AUSTRALIAN VETERINARY EMERGENCY PLAN

AUSVETPLAN

Enterprise manual

Beef cattle feedlots

Version 5.2

AUSVETPLAN is a series of technical response plans that describe the proposed Australian approach to an emergency animal disease incident. The documents provide guidance based on sound analysis, linking policy, strategies, implementation, coordination and emergency-management plans.

National Biosecurity Committee

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EMERGENCY ANIMAL DISEASE HOTLINE: 1800 675 888

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

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Version 3.0, 2010 (major update)

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1 Introduction

1.1 This manual

1.1.1 Purpose

Enterprise manuals address the risks associated with so-called 'risk enterprises'. These are defined as livestock or related enterprises that are a potential source of major infection for many other premises. Risk enterprises have the potential to increase the size of an outbreak and/or affect its nature.

1.1.2 Scope

This enterprise manual is aimed at government officers and beef cattle feedlot personnel who may be involved in emergency animal disease (EAD) preparedness. For government personnel, including those not familiar with the industry, the manual brings together, from many sources, operational guidelines, plans of action and other resources for dealing with EADs. For industry personnel, including animal and enterprise owners or managers, the manual provides guidelines on the distribution of responsibilities during an EAD outbreak as required by the relevant government authorities. It also provides strategies that may be adopted to improve preparedness for, or to handle, a suspected EAD. Managers should include elements of this manual in the operational manuals of their enterprises.

1.1.3 Development

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

1.2 Other documentation

This enterprise manual should be read and implemented in conjunction with:

- other AUSVETPLAN documents, including response strategies, operational and management manuals, and any relevant guidance and resource documents. The complete series of manuals is available on the Animal Health Australia website[1]
- relevant nationally agreed standard operating procedures (NASOPs). These procedures complement AUSVETPLAN and describe in detail specific actions undertaken during a response to an incident. NASOPs have been developed for use by jurisdictions during responses to EAD incidents and emergencies
- relevant jurisdictional or industry policies, response plans, standard operating procedures and work instructions

[1] https://animalhealthaustralia.com.au/ausvetplan

- relevant Commonwealth and jurisdictional legislation and legal agreements, such as the Emergency Animal Disease Response Agreement (EADRA)[2], where applicable.

1.3 Training resources

1.3.1 EAD preparedness and response arrangements in Australia

The EAD Foundation online course[3] provides livestock producers, veterinarians, veterinary students, government personnel and emergency workers with foundational knowledge for further training in EAD preparedness and response in Australia.

1.3.2 Industry-specific training

Feedlots accredited under the National Feedlot Accreditation Scheme (NFAS)[4] must provide suitable staff training and maintain appropriate records of training.

The Australian Lot Feeders' Association (ALFA)[5] works with Meat & Livestock Australia and Animal Health Australia to develop and deliver training needs within the feedlot sector.

Feedlot-specific training through Feedlot TECH[6] features links to online training, educational resources and career information specific to the Australian feedlot industry. It provides access to online training in core practical feedlot skills that can be completed at any time or location and easily integrated into daily operations and onsite training. Feedlot TECH training is available to any member of ALFA. Available training includes antimicrobial stewardship, cattle postmortem, nutrition, feeding and milling. Training needs for the feedlot sector are continually reviewed and regularly updated.

[2] https://animalhealthaustralia.com.au/eadra
[3] https://animalhealthaustralia.com.au/online-training-courses
[4] www.ausmeat.com.au/services/list/livestock/nfas
[5] www.feedlots.com.au
[6] www.feedlottech.com.au

2 The Australian industry

2.1 Output markets for feedlots

2.1.1 Market for feedlot beef

The feedlot industry contributes approximately $4.6 billion to the Australian economy with over 90,500 tonnes exported 2024. Japan (39%), China (23%) and Korea (17%) remain strong as Australia's leading grain fed export market destination (see Figure 2.1).[7]

The majority of production growth in the beef industry over the past 10 years has been in the feedlot sector with the number of cattle on feed exceeding 1.4 million head and total capacity in Australian feedlots surpassing 1.6 million head in 2024.[8]

The number of days that cattle are held in a feedlot on feed is driven by the market. The domestic market in Australia mostly requires short-fed cattle with around 70 days on feed (DOF).

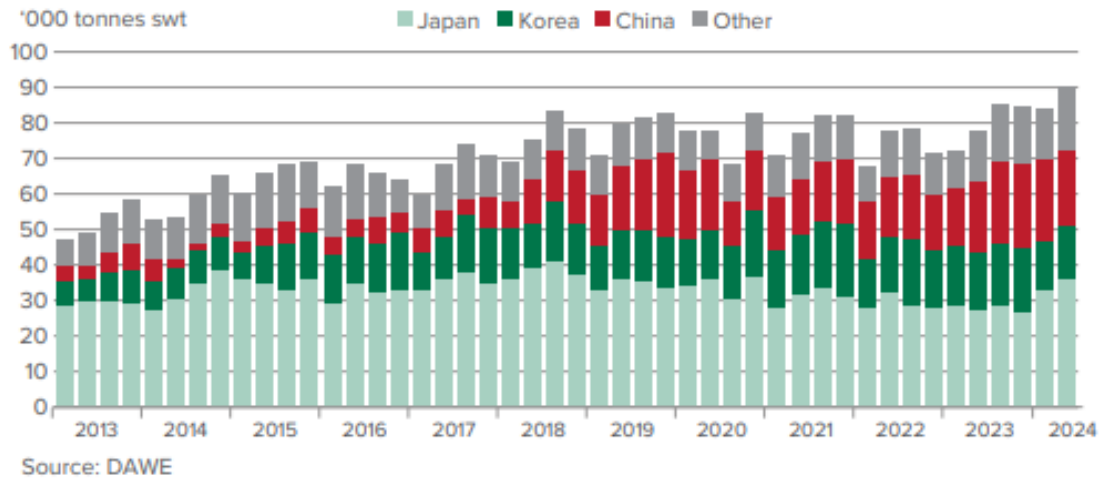


Figure 2.1 Australian grain-fed beef export destinations (Lukey 2024).

2.1.2 Markets for manure

Manure is a byproduct of the feedlot when pens are cleaned. Depending on the feedlot, the manure can go through a number of processes, including composting and processing into pellets. Manure is sold off the feedlot as a source of organic fertiliser and is used by farmers and gardeners. It is sold either in bulk loads or in 20 kg or 25 kg bags.

[7] https://www.mla.com.au/globalassets/mla-corporate/prices--markets/documents/trends--analysis/lot-feeding-brief/mla_lot-feeding-brief_august-2024_220824.pdf
[8] https://www.feedlots.com.au/_files/ugd/5bcc7b_4663ac7fc0d84d5faa18181f940720af.pdf

2.2 Industry operations

Meat & Livestock Australia defines a beef cattle feedlot as 'a confined yard area with watering and feeding facilities, where cattle are completely handfed or mechanically fed for the purpose of beef production' (MLA 2012, p. 1). This definition includes both covered and uncovered yards.

The national beef cattle feedlot capacity is approximately 1.5 million head.[9] Feedlots are major businesses with substantial fixed investment in the premises and large operating expenditures for cattle, feed and staff. They are subject to considerable variations in the price of their inputs and the value of their product in international markets. They use expert knowledge and management skills to balance these factors while ensuring that day-to-day operations run smoothly.

2.2.1 Enterprise types

Feedlots are a mix of family-owned, company-owned or investor-owned. The number of cattle on feed within feedlots varies from fewer than 100 to more than 30,000 (see Figure 2.2). The number of cattle on feed at a feedlot at any one time can vary depending on the price of livestock and grain. The majority of feedlots have a mixture of short and long-fed cattle to supply a number of different markets. Short fed cattle are on feed for up to 99 days, midterm fed cattle range from 99-199 DOF whereas long fed cattle can spend 200 plus DOF.

Beef cattle feedlot enterprises have a variety of structures. They might include :

- alone, without any other concurrent farm-based enterprise
- with a cropping enterprise that supplies part of the feed ration (possibly including other premises owned by the same person or business)
- that is part of a vertically integrated business, with breeding or backgrounding operations on the same or different premises to the feedlot that are owned by the same business
- with other mixed livestock and farming enterprises
- with corporate ownership
- that is opportunistic and only operates when the price of livestock and grain is suitable (typically in dry seasons or drought).

Most enterprises have one feedlot, and the animals enter and leave for slaughter from the same premises. In other enterprises there are several feedlots on different premises owned by the same owner. In the majority of cases with multiple feedlots, livestock do not move between feedlots on different premises, but there may be movement of machinery, equipment and staff between premises. Most beef feedlots run a continuous 'top and tail' enterprise in which animals are regularly arriving and leaving the facility and in which animals are present at all times. Only a small number of feedlots have an 'all-in/all-out' production system that moves animals through the process in groups.

[9] www.feedlots.com.au/overview

Although this manual applies to all feedlots, the larger enterprises are associated with greater concern for emergency animal disease (EAD) preparedness because of the number of cattle involved, their operational complexity and the greater potential profit losses caused by a prolonged disease event.

2.2.2 Locations

Feedlots are usually located close to supplies of grain and other possible feeds, water, store cattle, labour, major highways, abattoirs and saleyards. As a result of these factors, several areas in Australia have a high concentration of feedlots (see Figure 2.2).

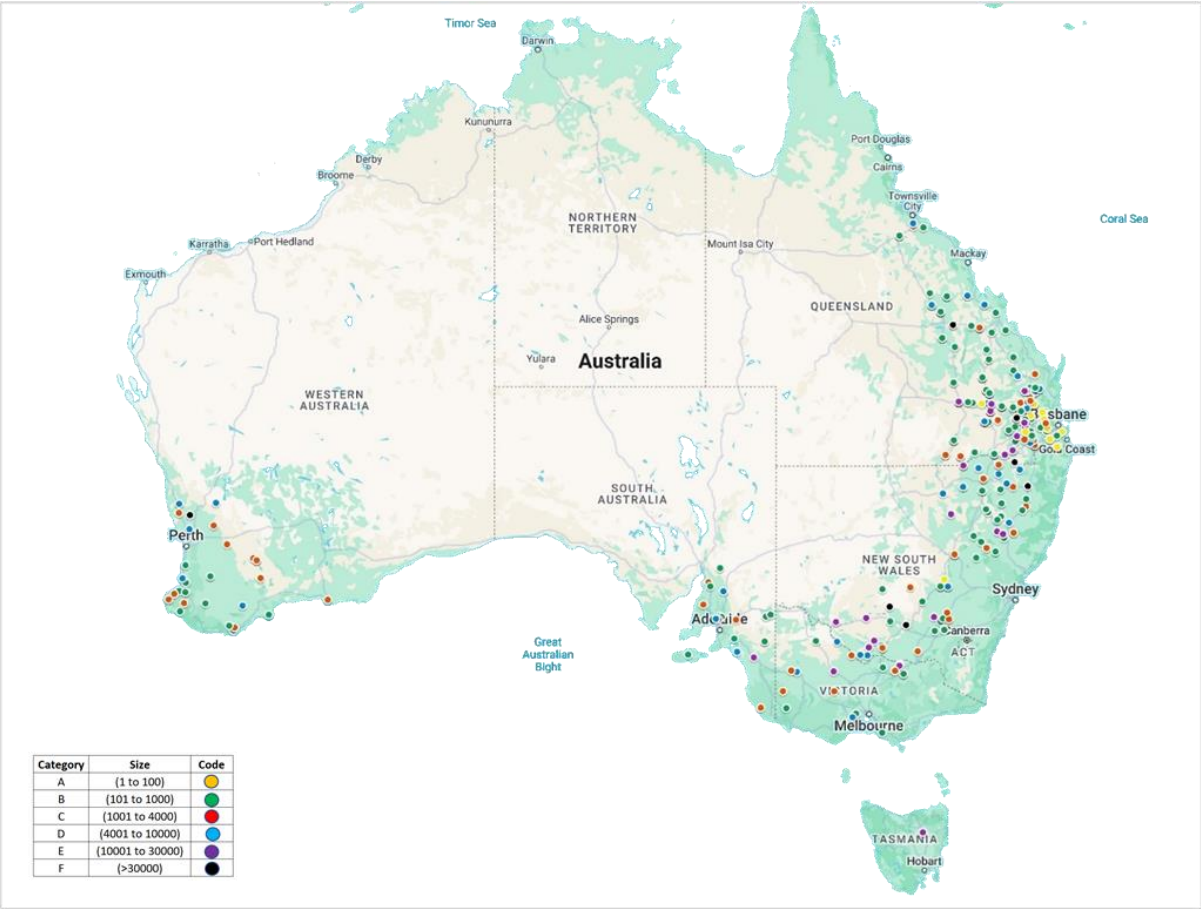


Figure 2.2 Locations and sizes of NFAS-accredited feedlots in Australia in 2023

Source: AUS-MEAT (2024)

Beef cattle feedlots operate in all states of Australia. More than half of the NFAS-accredited feedlots (58%) are in Queensland (see Figure 2.3).

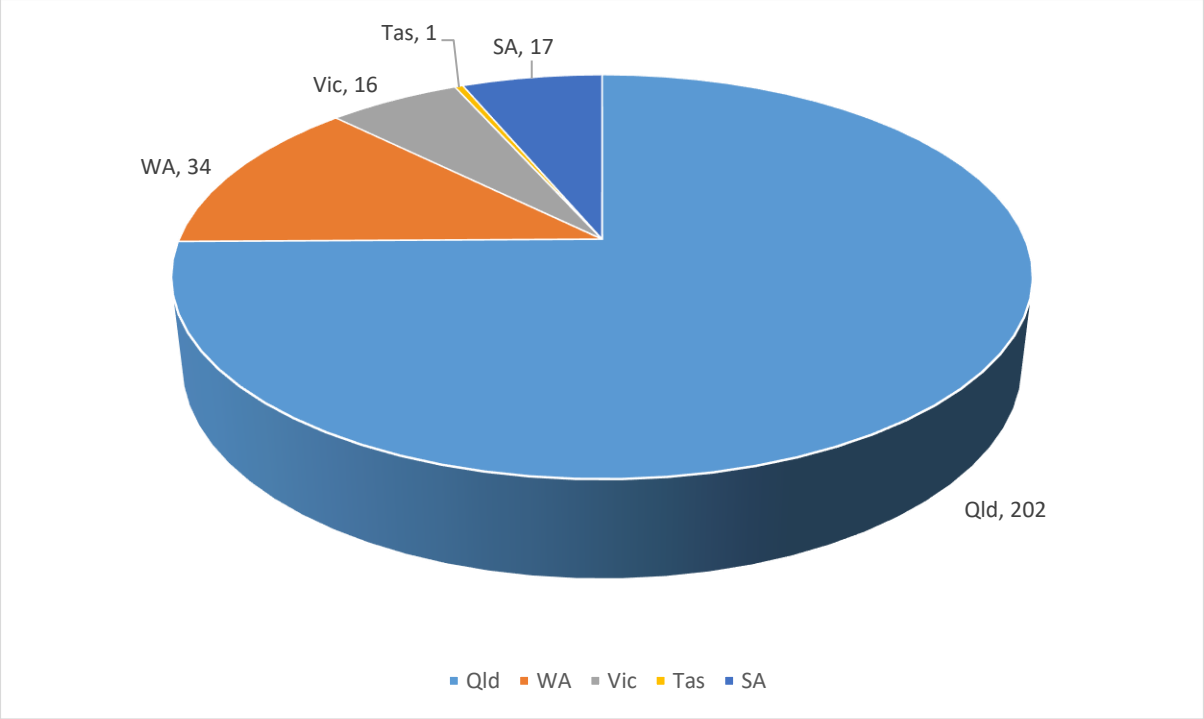


Figure 2.3 Number and proportion of NFAS feedlots by Australian jurisdiction

Source: AUS-MEAT (2024)

The location of a feedlot is subject to approval from the relevant jurisdictional environmental protection agency and to local government planning and approval regulations. There is some variation in feedlot requirements between jurisdictions and between local councils within those jurisdictions. Each state and territory also has its own specific legislation, code of practice, regulations and guidelines for the development and operation of feedlots, as well as more general legislation governing water use, land clearing and other relevant issues.

2.2.3 Feedlot operations

Cattle arrive at a feedlot either by direct entry, from a saleyard or backgrounding operation, or from a depot. All cattle are unloaded at a receiving area and then moved into an induction area that may or may not be physically separated from the feed pens. Each arriving animal has its National Livestock Identification System (NLIS)[10] tag scanned and recorded. The animals are then tagged with an enterprise-specific identification number, vaccinated, drenched and given other feedlot treatments depending on market specifications.

To enable cattle to adapt to a high-energy and high-protein diet, a stepped feeding procedure of starter, grower and finisher rations is used. Once cattle are accustomed to the feeding regime and allocated to a particular pen, minimal relocations occur during the feeding period. It usually takes 48 hours for cattle to move from the arrival areas to their feed pens, but this process can take up to one week. The pens mostly contain between 50 and 250 cattle, depending on the feedlot's practices.

On a large feedlot, there are daily arrivals and dispatches for slaughter. The number of animals sent for slaughter varies as a percentage of pen capacity, depending on the feeding period. Once the animals

[10] https://ablis.business.gov.au/service/ag/national-livestock-identification-scheme-nlis-/321

reach their target weight they are typically moved directly to an abattoir. The time cattle spend in the feedlot depends on their final market.

On occasion, animals that do not grow well are culled. They are most likely to go to saleyards or be sold privately.

2.2.4 Animal health

Animal health is critical within the feedlot sector and is often managed through veterinary management and consultation. Cattle entering a feedlot are inspected on arrival and any problems are recorded. A health management program (generally linked to the individual NLIS identification number for each animal) is then used to detect illness and injuries and monitor livestock health.

Daily health is monitored by 'pen riders': staff on horseback who check livestock for signs of poor health. Illnesses and deaths that occur are detected early, and animals are removed to a hospital pen for treatment or to a disposal area as routine procedure. Treatments and postmortem examinations are commonly performed by feedlot staff under the direction of a veterinarian. Animals showing signs of illness are held in a hospital pen until healthy or, if the illness is minor, returned to their original pen after treatment. The high level of supervision by feedlot managers means that health and welfare issues in feedlots are managed promptly.

Feedlots accredited under the National Feedlot Accreditation Scheme (NFAS) must ensure that systems are in place to prevent contamination of stockfeed when equipment used for handling feed is also used in other activities, such as handling manure and dead stock.

Feedlots engage skilled veterinary advice and management to assist in maintaining the health and performance of cattle on the feedlot. This may be carried out through direct visits, remote consultations or virtual meetings.

NFAS-accredited feedlots have an 'incident reporting' requirement. This means unusual numbers of deaths or illnesses in feedlot cattle within a 24-hour period must be reported to a veterinarian for immediate assessment. Feedlots with up to 5,000 cattle on feed must report more than three deaths or 20 'pulls' (cattle removed from pens due to illness or injury) within a 24-hour period. A sliding scale is applied to feedlots holding more than 5,000 cattle: they must report to a veterinarian if deaths exceed approximately 0.1% of occupancy or if pulls exceed 1.1% (see Table 1 in Appendix 7 of the NFAS Handbook — Rules and Standards of Accreditation[11]). Higher treatment and mortality rates require reporting to the Australian Lot Feeders' Association (ALFA), which then contacts the relevant state's veterinary officer and other government agencies depending on the mortality rate (see Appendix 7, Incident Reporting Decision Diagram, in the NFAS Handbook — Rules and Standards of Accreditation).

[11] https://www.beefcentral.com/wp-content/uploads/2024/01/NFAS_-_Rules_and_Standards_of_Accreditation.pdf

2.2.5 Inputs

2.2.5.1 Animals

Most cattle in feedlots are *Bos taurus* breeds, typically Angus and other British breeds. Animals are sourced from saleyards, private sales and backgrounding facilities. The source of cattle is largely dependent on the target market, which determines the breed and age of cattle required. Incoming cattle can travel long distances to get to feedlots, including crossing jurisdictional borders. Some larger feedlots have specific trucks assigned for cattle movements.

There is frequent commingling as cattle leave the saleyards and prior to their arrival at the feedlot. Accumulators may purchase different lines of cattle until a specified number of animals are ready for the feedlot. These cattle may be held at an interim facility or go straight to the feedlot from premises or saleyards. Cattle that are destined for the long-fed market tend to be obtained from a single source and sent straight to the feedlot, avoiding saleyards and accumulators.

Horses are also used extensively in feedlot operations for pen riding and moving livestock around the feedlot. Horses are often held on the feedlot whilst working but may be changed over regularly.

2.2.5.2 Feed

The types of feed used in feedlots vary according to the location and the local availability of feed. At large feedlots, feed storage can be limited, so grain may be brought in on a daily basis to ensure a sufficient supply. Beef cattle feedlots across Australia vary in terms of facilities and management style. Part of the variation is associated with differences in feedlot size, climate, year-round access to grain, and the product market.

High-moisture feeds, such as silage, citrus pulp and brewer's grains, are generally sourced within 25 to 150 km of the feedlot. Other ingredients, such as cereal grains, pulses, hay, protein meals, molasses (or liquid supplements with vitamin, mineral and/or rumen modifier premixes) and byproducts (such as cottonseed, almond hulls, oils, biscuit meal and bread meal) may be sourced from further away, in some cases more than 1,000 km. All feedlots buy in some component of their feed ration. Some smaller feedlots buy in fully prepared rations, which may be delivered from a truck that also visits other farms on the same delivery run.

Large feedlots usually prepare rations that are formulated onsite by nutritionists. Rations combine grain with roughage such as hay, silage or straw; molasses; other ingredients such as white cottonseed, distillers dried grains, grape meal and almond hulls; and a mineral and/or vitamin supplement. Grains are usually processed to improve digestibility through dry rolling, tempered rolling, reconstitution or steam flaking.

Feedlots use large quantities of feed, with cattle consuming approximately 2.3%–2.5% of their bodyweight equivalent per day on a dry-matter basis. A rule of thumb is that 100 tonnes of feed per week is required for 1,000 cattle.

Feedlots often grow a portion of the grain and forage requirements onsite; however, most bulk grain supplies are purchased regionally. Larger feedlots may receive multiple loads daily. Feed deliveries can generally be made to the feed storage and processing area without any contact with the feeding pens.

Special feed distribution vehicles are used internally to distribute formulated rations from the feed preparation area to troughs in the feeding pens. Most large feedlots use open troughs. Smaller and opportunity feedlots generally use self-feeder bins, as these require filling only once or twice per week.

2.2.6 Outputs

2.2.6.1 Animals

Almost all cattle that leave a feedlot go straight to an abattoir. Some cattle are sent to abattoirs over jurisdictional borders. Cull animals may be sold through saleyards. Calves born at the feedlot may be moved to other premises owned by the feedlot operator, sold through saleyards or privately sold with or without their mothers.

An increasing number of livestock transport vehicles have effluent tanks, but not all trucks are equipped with these tanks.

Once cattle are on feed at one feedlot, they stay there until they are dispatched to a processing facility. Movement of animals between feedlots does not generally occur.

2.2.6.2 Feed

There are usually no feed outputs, as raw ingredients and manufactured feed stay on the feedlot. However, sometimes feed is manufactured at one feedlot then transported to another for use.

2.2.6.3 Waste

i. Manure

Total manure production (solid and liquid) is approximately 6% of bodyweight per day. Manure is cleaned away from pens every 60–90 days in both shedded and open feedlot enterprises, or when the manure layer reaches a depth of approximately 15 cm.

Manure is usually scraped towards the centre or lower end of a pen and formed into a temporary mound. Manure that has been removed from yards is either used immediately or stockpiled on the premises or offsite. Mounding and stockpiling hasten the decomposition of manure and reduce the quantity to be disposed of by up to 50%. However, these processes also reduce the nutrient content of the manure and therefore its value as a fertiliser. In a typical opportunity feedlot, with small numbers of cattle and low stocking densities, manure accumulation is low and the frequency of yard cleaning is lower than in larger, more intensive operations.

Feedlots vary by size in how they manage manure. Smaller feedlots may sell it to surrounding farms for immediate use straight after removing it from the pens. The majority of feedlots compost the manure for a minimum of 28 days, with the manure remaining at the feedlot for 2–3 months after collection. Some larger feedlots process the manure into a pelletised fertiliser that they then sell.

Typically, a feedlot steer weighing 450 kg produces about 800 kg of fresh manure per month, 90% of which is water. Stocking density and animal live weight have a significant impact on the moisture added to the feedlot surface (referred to as a pad) and on the rate of manure accumulation. After taking decomposition and typical moisture content of the pad into account, about 1–2 tonnes of manure per head needs to be removed from the yards each year.

ii. Effluent

Rain run-off from feedlots is described as 'effluent' because it has been in contact with manure. The effluent has the potential to pollute surface water and groundwater. Effluent is collected, held in a sedimentation system and then stored in holding ponds until it can be used. Drains, sedimentation systems and holding ponds may be made from compacted soil or lined with an impermeable material such as clay to prevent soil infiltration. Effluent is generally diluted with water and used for irrigating crops or pasture; alternatively, it may be dispersed by evaporation. The NFAS maintains strict standards for effluent management.

iii. Carcasses

Carcasses are removed from pens following the daily yard inspection. They are generally lifted using a loader or carry-all rather than being dragged away, which could result in the discharge of blood and other body fluids. Carcass disposal may occur through burial in prepared pits, burning or composting. A single postmortem site is used, generally located some distance from the feedlot to optimise biosecurity. The area may be secured by fencing to reduce entry of wildlife or feral animals.

2.2.7 Facility structure

A typical commercial feedlot (see Figure 2.4) is comprised of an administration complex, a feed preparation area, cattle pens and yards, and waste disposal areas. The design varies with the size of the facility, with smaller feedlots generally having fewer administrative buildings and feed processing facilities. Some large feedlots have an outer perimeter fence to stop feral and wild animal movements and unsolicited human movements.

Feedlots may be either indoor or outdoor systems. In outdoor systems, the flooring pad in the pens is typically compacted gravel or dirt. The manure packs down and mixes with the gravel or dirt to form an interface layer that assists with scraping and pen cleaning. In shedded systems, the flooring is typically gravel, or occasionally bitumen, with additional bedding made of straw, rice hulls or wood chips. The fences around the stock pens tend to be wooden or steel posts with cables. Outdoor systems may have shade cloth or hard structures that protect cattle from the sun.

The space requirements per animal are defined under the Australian Animal Welfare Standards and Guidelines for Cattle.[12] Pen size and the number of animals per pen must reflect the minimum required square metreage per animal. Pen size is often tailored to the number of cattle in a typical truck delivery, and a range of sizes may be used in custom feedlots that receive consignments of different sizes.

[12] https://animalwelfarestandards.net.au/welfare-standards-and-guidelines/cattle

The processing and induction yards are usually contiguous with the feedlot. Incoming and outgoing cattle movements typically use the same yard complex (perhaps with a different laneway system).

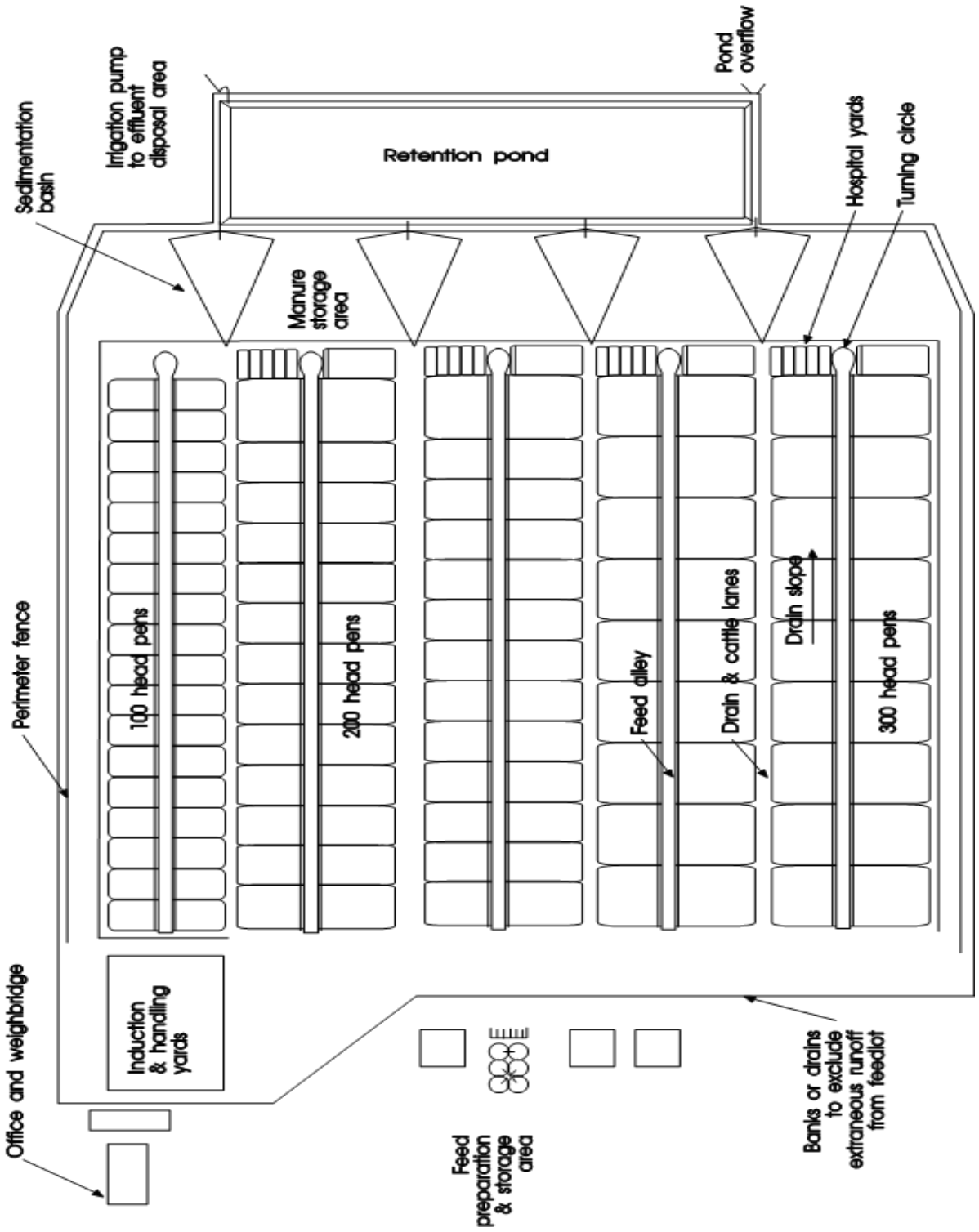


Figure 2.4 Schematic illustration of a typical feedlot

Access for feed distribution is via an all-weather road. Water troughs are usually situated in the centre of a fence line on the lower side of the pen, providing access to two troughs per pen. Water troughs generally provide drinking space for about 10% of a pen at any one time. Generally, 300 mm of trough length is allowed for every 10 head. Water troughs may be accessible to only one pen or shared

between adjoining pens. Dual-purpose channels that serve as both cattle lanes and drains are common at the low end of the pens. They provide all-weather access for cattle movement, cleaning and maintenance. Pen-to-pen drainage is avoided by ensuring that the pen cross-slope is less inclined than the slope towards the below-pen drain.

Most feedlots have hospital pens that are separated from the feeding pens.

Most feedlots do not have truck washes, but some have a concrete apron for washing machinery and vehicles.

2.2.8 Traceability

In all states and territories of Australia, the NLIS requires all cattle to be individually identified with a NLIS-accredited device before leaving an area defined by a Property Identification Code (PIC).[13] An approved NLIS device for cattle is a radio-frequency identification (RFID) that includes either a single ear tag or a rumen bolus and visual ear tag combination.

All feedlots have a PIC, but having a PIC does not automatically identify the premises as a feedlot.

The feedlot may contain a mixture of customer-owned and feedlot-owned cattle. Customer-owned cattle are fed for a fee and ownership is not transferred to the feedlot. However, movement records must be maintained and the NLIS database updated to reflect all of the movements of each individual animal, regardless of ownership of the premises or animal.

2.2.9 Staff

Most people who work on the feedlot live locally or onsite. Some staff have their own livestock and many own horses.

2.2.10 Record keeping

NFAS-accredited feedlots are required to keep comprehensive up-to-date records as part of their accreditation. These records include the movements of animals, feed trucks and visitors. The record keeping in smaller and noncommercial feedlots may be less rigorous.

2.2.11 Biosecurity

NFAS-accredited feedlots are required to have biosecurity management plans. These plans are audited as part of their NFAS accreditation.

The biosecurity standards at NFAS-accredited feedlots vary. Some feedlots have visitor and stock reception areas with relevant forms for stock received, inspection, visitor risk assessment and vehicle cleaning. Vehicle routes on the premises are designed to minimise the entry and spread of diseases by controlling movements within and around the feedlot. The level of biosecurity on feedlots that are not NFAS-accredited is less well understood.

[13] www.integritysystems.com.au/on-farm-assurance/property-identification-code-pic

2.2.12 Feral and wild animals

Feedlots can attract significant populations of rodents and other feral and wild animals due to the abundant availability of feed stored at the feedlot. NFAS-accredited feedlots manage feral and wild animals through their biosecurity management plan whereas large feedlots may also use exclusion fencing to keep out large feral animals. Feral pig access can be problematic on feedlots due to readily available food sources if fencing is not in place.

2.3 Industry organisation

ALFA is the national peak body representing the feedlot industry. It provides leadership, formulates policies, sets strategic directions, provides training through Feedlot TECH, provides membership services, leads community engagement and agrees to overall levels of funding for industry projects (eg research, development and extension). As the industry representative body, ALFA works on a wide range of feedlot management areas in response to the needs of the industry and its members.

2.4 Accreditation schemes

2.4.1 The National Feedlot Accreditation Scheme

The NFAS program underpins the integrity of the Australian lotfeeding industry. It was initiated by ALFA in 1994 and is now owned and managed by AUSMEAT through the Feedlot Industry Accreditation Committee (FLIAC) made up of the feedlot industry, AUSMEAT and 4 state governments.[14] Accredited feedlots must demonstrate a responsive feedlot management program that guarantees the safety and integrity of their grain fed beef products.

The accreditation process requires a feedlot to:

- have documented procedures in place that are specific to the feedlot and meet the industry standards
- maintain records to show that these procedures are adhered to for all cattle fed at the feedlot
- undergo a third-party audit of these procedures, records and facilities.

Each NFAS-accredited feedlot has a quality system manual and employs trained QA officers. Accredited feedlots are audited annually by a third party to ensure they continue to meet the agreed standards.

The NFAS has around 350 accredited feedlots. All accredited feedlots are required to have a biosecurity management plan and an EAD action plan that outline implemented processes that the feedlot has in place to address biosecurity.

There may be situations in which feedlots contain cattle that are fed intensively, but the feedlots are not NFAS-accredited and are therefore not accountable to the NFAS standards. Unaccredited feedlots

[14] https://www.ausmeat.com.au/services/list/livestock/nfas/nfas-information/

are not permitted to sell their beef with the Authority for the Uniform Specification of Meat and Livestock (AUS-MEAT) 'grain-fed' cipher.[15]

2.4.2 The European Union Cattle Accreditation Scheme feedlot rules

Beef exported to the European Union must come from animals that have been raised on premises accredited under the European Union Cattle Accreditation Scheme (EUCAS). This includes accredited farms, accredited feedlots and accredited saleyards. More information can be found on the Department of Agriculture, Fisheries and Forestry (DAFF) EUCAS site.[16]

2.4.3 The Livestock Production Assurance program

The Livestock Production Assurance (LPA) program is the on-farm assurance program that underpins market access for Australian red meat. Feedlots do not need to be accredited under the NFAS to participate in the national LPA program. More information about LPA can be found on the Livestock Production Assurance Integrity Systems site.[17]

2.4.4 Relevant documents

The following are documents relevant to LPA, EUCAS and/or NFAS:

- Australian animal welfare standards and guidelines (DAFF)[18]
- Safe Use of Veterinary Medicines on Farms (Australian Veterinary Association) (MLA 2012)[19]
- Australian beef cattle feedlot manuals (Meat and Livestock Australia [MLA])[20]
- National Beef Cattle Feedlot Environmental Code of Practice (MLA)[21]
- National Guidelines for Beef Cattle Feedlots in Australia (MLA) [22]
- National Biosecurity Manual for Beef Cattle Feedlots (Animal Health Australia)[23]
- National Vendor Declaration (Integrity Systems)[24]
- National Cattle Health Declaration (Australian Cattle Veterinarians)[25]
- Commodity Vendor Declaration (MLA).[26]

[15] https://www.mla.com.au/news-and-events/industry-news/eating-quality-cipher-a-key-advantage-for-industry/
[16] www.agriculture.gov.au/biosecurity-trade/export/controlled-goods/meat/elmer-3/eucas
[17] www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance
[18] www.agriculture.gov.au/agriculture-land/animal/welfare/standards-guidelines
[19] www.ava.com.au/policy-advocacy/policies/use-of-veterinary-medicines/responsible-use-of-veterinary-medicines-on-farms
[20] www.mla.com.au/contentassets/7987492b3943479aaf5729ec74463833/b.flt.0146_final_report.pdf
[21] www.feedlots.com.au/_files/ugd/f25d7a_9f5490f89b894f4cb3d8fdcadd5f37e4.pdf
[22] https://futurebeef.com.au/wp-content/uploads/National-guidelines-for-beef-cattle-feedlots-in-Australia-third-edition.pdf
[23] https://farmbiosecurity.com.au/wp-content/uploads/2019/03/National-Biosecurity-Manual-for-Beef-Cattle-Feedlots1.pdf
[24] https://integritysystems.com.au/on-farm-assurance/national-vendor-declaration-nvd
[25] www.immuneready.net.au/declared-ready
[26] https://www.mla.com.au/globalassets/mla-corporate/meat-safety-and-traceability/documents/commodity-vendor-declaration.pdf

2.4.5 Auditing

The majority of feedlots in Australia are accredited under the NFAS.[27] NFAS-accredited feedlots are audited annually by AUS-MEAT Limited.

The exact number of unaccredited feedlots is unknown. Non-NFAS feedlots may be subject to regular independent audits to meet their local council and jurisdictional requirements.

[27] www.ausmeat.com.au/services/list/livestock/nfas/nfas-information

3 Emergency animal diseases and the industry

3.1 Emergency animal diseases that may affect cattle

The main emergency animal diseases (EADs) that may affect cattle are listed below. More details on each are available in the relevant **AUSVETPLAN response strategy** or **response policy brief**.[28]

The main EADs that affect cattle are:

- anthrax (sporadic)
- Aujeszky's disease (sporadic)
- bluetongue
- bovine brucellosis
- bovine spongiform encephalopathy
- bovine tuberculosis
- contagious bovine pleuropneumonia
- East Coast fever
- foot-and-mouth disease (FMD)
- haemorrhagic septicaemia
- heartwater
- Jembrana disease
- lumpy skin disease
- rabies
- Rift Valley fever
- rinderpest (eradicated)
- screw-worm fly
- surra
- vesicular stomatitis.

3.2 Main spread mechanisms for emergency animal diseases

Feedlots present a high risk for the introduction and spread of EADs and other diseases not categorised as EADs.

This enterprise manual focuses on Emergency Animal Disease Response Agreement (EADRA)[29]-listed EADs.

The National Biosecurity Manual for Beef Cattle Feedlots[30] outlines the main disease spread mechanisms (see Table 3.1).

[28] https://animalhealthaustralia.com.au/ausvetplan/
[29] https://animalhealthaustralia.com.au/eadra
[30] www.farmbiosecurity.com.au/wp-content/uploads/2019/03/National-Biosecurity-Manual-for-Beef-Cattle-Feedlots1.pdf

Table 3.1 Main disease spread mechanisms

Type of contact	Transmission mechanism	Specific biosecurity risk
Direct	Cattle introductions or cattle movements from one production area to another with them closely confined to one another	• Cattle
Direct	Direct contact with infected or contaminated carcasses	• Cattle
Direct	Susceptible feral and domestic animals' excretions and secretions	• Other livestock, feral animals, predators and pets in production areas
Indirect	Horse introductions and subsequent close confinement	• Horses
Indirect	Nonsusceptible feral and domestic animals' excretions and secretions	• Other livestock, feral animals, predators and pets in production areas • Waterbird populations in effluent systems and sediment ponds • Domestic poultry in production areas
Indirect	Insects (ticks and nuisance flies includin biting flies)	• Biological or mechanical transmission via insects
Indirect	Rodents	• The animals themselves or their excretions and secretions
Indirect	Contaminated feed or water	• Excretions and secretions from avian or other animal species • Raw materials used for the production of feed mix • Postproduction contamination or spoilage during transport and storage • Exposure of feed to rodents and birds on the premises • Bacteria and mould in poor-quality or damaged feed • Restricted animal material (RAM)[31] • Shared water troughs in pens
Indirect	Inhalation or ingestion of aerosol or dus particles	• Aerosolised pathogens (eg FMD virus)
Indirect	Equipment and vehicle use without appropriate decontamination	• Heavy plant equipment

[31] https://animalhealthaustralia.com.au/australian-ruminant-feed-ban/

Type of contact	Transmission mechanism	Specific biosecurity risk
		• Utility vehicles, trucks, horse floats etc • Heavy machinery, front end loaders, tractors etc
Indirect	Fomite (contaminated equipment)	• Veterinary equipment brought to the feedlot or used for induction
Indirect	People (visitors and staff) and associated fomites (eg clothing and shoes)	• Staff and family members living onsite • Animal health consultants • Contractors, maintenance personnel
Indirect	Incorrect effluent management (eg sediment ponds not left long enough before being used as irrigation)	• Effluent used on pastures

3.3 Significant issues for the industry in the event of an EAD incident

Feedlot managers may be able to obtain information from the response agency about the source of the outbreak and rapidly determine whether incoming cattle present a risk that needs to be managed. If incoming cattle are suspected of carrying the EAD, they may be diverted to other premises or segregated from other cattle on arrival, depending on the disease. This decision is made in consultation with the feedlot veterinarian and the response agency. With suitable contingency planning, feedlot managers can take actions to reduce the likelihood of disease introduction and spread to their cattle. For example, they might create a buffer zone around the feedlot by moving livestock or identifying suitable isolation facilities.

3.4 Commercial implications for the lot fed industry

The effects of an EAD incursion on a business will vary depending on the specific EAD and the outbreak location, as these factors determine the appropriate response activities and the export and domestic markets that will be affected.

Most EADs are not a risk to public health. However, the commercial implications of a significant EAD outbreak on the feedlot industry can be far-reaching. These may include:

- loss of income for people and companies that work in the feedlot supply chain
- loss of income for companies that provide services to the feedlot industry, including suppliers of feed, farm services, farm consultants, veterinarians and nutritionists
- loss of consumer confidence in Australian products, both domestically and internationally, leading to a long-term reduction in consumer demand
- changes or replacement of Australia as a supplier for key international markets
- a reduction in the overall number of animals in areas affected by the EAD, resulting in a loss of genetic diversity

- long-term economic sustainability impacts on producers, processors, allied industries and rural communities that depend on the feedlot industry.

3.4.1 Individual feedlot incurred losses

An EAD outbreak may cause:

- financial issues when recurring costs associated with business operations (including mortgage or loan interest charges) are incurred in the absence of all, or part, of the business's cash flow
- a potential decrease in, devaluing of, or loss of domestic and international trade in beef feedlot products
- environmental issues resulting from cattle and product disposal (if storage is limited and carcasses require on-farm disposal)
- additional costs for remedial treatment and monitoring of livestock and other animals
- potential herd and genetic losses due to disease and disease control measures
- job losses as businesses respond to their reduced ability to maintain normal business operations and cash flow
- potential company closures.

3.4.2 Valuation and compensation

Compensation may be available to owners for livestock that die or are destroyed for the purpose of eradicating an EAD or preventing its spread. For cost-shared responses, details are available in the **AUSVETPLAN operational manual *Valuation and compensation*** and the Emergency Animal Disease Response Agreement (EADRA).[32]

3.4.3 Change to market access

Access to export markets, and potentially to domestic markets as well, may be affected by the outbreak of an EAD in Australia. Importing countries have requirements that must be met for the importation of Australian animals and animal products. The importing requirements for Australia's main export trading partners are recorded in the Manual of Importing Country Requirements (MICOR).[33] Export market interruptions are likely to result in export processing facilities closing or taking considerably less stock for slaughter.

EAD outbreaks can therefore have immediate and substantial effects on the export market. The domestic beef market is likely to continue with decreased demand.

Feedlot business planning for future outbreaks of EADs might include a consideration of:

- restricted or curtailed access to export processing facilities
- inability to send cattle over jurisdictional borders for processing
- capacity to hold animals beyond their planned 'on feed' time
- alternative markets for the product
- business versatility to adapt to changed market access
- maintenance of business operations and staff.

[32] https://animalhealthaustralia.com.au/eadra
[33] https://micor.agriculture.gov.au/Pages/default.aspx

3.4.4 Long-term implications

The long-term implications of an EAD for lot feeders will vary with the type of disease, its location and spread and the export market response. If a loss of access to Australian beef feedlot products in customer countries results in reputational damage, there may be a reduction in demand for Australian feedlot beef and a loss of export income in the long term.

Under the guidelines of the World Organisation for Animal Health (WOAH), there is opportunity for a containment zone and compartmentalisation[34] to be established around the areas where in which the outbreak is occurring, with the purpose of keeping the remainder of the country disease-free status.

The recognition of such could be a preparedness strategy negotiated by the Australian Government, individual overseas trading partners and domestic supply chains to ensure business continuity is balanced with disease eradication efforts.

3.4.5 Operational activities following confirmation of an EAD

During an EAD response, all contacts with animals on infected premises (IP), dangerous contact premises (DCP), and suspect premises (SP) or trace premises (TP) (refer to glossary) will be followed up by government authorities. The extent of trace-back of cattle movements will vary for each disease depending on the period between infection and the onset of clinical signs. Trace-forward of movements off IP will apply up until the time quarantine is imposed. Tracing will also apply to all animal products, vehicles (eg livestock transport vehicles, feed trucks, visitors' cars), materials such as hay and grains, and people (including veterinarians, nutritionist's contractors, feed representatives and visitors). The creation and maintenance of detailed documentation is central to this process.

3.4.5.1 Animals on the feedlot that are infected or likely to be infected

If animals that are infected or likely to be infected are determined to be on a particular feedlot, the jurisdictional disease control authorities will direct all activities on that premises until the premises status is resolved. For cost-shared responses, the nature of the response activities will be determined by the state and territory authorities in conjunction with the National Management Group (NMG), following the recommendations of the Consultative Committee on Emergency Animal Diseases (CCEAD). The primary objectives of any response activity are to:

- prevent the spread of the EAD agent between infected and susceptible animals and areas
- contain the infection to the IP
- prevent the production of large volumes of the EAD agent by infected animals
- minimise the amount of EAD agent in the environment.

For many EADs, these objectives are best achieved through quarantine and movement controls and 'stamping out'. Stamping out is achieved by the destruction and disposal of all susceptible animals on the affected premises, followed by decontamination. In a small number of cases, such as screw-worm fly incursion and some insect borne viral diseases such as bluetongue, the movement of the infection cannot be controlled by managing animal movements alone but appropriate vector control can be instituted.

The jurisdictional disease control authorities will manage the response on individual premises through an appointed site supervisor. A specific destruction team will carry out animal destruction

[34] https://www.woah.org/en/what-we-do/standards/observatory/implementation-of-standards-the-observatory-annual-report/monitoring-zoning-and-compartmentalisation/

activities. Feedlot managers will need to work closely with this team. A livestock controller will oversee the handling and movement of all livestock in accordance with the plans developed by the local control centre (LCC) infected premises operations (IPOP) function. Movement of all equipment and vehicles onto and off an IP will be under the direction of the field (FLD) infected premises site supervision function, managed by the FLD infected premises security personnel with assistance of feedlot staff. When an IP, DCP, SP or TP is declared, a formal quarantine notice, as defined in relevant jurisdictional legislation, will be issued. The terms of such quarantine will vary depending on the circumstances, but these terms will usually formally restrict the movements of cattle and other materials and require the owner or manager to take specific steps to help manage the disease under direction of the government authority.

These activities require significant organisation and resources and are likely to take a considerable time to complete. Public relations and animal welfare also need to be considered by the government authority.

3.4.5.2 Destruction of animals

In an outbreak of a highly contagious disease such as FMD, it may be necessary to destroy a large number of cattle quickly to reduce the potential for further spread of the virus. Speed is essential when managing these outbreaks, as live infected animals will continue to produce and possibly spread the disease agent. It is essential that animals are destroyed humanely and in accordance with response agency requirements. A destruction plan that sets out the destruction method and process will be determined by the LCC destruction function after consultation with the feedlot manager and/or owners and consideration of all relevant factors. In some circumstances, destruction of cattle at an abattoir may be possible following a risk assessment and a determination of the available resources. Guidance on acceptable techniques for the humane destruction of cattle is provided in the **AUSVETPLAN operational manual *Destruction of animals***.

Before any destruction of cattle in an EAD response occurs, animals and property should be valued and a disposal plan developed and approved.

3.4.5.3 Disposal

Options for disposal are described in the **AUSVETPLAN operational manual *Disposal.***

The disposal process will be set out in a disposal plan that will be determined by the IPOP function after consultation with the feedlot manager and/or owners and consideration of all relevant factors.

ALFA are presently working with the lot fed industry to develop resources as so that feedlots can implement individual Feedlot EAD Plans that identify the preferred methods of disposal specific to each feedlot.

3.4.5.4 Decontamination

Once destruction and disposal are complete, the feedlot's decontamination process will be managed by the FLD decontamination/disinsection function in cooperation with the feedlot manager and other staff. Effective decontamination of facilities, equipment and vehicles reduces the period between animal destruction and restocking. For additional information, consult the **AUSVETPLAN operational manual *Decontamination***.

3.4.5.5 Tracing

Depending on the type of EAD and the location of infected animals, response authorities may require assistance from the feedlot to complete tracing. Tracing is the gathering of information about the movements of animals, people and potentially disease-bearing items within a defined period. Its purpose is to identify the probable source and spread of EAD agents. Further information is available in the **AUSVETPLAN guidance document *Tracing and surveillance*.**[35]

Feedlots should ensure that their records can rapidly identify the source of all stock (ie the Property Identification Code of the animal's last property of residence) and the current location of stock on the feedlot. Other things that may need to be traced include vehicles, equipment, people and waste. Adequate records for all of the above must be available.

3.4.5.6 Surveillance

According to the **AUSVETPLAN guidance document *Tracing and surveillance***, surveillance in the EAD context means 'the systematic ongoing collection, collation and analysis of information, and its timely dissemination, to define the extent of infection in an area, detect new infections, monitor progress against response objectives and demonstrate freedom from disease.[35]

Depending on the type of EAD and the location of infected animals, response authorities may require assistance from the feedlot to facilitate surveillance. This is likely to include providing access to several animals from the feedlot for examination and/or sampling. Feedlots may also be asked to provide animal health records and morbidity and mortality data.

3.4.5.7 Vaccination

Vaccines may be used to control some EADs (eg FMD). How and when the vaccine is used will be determined on a case-by-case basis by the NMG on advice of the CCEAD and then applied through jurisdictional authorities.

3.4.5.8 Treatments

The Emergency Animal Disease Response Plan (EADRP) may include animal treatments that reduce the spread of the disease, for example treatments that control vectors. The withholding period[36] must be considered if animals are to be slaughtered for human consumption.

3.4.5.9 Movement controls

Movement controls are described in the relevant **AUSVETPLAN response strategy**. During a response, these controls are documented in jurisdictional legislation. Controls may vary during a response depending on the jurisdiction, the area involved and the stage of the response. Many EAD responses require movement controls or management over an area wider than the directly affected premises, so in many cases permits are required when moving livestock, feed, vehicles, waste and equipment. These permits are issued by the response agency and include conditions that mitigate

[35] https://animalhealthaustralia.com.au/wp-content/uploads/dlm_uploads/2021/07/AVP_Guidance_TracingAndSurveillance_V5.pdf
[36] https://www.apvma.gov.au/registrations-and-permits/data-requirements/agricultural-data-guidelines/residues-part-5a/specific/withholding-periods

specific disease transmission mechanisms. Feedlots that obtain stock from many different premises or areas are particularly vulnerable to being implicated by traces from high-risk premises or regions.

National livestock standstill (only applies to foot-and-mouth disease)

Restrictions placed on the movement of cattle by a national livestock standstill affect the operations of all feedlots. Further details on the national livestock standstill are available in the **AUSVETPLAN response strategy *Foot-and-mouth disease***.

4 Emergency animal disease preparedness and management

Information about national arrangements for the management of emergency animal diseases (EADs) can be found in the **AUSVETPLAN control centres management manual, Part 1** ***Managing an emergency animal disease response***.

In an EAD event, the relevant jurisdictional government animal health officials will manage all aspects of disease control and eradication, following the process described in their EAD response plan and informed by the appropriate **AUSVETPLAN response strategy**. To minimise the risk of disease spread, it is important that all relevant businesses fully comply with what is required of them. The lead government agency will provide leadership on all operational activities.

To ensure an effective response, businesses can assist by:

- complying with all instructions provided by the lead agency
- checking with the relevant government authority before moving on or off the premises any animals, animal products or materials that have been in contact with livestock
- maintaining accurate and timely records of all movements of animals, feed, manure, people, machines (etc) that move onto and off the premises
- maintaining a current and accurate inventory of cattle, infrastructure and equipment, thereby expediting the process of valuing items that need to be destroyed in an EAD response and assisting the preparation of claims for compensation
- keeping all NLIS animal identification transfers current
- considering EADs during development and implementation of the biosecurity management plan
- maintaining regular surveillance of livestock by trained staff (early detection and notification of disease is integral to rapid implementation of disease control measures)
- knowing how to report any suspicion of an EAD and doing so immediately
- having a reliable water supply (in an EAD response there may be an increased requirement for water to facilitate decontamination).

Information on the likely clinical signs of EADs can be found in:

- the appropriate **AUSVETPLAN disease response strategy**
- government animal health agency correspondence
- government health agency websites
- *Emergency animal diseases: a field guide for Australian veterinarians*[37]
- the Australian Government website Outbreak: animal and plant pests and diseases[38] (during an outbreak).

The following **AUSVETPLAN** manuals provide more detailed information on response activities:

- The relevant EAD **response strategy**
- **Operational manual** ***Destruction***
- **Operational manual** ***Disposal***
- **Operational manual** ***Decontamination***
- **Guidance document** ***Movement controls***

[37] www.outbreak.gov.au/prepare-respond/identify-pests-diseases/emergency-animal-diseases-field-guide
[38] www.outbreak.gov.au

- **Guidance document *Tracing and surveillance.***

5 Industry preparedness

5.1 National-level industry preparedness and response planning

5.1.1 Procedures for early detection of disease

Australia has strong systems and processes in place for the early detection, surveillance and rapid reporting of emergency animal diseases (EADs). These systems include active surveillance programs (eg the National Significant Disease Investigation Program and the National Transmissible Spongiform Encephalopathy Surveillance Program) and passive surveillance systems (eg producer and abattoir surveillance). The identification of pathogens and the tracking of exposure to pathogens may also be informed by vector surveillance and sentinel animal surveillance (eg the National Arbovirus Monitoring Program).

The importance of investigating animals with clinical signs consistent with EADs is regularly clearly communicated by government authorities to lot feeders and their consultant veterinarians.

5.1.2 The Australian Lot Feeders' Association's commitments and responsibilities as a signatory

As a signatory to the Emergency Animal Disease Response Agreement (EADRA) on behalf of lot feeders, ALFA is committed to undertaking preparedness activities and to meeting its cost-sharing obligations during a response.

ALFA invests heavily in preparedness activities on behalf of lot feeders by engaging in EADRA review opportunities and participating in AUSVETPLAN technical writing groups.

In addition to these activities, ALFA ensures that the risk of an EAD occurrence is minimised through the development and implementation of biosecurity management plans and the promotion of EAD response preparedness within the NFAS. ALFA also ensures that personnel are trained to step into key roles in an EAD response. These trained personnel may serve as feedlot representatives on the CCEAD or the NMG, or they may fulfil the Liaison–Livestock Industry function at state or local control centres.

During a response, ALFA meets its cost-sharing arrangements by following the predetermined strategies defined in the ALFA EAD crisis response plan.

5.1.3 Emergency animal disease response planning for the lot fed industry

ALFA has developed an ALFA EAD response plan template that outlines the strategies ALFA will take to lead the feedlot industry though an EAD response. The ALFA EAD response plan and associated standard operating procedures play a pivotal role in the feedlot industry's responses EAD incursions.

The ALFA EAD response plan:

- ensures ALFA meets its obligations under the EADRA

- guides collaborative work with government biosecurity officers to manage EAD outbreaks with the highest degree of mutual understanding and efficiency
- supports the feedlot industry through EAD incursions
- minimises the time out of domestic markets
- minimises the time out of export markets, either through the reclamation of market access or through the establishment of new markets via zoning or compartmentalisation planning in partnership with the Australian Department of Agriculture, Fisheries and Forestry
- contributes to bilateral trade negotiations
- identifies government and industry support and relief arrangements and works with relevant jurisdictional authorities to identify opportunities to pivot to contract workers during a response
- manages human health impacts, including the maintenance and support of mental health (including suicide prevention), particularly where people are directly affected by financial stress and/or response activities
- provides supporting evidence for EAD freedom through access to movement records that facilitate traceability
- assists in the development of communications plans and materials developed in partnership with response agencies, including fact sheets and communiqués covering
    - biosecurity key messages
    - movement controls
    - human health and safety issues associated with beef and associated products.

5.1.4 Individual feedlot preparedness

Individual feedlots can also incorporate EAD planning components into their biosecurity management plans through the consideration of:

- improved biosecurity measures to reduce the likelihood of introducing disease to the feedlot, spread within the feedlot or spread to other places
- business continuity in the case of an EAD
- animal welfare
- feed contingency plans
- the capacity of current facilities for the timely and humane destruction of all animals on the premises
- the feasibility of disposing of all stock held on the feedlot within a short time
- the suitability of current machinery for stock disposal
- the availability of suitable on-premises resources to decontaminate the premises
- movement operations, including the management of cattle in transit in the event of a national livestock standstill
- the environmental impacts of EAD operations
- the feasibility of selling all cattle on the feedlot for processing at once
- processing facility capacity and capability
- withholding periods
- storage capacity that allows manure and effluent to be stored on the premises for several weeks
- staff capacity to assist with on-premises operations, including animal destruction, disposal and decontamination (with a preference for personnel who do not have susceptible species at home)
- high-quality record keeping that supports traceability

- the maintenance of a detailed inventory to assist with valuation and compensation.

In addition to disease control, feedlots may also better prepare for maintaining business and financial viability by:

- increasing cash reserves
- identifying assets (such as equipment) that could be sold to generate cash without posing a biosecurity risk
- managing ongoing costs (eg facilities, employee salaries or wages, on-costs)
- strengthening working relationships with banks, other financial institutions and accounting and legal firms
- obtaining insurance for the business, income protection, equipment, supplies and product
- reviewing business lease arrangements
- reviewing staff contracts to determine flexibility in increasing or decreasing work hours or laying off staff
- establishing effective communications with suppliers they can draw upon in case of payment delays or to negotiate repayment terms during the outbreak
- identifying the value of assets that may be destroyed during a response and determining which may be eligible for compensation.

5.2 Biosecurity measures and the industry

The incorporation of routine feedlot biosecurity into contingency planning serves to protect individual feedlots and the industry as a whole in the event of an EAD outbreak. Guidelines on management best practices for biosecurity are available from ALFA. The Farm Biosecurity website[39] also provides guidance on improving enterprise biosecurity and developing an EAD action plan.

5.2.1 General biosecurity

NFAS-accredited feedlots are required to have a biosecurity management plan. Accredited feedlots are audited annually to ensure they are compliant with the biosecurity standards set by the NFAS. The industry quality assurance program has a biosecurity module designed to control endemic diseases.

Biosecurity measures are designed to mitigate the risk of disease introduction by managing the routes through which pathogens can be introduced. Disease may cause animals to show obvious clinical signs (eg coughing, lameness, reduced appetite or death), or they may cause mild or subclinical signs. Both obvious and more subtle diseases can affect production, welfare and profitability. Some infectious agents can remain viable for long periods away from the animal, and these can be spread through the movement of people, equipment, vehicles and other things that are contaminated with the infectious agent, including aerosols. Other diseases may only be transmitted through close contact between animals and therefore can only spread via live animal movements. Finally, some diseases rely on a vector to spread. These diseases may be spread only by vectors or by vectors plus other routes such as direct animal-to-animal contact. Though a different set of biosecurity measures applies to each disease, a strong feedlot EAD plan must consider all possible spread mechanisms and corresponding biosecurity measures.

The aim of strong biosecurity measures is to mitigate the risk of introducing or allowing the spread of as many diseases as possible. Biosecurity management plans should therefore include a wide range of

[39] www.farmbiosecurity.com.au

different measures. In the event of an EAD outbreak, high-risk disease-specific biosecurity measures may be implemented under the guidance of the relevant jurisdictional government.

5.2.2 Biosecurity during a response to an emergency animal disease

ALFA is working to improve feedlot preparedness for EAD outbreaks. The future NFAS accreditation framework will require accredited feedlots to develop a feedlot EAD plan (FLEADP).

The type of biosecurity measures applied during an EAD response will depend on the specific disease, the feedlot's disease status and the risks associated with the premises. Information specific to each outbreak will be available from jurisdictional government authorities and through the Australian Government's Outbreak: Animal and plant pests and diseases website.[40]

ALFA is developing a manual on how to prevent and respond to an EAD outbreak in feedlots to help support lot feeders to prepare adequate feedlot emergency animal disease response plans.

All accredited feedlots will need to develop a FLEADP as part of their NFAS biosecurity module. Unaccredited feedlots are also strongly encouraged to develop a FLEADP.

5.2.2.1 Considerations when developing a feedlot emergency animal disease plan (FLEADP)

EAD preparedness requires consideration of all conceivable eventualities that could follow an EAD incursion or outbreak. Preparedness includes the development of plans to manage the outbreak or mitigate its effects.

The FLEADP provides feedlots with an additional mechanism to prepare for changes in feedlot management that may arise when the presence of an EAD in Australia is confirmed. In the process of developing such a plan, managers and staff can discuss and document the practical actions specific to their feedlot that will achieve a state of optimum readiness. Consultation with jurisdictional government officers trained in EAD responses is recommended during the development phase. Guidance materials on preparing a FLEADP are available on the Farm Biosecurity website.[41, 42]

A FLEADP should consider:

- stock management
- movement of vehicles
- equipment and material
- personnel
- building and structures
- pest (including vermin and vector) control
- quarantine of incoming cattle
- other aspects described in Sections 5.1.3 and 5.1.4.

[40] www.outbreak.gov.au
[41] www.farmbiosecurity.com.au/news/surviving-an-emergency-disease-outbreak
[42] www.farmbiosecurity.com.au/wp-content/uploads/2014/07/EAD-Risk-Management-Manual.pdf

Glossary

Standard AUSVETPLAN terms

For definitions of standard AUSVETPLAN terms, see the **AUSVETPLAN *Glossary.***

Document-specific terms

Term	Definition
Accumulators	Independent cattle buyers for the feedlot that purchase cattle from multiple premises.
Feedlot	A confined yard area with watering and feeding facilities, where cattle are completely handfed or mechanically fed for the purpose of beef production.
National Feedlot Accreditation Scheme	An independently audited quality assurance program for the Australian lotfeeding industry that was initiated by the Australian Lot Feeders' Association (ALFA) and is owned and managed by AUS-MEAT through the Feedlot Industry Accreditation Committee (FLIAC).
National Livestock Identification System	Australia's system for the identification and traceability of cattle, sheep and goats.
Pen riders	Feedlot employees who are trained in the early detection of livestock diseases.

Abbreviations

Standard AUSVETPLAN abbreviations/acronyms

For standard AUSVETPLAN abbreviations, see the **AUSVETPLAN *Glossary***.

Document-specific abbreviations/acronyms

Abbreviation/acronym	**Full title**
ALFA	Australian Lot Feeders' Association
DAFF	Department of Agriculture, Fisheries and Forestry
MLA	Meat & Livestock Australia
NFAS	National Feedlot Accreditation Scheme
NLIS	National Livestock Identification System
PIC	Property Identification Code
RFID	Radio-frequency identification

References

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