing of infected carcases, and can be found in the AUSVETPLAN Operational Procedures Manual Decontamination. Additional information on the disease is available in the Bovine Spongiform Encephalopathy Disease Strategy Manual on the Animal Health Australia website.

How the disease will be controlled if it occurs in Australia

If Bovine Spongiform Encephalopathy is detected in Australia, the strategy will be to eradicate the disease as quickly as possible using modified stamping out supported by a combination of strategies. Eradication will involve:

- Early recognition and laboratory confirmation
- Initial quarantine of infected and dangerous contact premises
- Quarantine and movement controls over animals and animal products
- Improved risk reduction measures, such as revisions to the ruminant feeding ban
- Tracing and increased surveillance to identify cohort cattle and the source and extent of infection, and subsequently to establish proof of freedom from the disease
- Zoning to define infected and disease-free premises and industry sectors
- Disposal of confirmed case(s)

- Destruction and disposal of all cohort cattle, depending on the findings of veterinary investigations
- Recall of animal products likely to be contaminated
- A public awareness campaign

Cost sharing

Bovine Spongiform Encephalopathy is classified as a Category 2 Disease in the Emergency Animal Disease Response Agreement. If Bovine Spongiform Encephalopathy is detected in Australia, the cost of eradication will be funded 80% from Government and 20% from industry.

Foot-and-Mouth Disease

Foot-and-Mouth Disease is a highly contagious viral disease of domestic and cloven-hoofed wild animals including cattle, sheep, goats, pigs, camelids (camels, alpacas and llamas), buffalo and deer.

Where the disease occurs

Foot-and-Mouth Disease is present in the Middle East, Africa, Asia and most of South America. Indonesia, Singapore, Papua New Guinea, New Zealand, the Philippines and the Pacific island nations are free from Foot-and-Mouth Disease. Parts of Malaysia are also free. Minor outbreaks of possible Foot-and-Mouth Disease occurred in Australia in 1801, 1804, 1871 and 1872. Foot-and-Mouth Disease has not been diagnosed in Australia since 1872.

The most significant risk of entry of Foot-and-Mouth Disease into Australia is through illegal entry of meat and dairy products. The virus can survive for long periods in a variety of fresh, partly cooked, cured and smoked meat products, and dairy products that are inadequately heat treated. These could be brought in by passengers on aircraft or ships, or be sent through the post. Garbage discarded by fishing vessels or yachts is another risk. Swill feeding is illegal in Australia; however, the threat posed by illegal swill feeding by small and backyard producers remains.

The Northern Australia Quarantine Strategy is aimed at early detection of exotic disease in high-risk areas of northern Australia. The Northern Australia Quarantine Strategy conducts onshore animal health surveillance for targeted pests and diseases, including Foot-and-Mouth Disease.

Clinical signs

Animals with Foot-and-Mouth Disease develop the following clinical signs:

- Fever
- Salivation and smacking of the lips
- Lameness
- Poor appetite
- Reduced milk production
- Vesicles (fluid-filled blisters) in the mouth and nostrils, on the teats and one the skin between and above the hooves
- Abortion

Mortality in adult cattle is usually low to negligible, but up to 50% of calves may die from cardiac involvement or complications such as secondary infection, exposure or malnutrition.

The disease can also be mild or unapparent, especially in *Bos indicus* breeds of cattle and in sheep.

Spread of the disease

In ruminants, the most common route of infection is inhalation of the virus in droplets or aerosols. Pigs are mainly infected by eating contaminated feed. The Foot-and-Mouth Disease virus can be

spread on contaminated vehicles and equipment, and people can easily transfer infection to animals via contaminated boots, hands and clothing. Spread has been associated with veterinarians, vaccinating teams and rodent exterminators.

Infected animals shed the virus in expired air, fluid from ruptured vesicles, secretions (e.g. tears, saliva and nasal discharge), excretions (e.g. faeces and urine), milk, semen and blood. The Foot-and-Mouth Disease virus can remain infective in the environment for several weeks. It may survive longer in organic matter, for example soil, manure and dried animal secretions, or on chemically inert materials like straw, hair and leather.

Can the disease be transmitted to humans

In people, infection with the Foot-and-Mouth Disease virus is rare and Foot-and-Mouth Disease is not considered a public health problem. People can be infected with the virus through wounds on the skin when handling diseased animals or the virus in the laboratory, or through the mouth lining by drinking infected milk. Infection cannot occur by eating meat from infected animals.

The infection is temporary and mild, only very occasionally resulting in clinical disease (fever, vesicles on the hands or feet or in the mouth). Healthy people can harbour Foot-and-Mouth Disease virus sub-clinically in their nasal passages and throat for up to 28 hours after contact with infected animals.

Risk of disease spread to susceptible animals through products, by-products and discharges from infected animals in meat processing plants

Bone in meat	Deboned meat	Hides and skin	Offal (includes red and green)	Nervous tissue	Effluent (yards, slaughter floor)	Meat, blood and bone meal	Manure, paunch and visceral contents
+++	++	+	+++	-	+++	-	+++

+ = definite risk, - = no known risk

Information on how to decontaminate facilities contaminated with the Foot-and-Mouth Disease virus, as well as the recommended method of disposing of infected carcases, and can be found in the AUSVETPLAN Operational Procedures Manual Decontamination. Additional information on the disease is available in the Foot-and-Mouth Disease Strategy Manual on the Animal Health Australia website.

How the disease will be controlled if it occurs in Australia

If Foot-and-Mouth Disease occurs in Australia, the strategy will be to eradicate the disease in the shortest possible period, while minimising economic impact, using stamping out supported by a combination of strategies. Eradication will involve:

- Assessment of the epidemiological situation, including laboratory confirmation of cases and typing of virus, ordering vaccine, an immediate national livestock standstill and quarantine and movement controls

- Implementation of legislated declared areas, tracing and surveillance, destruction of animals on infected premises and potentially on dangerous contact premises, carcass disposal and decontamination of infected and dangerous contact premises
- Recall of animal products likely to be contaminated
- Implementation of relief and recovery programs and industry support, as well as a public awareness campaign. Additional measures may be taken if authorities consider that they would be beneficial in containing and managing the outbreak, including:
- Vaccination to reduce susceptibility of animals to infection and clinical disease, and potentially reduce virus excretion
- Pre-emptive destruction of susceptible animals to minimise spread of infection
- Zoning (where appropriate), with risk-based movement controls (e.g. extending to milk and other commodities)

The final stage of the response will be surveillance for proof of freedom from the disease.

Cost sharing

Foot-and-Mouth Disease is classified as a Category 2 Disease in the Emergency Animal Disease Response Agreement. If an outbreak of Foot-and-Mouth Disease occurs in Australia, the cost of eradication will be funded 80% from Government and 20% from industry.

Lumpy Skin Disease

Lumpy Skin Disease is a highly infectious, generalised viral skin disease of cattle. *Bos taurus* cattle are more susceptible to Lumpy Skin Disease than *Bos indicus* (zebu) cattle. Jersey, Guernsey, Friesian and Ayrshire breeds are particularly susceptible to infection. Asian Buffaloes can also develop Lumpy Skin Disease.

Where the disease occurs

Traditionally Lumpy Skin Disease was only present in Africa; however, the disease has now spread to the Middle East, the Arabian Peninsula, Pakistan and several European countries.

Lumpy Skin Disease has never occurred in Australia. Australia does not import live cattle, embryos or semen from countries with Lumpy Skin Disease so there is minimal risk of the disease entering the country this way. The risk of the virus entering Australia in insect vectors is considered to be low because the virus only survives up to 4 days in insects.

Clinical signs

Cattle with Lumpy Skin Disease develop the following clinical signs:

- Watery eyes with reddened conjunctivae and corneas
- Nasal discharge
- Raised swollen nodules on the skin that may be filled with blood or bleeding. The skin nodules are most common on the head and neck, perineum, genitalia and udder, and limbs
- Enlarged lymph nodes
- Pox lesions on the muzzle and in the mouth and nostrils
- Coughing and difficulty breathing
- Swollen joints and tendons

Death of cattle with Lumpy Skin Disease is usually from pneumonia. Death rates vary, up to 40%, with a death rate of 1-5% more common.

Spread of the disease

Lumpy Skin Disease virus is mainly spread by insects such as flies and mosquitoes mechanically carrying the virus between animals. The virus can also be spread by direct contact or by cattle eating contaminated feed or drinking contaminated water.

Infected cattle shed the virus in tears, nasal discharges, saliva, milk, semen and blood or fluid that seeps from the skin nodules.

Lumpy Skin Disease virus is very resistant in the environment and can remain alive for long periods on or off the animal host. The virus is susceptible to sunlight, but will survive in cold temperatures. The virus can survive for up to 6 months in a suitable environment, such as shaded animal pens, and on clothing and equipment.

Can the disease be transmitted to humans

Lumpy Skin Disease does not affect humans.

Risk of disease spread to susceptible animals through products, by-products and discharges from infected animals in meat processing plants

Bone in meat	Deboned meat	Hides and skin	Offal (includes red and green)	Nervous tissue	Effluent (yards, slaughter floor)	Meat, blood and bone meal	Manure, paunch and visceral contents
-	-	+++	-	-	++	-	-

+ = definite risk, - = no known risk

Information on how to decontaminate facilities contaminated with the Lumpy Skin Disease virus, as well as the recommended method of disposing of infected carcases, and can be found in the AUSVETPLAN Operational Procedures Manual Decontamination. Additional information on the disease is available in the Lumpy Skin Disease Strategy Manual on the Animal Health Australia website.

How the disease will be controlled if it occurs in Australia

If Lumpy Skin Disease occurs in Australia, the strategy will be to eradicate the diseases in the shortest possible period using stamping out. Eradication will involve:

- Mandatory slaughtering and sanitary disposal of destroyed animals and contaminated animal products
- Quarantine and movement controls over animals, products and other potentially contaminated items
- Decontamination of fomites (facilities, equipment and other items)
- Control of insect vectors
- Tracing and surveillance to determine the source and extent of infection in both animals and insects and to provide proof of freedom from the disease
- Zoning to define infected and disease-free premises and areas
- A public awareness campaign
- Vaccination in a ring around infected areas may also be considered

Cost sharing

Lumpy Skin Disease is classified as a Category 3 Disease in the Emergency Animal Disease Response Agreement. If an outbreak of Lumpy Skin Disease occurs in Australia, the cost of eradication will be funded 50% from Government and 50% from industry.

Peste des Petits Ruminants

Peste des Petits Ruminants is a viral disease of sheep and goats. Goats are more susceptible than sheep and suffer more severe disease. Young animals (3-18 months old) are more susceptible than adult animals or unweaned kids and lambs.

Deer and camels may also be infected with the Peste des Petits Ruminants virus and transmit infection.

Where the disease occurs

The World Organisation for Animal Health (OIE) estimates that over 70 countries are infected with Peste des Petits Ruminants. Most of these countries are in sub-Saharan Africa, the Arabian Peninsula, the Middle East and the Indian subcontinent. Over the past 10 years the virus has spread into Central and Southern Asia. It is estimated that 62.5% of the global small ruminant population is at risk from Peste des Petits Ruminants.

In 2015, the OIE announced an initiative to eradicate Peste des Petits Ruminants globally by 2030.

Peste des Petits Ruminants has never occurred in Australia. The most likely route of introduction of the virus into Australia is by the importation of infected sheep or goats. However, Australian does not allow the importation of sheep and goats from countries with Peste des Petits Ruminants, so the risk of introduction is remote. It is unlikely that the virus would survive in sheep transport ships returning to Australia from the Middle East.

Clinical signs

The clinical signs of Peste des Petits Ruminants are sheep and goats are:

- Fever
- Ocular and nasal discharge
- Necrotic stomatitis (inflammation of the mouth with pus formation)
- Severe diarrhoea
- Coughing and difficulty breathing
- Small nodular lesions around the lips and muzzle
- High death rate (50 – 90%)

Spread of the disease

Peste des Petits Ruminants spreads rapidly between in-contact animals. In naïve populations of sheep and goats 90-100% of animals will develop disease.

The Peste des Petits Ruminants virus is mainly spread by aerosol inhalation or direct contact, such as licking. Infected sheep and goats shed the virus in all secretions and excretions, including tears, nasal discharges, faeces and semen.

The virus has poor survival outside the host, but can survive longer in water troughs, bedding and feed.

Can the disease be transmitted to humans

Peste des Petits Ruminants does not affect humans.

Risk of disease spread to susceptible animals through products, by-products and discharges from infected animals in meat processing plants

Bone in meat	Deboned meat	Hides and skin	Offal (includes red and green)	Nervous tissue	Effluent (yards, slaughter floor)	Meat, blood and bone meal	Manure, paunch and visceral contents
+	+	-	+	-	+	-	+

+ = definite risk, - = no known risk

Information on how to decontaminate facilities contaminated with the Peste des Petits Ruminants virus, as well as the recommended method of disposing of infected carcases, and can be found in the AUSVETPLAN Operational Procedures Manual Decontamination. Additional information on the disease is available in the Peste des Petits Ruminants Disease Strategy Manual on the Animal Health Australia website.

How the disease will be controlled if it occurs in Australia

If Peste des Petits Ruminants occurs in Australia, the strategy will be to eradicate the disease in the shortest possible period using stamping out. Eradication will involve:

- Early recognition and laboratory confirmation of cases
- Quarantine and movement controls over animals, products and other potentially contaminated items
- Mandatory slaughtering and sanitary disposal of destroyed animals and contaminated animal products
- Decontamination of fomites (facilities, equipment and other items)
- Tracing and surveillance to determine the source and extent of infection and to provide proof of freedom from the disease
- Zoning to define infected and disease-free premises and areas
- A public awareness campaign

Cost sharing

Peste des Petits Ruminants is classified as a Category 2 Disease in the Emergency Animal Disease Response Agreement. If an outbreak of Peste des Petits Ruminants occurs in Australia, the cost of eradication will be funded 80% from Government and 20% from industry.

Rabies

Rabies is a viral disease of mammals that is almost invariably fatal without vaccination.

Globally, Rabies is of both public health and animal health significance.

Where the disease occurs

The Rabies virus is present in most of the world except Australia, New Zealand, Papua New Guinea, Japan, Great Britain and Ireland, and many small island nations.

Although an endemic lyssavirus is present in bats in Australia and can cause fatal encephalitis — which is indistinguishable from Rabies in humans — Australia is free from the Rabies virus.

Rabies is not considered a disease of birds and birds do not play a significant part in the maintenance or spread of the Rabies virus. The susceptibility of Australian native animals to the Rabies virus is unknown.

Clinical signs

Cattle

- Depression
- Paralysis of throat muscles with grinding of teeth and excess salivation, which can lead to a false diagnosis of oesophageal obstruction
- Low-pitched bellowing
- Increased sexual excitement
- Some animals may attack other animals or objects, charge and butt, but seldom bite
- Paralysis, knuckling over at the fetlocks, stumbling and falling
- Unable to rise, lapse into a coma and die

Sheep

- Initial period of excitement, during which affected sheep move restlessly, salivate and grind their teeth
- Twitching of the lips and tongue
- Wool biting
- Aggressive butting of other sheep or objects
- Sexual excitement
- Bleating
- Increasing weakness and paralysis, followed by inability to rise
- Death within 72 hours of the onset of clinical signs

Spread of the disease

The Rabies virus life cycle involves maintenance-host species and spillover-host species:

- *Maintenance hosts* are the animal species that principally maintain the Rabies virus. Successful control of Rabies in the maintenance host will lead to eradication of the virus cycle in the ecological community. Examples of maintenance hosts are dogs, foxes and bats.
- *Spillover hosts* are infected animals that are not the animal species that normally maintain the Rabies virus. Spillover hosts are often, but not always, dead-end hosts. They may transmit infection to other animals, although this is relatively uncommon. Spillover hosts include humans and other primates, horses, cattle, sheep, pigs and some wild species.

Can the disease be transmitted to humans

Human Rabies is found wherever animal Rabies is found.

Rabies is usually transmitted by bites from infected animals and has a variable incubation period of days to years. Globally, dogs are the source of most human cases of Rabies.

Risk of disease spread to susceptible animals through products, by-products and discharges from infected animals in meat processing plants

Bone in meat	Deboned meat	Hides and skin	Offal (includes red and green)	Nervous tissue	Effluent (yards, slaughter floor)	Meat, blood and bone meal	Manure, paunch and visceral contents
+	+	+	+	+++	+	+	+

+ = definite risk, - = no known risk

Information on how to decontaminate facilities contaminated with the Rabies virus, as well as the recommended method of disposing of infected carcases, and can be found in the AUSVETPLAN Operational Procedures Manual Decontamination. Additional information on the disease is available in the Rabies Disease Strategy Manual on the Animal Health Australia website.

How the disease will be controlled if it occurs in Australia

If Rabies occurs in Australia, the strategy will be to eradicate the disease in the shortest possible period. Eradication will involve:

- Destruction of infected animals
- Quarantine, vaccination or destruction of exposed animals
- Movement control, vaccination or quarantine of suspect animals until their rabies status has been clarified

- Vaccination of domestic carnivores (e.g. dogs, cats, ferrets), other selected species and targeted animal groups in Declared Areas to protect animals against infection and reduce exposure of humans
- Monitoring of wild animals
- Tracing and surveillance
- Linkage and coordination of public health and environmental authorities
- A public awareness campaign

Successful implementation of the policy will depend on community cooperation and compliance with all control and eradication measures.

Population reduction of susceptible species is not appropriate.

Cost sharing

Rabies is classified as a Category 1 Disease in the Emergency Animal Disease Response Agreement. If Rabies occurs in Australia, the cost of eradication will be funded 100% from Government.

Rift Valley Fever

Rift Valley Fever is a viral disease of cattle, sheep and goats that is transmitted by mosquitoes. Other animals such as buffalo, camels, horses, donkeys, pigs, cats, dogs and rodents can also be infected. The susceptibility of Australian native fauna is not known. Birds, reptiles and amphibians are not susceptible to infection.

Where the disease occurs

Rift Valley Fever occurs in Africa. It has also recently occurred on the Arabian Peninsula.

Rift Valley Fever has never occurred in Australia. Rift Valley Fever could be introduced into Australia through the importation of infected insect vectors or hosts, including humans. Some insect vector species for Rift Valley Fever occur in Australia and have been shown to be competent; therefore, it can be assumed that the disease could be naturally maintained in Australia.

Clinical signs

Cattle, sheep and goats: in these species, Rift Valley Fever is most severe in young animals, with high death rates. Animals may be found dead, or collapse and die when moved. In other cases fever, weakness, unsteady gait and nasal discharge develop, followed by death in less than 24 hours. In adult animals, subacute disease is more common, and the death rate is usually less than 10%. Infected animals develop fever, weakness, jaundice, abdominal pain and diarrhoea, and stop eating. Abortion (up to 85% in cattle) is a very common in pregnant sheep and cattle. The disease in goats is similar to the disease in sheep. However, adult goats are less likely to display clinical signs and, depending on the breed, unapparent infections are reported to be more common.

Buffalo, camels, horses, donkeys, pigs, cats, dogs and rodents: buffalo and camels are susceptible to infection and pregnant animals will abort. Infections in animals that are not pregnant are often unapparent, and death rates are low. Horses, donkeys, pigs, cats, dogs and rodents can become infected. With the exception of puppies, kittens, mice, and some other rodents, unapparent infections are the most likely outcome.

Spread of the disease

Rift Valley Fever is spread to, and between livestock, by mosquitoes.

The explosive nature of Rift Valley Fever epidemics suggests that mechanical transmission by insect vectors (i.e. flies) is also a probable means of spread.

Little is known about the persistence of the virus in skins, wool (and other fibres), bones or manure. Since wool, skins and bones may contain blood, some virus may persist in these products. It is not known how long the virus would survive on wool after it is pressed into bales. No data are available on persistence of Rift Valley Fever virus on equipment or personnel. However, the virus may be able to survive in dried discharges on walls for up to 3 months. Similarly, no data are available on transmission of Rift Valley Fever virus by equipment or personnel.

Can the disease be transmitted to humans

Humans can be infected with the Rift Valley Fever virus. Experience overseas indicates that the vast

majority of human infections result from direct or indirect contact with the blood or organs of infected animals. Direct contact with blood and viscera of infected animals during slaughter or shortly afterwards poses a significant likelihood of infection via a wound from a contaminated knife, contact with broken skin or inhalation of aerosols. Chilled or frozen meat is unlikely to present a human health hazard because the virus content of meat decreases rapidly following slaughter as a result of the decrease in pH with storage of the meat.

Risk of disease spread to susceptible animals through products, by-products and discharges from infected animals in meat processing plants

Bone in meat	Deboned meat	Hides and skin	Offal (includes red and green)	Nervous tissue	Effluent (yards, slaughter floor)	Meat, blood and bone meal	Manure, paunch and visceral contents
?	-	?	-	-	+	-	?

+ = definite risk, - = no known risk, ? = not known or uncertain

Information on how to decontaminate facilities contaminated with the Rift Valley Fever virus, as well as the recommended method of disposing of infected carcases, and can be found in the AUSVETPLAN Operational Procedures Manual Decontamination. Additional information on the disease is available in the Rift Valley Fever Disease Strategy Manual on the Animal Health Australia website.

How the disease will be controlled if it occurs in Australia

If Rift Valley Fever occurs in Australia, the strategy will be to eradicate the diseases in the shortest possible period using stamping out or, if the disease is widespread when diagnosed, a control policy using modified stamping out until Rift Valley Fever can be eradicated. Eradication will involve:

- Early recognition and laboratory confirmation of cases
- Vector monitoring and sero-surveillance to determine the zone of active transmission
- Mandatory slaughtering
- Sanitary disposal of destroyed animals and contaminated animal products
- Quarantine and movement controls over animals, products and other potentially contaminated items
- Treatment and husbandry procedures to control vector attack on susceptible animals, minimise health and production effects, and provide animal welfare in declared areas
- Decontamination of fomites (facilities, equipment and other items)
- Tracing and surveillance to determine the source and extent of infection in both animals and insects and to provide proof of freedom from the disease

- Vaccination to create buffer zones for the protection of uninfected susceptible animals, protect against clinical disease and facilitate livestock movement
- Vector control
- Zoning to define infected and disease-free premises and areas
- A public awareness campaign

If Rift Valley Fever ever occurs in Australia, eradiation will depend on total industry cooperation and compliance with all control and eradication measures.

Cost sharing

Rift Valley Fever is classified as a Category 2 Disease in the Emergency Animal Disease Response Agreement. If an outbreak of Rift Valley Fever occurs in Australia, the cost of eradication will be funded 80% from Government and 20% from industry.

Scrapie

Scrapie is a neurological disease of sheep and goats. It has a long incubation period (1-3 years or longer), which is then followed by progressive neurological degeneration.

Scrapie has been recognised in sheep and goats for over 200 years. It can be sporadic (a random occurrence with no known genetic or environmental cause), inherited (genetic) or transmissible (the abnormal prion is transmitted from one animal to another).

Where the disease occurs

Scrapie is present in several European Union Member States, especially the United Kingdom, Canada, the United States, Iceland, India, Japan, Brazil and Israel. There have been isolated reports of Scrapie in Australia (1952), New Zealand (1954) and the Republic of South Africa (1972). In these instances, the disease was confined to imported sheep and was eradicated by destruction of the affected group.

There are two potential pathways for the introduction of Scrapie into Australia:

(iv) Infected sheep or goats

(v) Biologicals (i.e. Vaccine) infected with the Scrapie infective agent

It is very unlikely that Scrapie will be introduced with legally imported livestock. Australia's strict import requirements reduce the likelihood of transmission through a contaminated biological product.

Clinical signs

The typical clinical signs of Scrapie include:

- Reduced exercise tolerance, fatigue
- Unsteady gait, loss of balance
- Rubbing of the poll and rump
- Loss of condition progressing to emaciation
- Excitement, confusion, agitation
- Nibbling response when scratched along the spine on the rump
- Rash
- Inability to stand
- Death

Spread of the disease

Scrapie is mainly transmitted from ewes or does to lambs or kids either prenatally or soon after birth. The Scrapie infective agents (prions) are most likely spread by infected uterine fluids.

Infected animals that never develop clinical signs of infection can be a source of Scrapie infection for other animals.

Can the disease be transmitted to humans

There has been no recorded evidence of Scrapie being transmitted from sheep or goats to humans.

Risk of disease spread to susceptible animals through products, by-products and discharges from infected animals in meat processing plants

Bone in meat	Deboned meat	Hides and skin	Offal (includes red and green)	Nervous tissue	Effluent (yards, slaughter floor)	Meat, blood and bone meal	Manure, paunch and visceral contents
-	-	-	-	+	+	+	-

+ = definite risk, - = no known risk

Information on how to decontaminate facilities contaminated with the Scrapie infective agent, as well as the recommended method of disposing of infected carcases, and can be found in the AUSVETPLAN Operational Procedures Manual Decontamination. Additional information on the disease is available in the Scrapie Disease Strategy Manual on the Animal Health Australia website.

How the disease will be controlled if it occurs in Australia

If Scrapie is detected in Australia, the strategy will be to eradicate the disease as quickly as possible using a combination of strategies. Eradication will involve:

- A total management plan to focus the action on risk animals and to maximise the efficiency of the eradication program
- Quarantine and movement controls over animals, animal products and other potentially infected items
- Tracing and increased surveillance to identify cohort sheep and goats, the source and extent of infection, and subsequently, to establish proof of freedom from the disease
- Risk assessment to identify the risk categories of livestock and to define further strategies
- Slaughter and sanitary disposal of all clinically affected, exposed and equivalent-risk stock
- A public awareness campaign

Cost sharing

Scrapie is classified as a Category 3 Disease in the Emergency Animal Disease Response Agreement. If Scrapie is detected in Australia, the cost of eradication will be funded 50% from Government and 50% from industry.

Sheep Pox and Goat Pox

Sheep Pox and Goat Pox are highly contagious viral diseases of sheep and goats. Merino and European breeds of sheep are more susceptible to Sheep Pox than other breeds. Goat breeds also vary in susceptibility to Goat Pox.

Where the disease occurs

Sheep Pox and Goat Pox occur in Africa, mainly north of the equator; the Middle East; Central and Southeast Asia, including southern Russia and western China; and the Indian subcontinent as far east as Myanmar.

Sheep Pox and Goat Pox have never occurred in Australia. There is considerable risk of Sheep Pox entering Australia in sheep vessels returning from the Middle East and on clothing, equipment and unprocessed wool products brought in by people from endemic areas.

Clinical signs

If Sheep Pox and Goat Pox ever occur in Australia the acute form of the disease would be expected. This is because Australian sheep and goats have never been exposed to the viruses. Clinical signs in the acute form of the disease include:

- A sudden onset of fever with discharges from the nose and eyes and excessive salivation
- Loss of appetite and reluctance to move
- Eruption of pox lesions in 1–2 days that extend over all the skin, but are most obvious where wool or hair is shortest, such as on the face, ears, axillae, groin and perineum and under the tail. Pox lesions may also be present on the mucous membranes of the mouth, nostrils and vulva
- Acute respiratory distress if the pox lesions develop in the lungs
- Matted fleece caused by exudate from ruptured pustules. Depending on the season, this will put animals at increased risk of flystrike
- A death rate approaching 50% in adults and 100% in young animals. Deaths can occur at any stage of the disease, with peak mortality about 2 weeks after the appearance of pox lesions

Healing of skin lesions is slow, taking 5–6 weeks.

A peracute form of Sheep Pox and Goat Pox can occur in initial outbreaks in an area. This form of the disease is characterised by fever, generalised haemorrhages, widespread cutaneous ulceration and death.

A nodular form of Sheep Pox and Goat Pox, called stonepox, can occur. Stonepox resembles Lumpy Skin Disease of cattle, with skin lesions 0.5–3 cm in diameter that are full of blood, thickened and raised above the surrounding skin.

Spread of the disease

Sheep Pox and Goat Pox spreads to, and between livestock, by:

- Direct contact. Most commonly this is through short-distance aerosol transmission from nasal secretions and saliva when sheep and goats are congregated
- Movement of infected animals
- The fleece, skins and hair from infected animals. The sheep pox and goat pox viruses can survive for at least 3 months in dry scabs
- The semen of infected rams and bucks
- Flies and other insects feeding on infected animals and mechanically transmitting the infection
- Mechanical transmission through infected clothing and equipment

Sheep Pox and Goat Pox viruses are very stable in the environment and can remain viable for long periods, on or off the animal host. They are susceptible to sunlight, but may persist for up to 6 months in a cool, dark environment, such as in shaded animal pens.

Can the disease be transmitted to humans

It is generally considered that Sheep Pox and Goat Pox viruses are not transmitted to humans. However, there have been reports of very mild skin lesions in people working with the viruses.

Risk of disease spread to susceptible animals through products, by-products and discharges from infected animals in meat processing plants

Bone in meat	Deboned meat	Hides and skin	Offal (includes red and green)	Nervous tissue	Effluent (yards, slaughter floor)	Meat, blood and bone meal	Manure, paunch and visceral contents
-	-	+++	-	-	++	-	-

+ = definite risk, - = no known risk

Information on how to decontaminate facilities contaminated with the Sheep Pox and Goat Pox viruses, as well as the recommended method of disposing of infected carcases, and can be found in the AUSVETPLAN Operational Procedures Manual Decontamination. Additional information on the disease is available in the Sheep Pox and Goat Pox Disease Strategy Manual on the Animal Health Australia website.

How the disease will be controlled if it occurs in Australia

If Sheep Pox and Goat Pox occur in Australia, the strategy will be to eradicate the diseases in the shortest possible period using stamping out. Eradication will involve:

- Mandatory slaughtering

- Sanitary disposal of destroyed animals and contaminated animal products
- Quarantine and movement controls over animals, products and other potentially contaminated items
- Decontamination of fomites (facilities, equipment and other items)
- Tracing and surveillance to determine the source and extent of infection and to provide proof of freedom from the disease
- Zoning to define infected and disease-free premises and areas
- A public awareness campaign
- Ring vaccination, for example, if feral goats are involved in the outbreak

Cost sharing

Sheep Pox and Goat Pox is classified as a Category 2 Disease in the Emergency Animal Disease Response Agreement. If an outbreak of Sheep Pox and Goat Pox occurs in Australia, the cost of eradication will be funded 80% from Government and 20% from industry.

Vesicular Stomatitis

Vesicular Stomatitis is a viral disease that affects mainly cattle, horses and pigs. It can also affect sheep, goats, llamas and alpacas.

Where the disease occurs

Vesicular Stomatitis only occurs in the Western Hemisphere (North, Central and South America). The disease is endemic in the warmer regions of the Western Hemisphere.

Vesicular Stomatitis has never occurred in Australia. The most likely way the Vesicular Stomatitis virus will enter Australia is with infected livestock or on contaminated equipment such as harnesses. The virus could also theoretically be introduced with insects on planes or ships, or by infected people.

Clinical signs

Clinically, Vesicular Stomatitis cannot be distinguished from Foot-and-Mouth Disease.

Vesicular Stomatitis causes blisters in the mouth and on the dental pad, tongue, lips, nostrils, coronary bands and teats. The blisters swell and break. Once the blisters break, the raw skin is so painful that the animals refuse to eat or drink and are lame.

- Excessive salivation and lip smacking may be the first sign
- Blanched, raise or broken blisters of different sizes in the mouth
- In cattle, the blisters are usually on the tongue, lips, hard palate and sometimes around the muzzle and lips
- In horses, the blisters are usually on the tongue, the lips, around the nostrils, at the corners of the lips and on the gums
- In pigs the blisters on the snout
- In cattle and horses blisters on the coronary bands are common
- Most animals recover in about 2 weeks

Vesicular Stomatitis can affect up to 100% of animals, but death rates are usually low unless there are complications from secondary bacterial infections. The disease causes significant economic losses in livestock.

Spread of the disease

Vesicular Stomatitis spreads to, and between livestock, by:

- Direct contact between infected and susceptible animals
- Drinking water or feed contaminated with infected saliva and fluid from blisters
- Biting insects

- Flies feeding on infected animals and mechanically transmitting the infection
- Virus on teat cups, harness bits or human hands mechanically transmitting infection

The virus only enters animals through broken skin or damaged mucous membranes.

The virus is relatively unstable and survives no more than several days in facilities that have housed infected animals.

Can the disease be transmitted to humans

Humans can become infected with Vesicular Stomatitis when handling affected animals. In people, Vesicular Stomatitis causes a flu-like syndrome with fever, muscle aches, headache and malaise.

Risk of disease spread to susceptible animals through products, by-products and discharges from infected animals in meat processing plants

Bone in meat	Deboned meat	Hides and skin	Offal (includes red and green)	Nervous tissue	Effluent (yards, slaughter floor)	Meat, blood and bone meal	Manure, paunch and visceral contents
-	-	-	-	-	+	-	-

+ = definite risk, - = no known risk

Information on how to decontaminate facilities contaminated with the Vesicular Stomatitis virus, as well as the recommended method of disposing of infected carcases, and can be found in the AUSVETPLAN Operational Procedures Manual Decontamination. Additional information on the disease is available in the Vesicular Disease Strategy Manual on the Animal Health Australia website.

How the disease will be controlled if it occurs in Australia

If Vesicular Stomatitis occurs in Australia, the strategy will be to eradicate the disease as quickly as possible. Eradication will involve:

- Judicious slaughtering of affected animals in specific circumstances
- Quarantine and movement controls to prevent spread by infected animals, contaminated equipment and people
- Tracing and surveillance to determine the source and extent of infection
- Insect vector control
- Decontamination to eliminate virus
- Epidemiological investigations to determine whether insect or wild animal vectors are involved
- A public awareness campaign

Vaccination may have a role, but its potential usefulness in eradication is not known.

Cost sharing

Vesicular Stomatitis is classified as a Category 2 Disease in the Emergency Animal Disease Response Agreement. If an outbreak of Vesicular Stomatitis occurred in Australia, the cost of eradication will be funded 80% from Government and 20% from industry.