



Stock Feed Manufacturers' Council of Australia

NATIONAL BIOSECURITY MANUAL FOR FEED MILLS

VERSION 1



Safe feed for food

This document is not intended to provide legal advice from SFMCA. You are advised to consult your regulatory or legal advisors in developing specific policies or in responding to specific problems.

SFMCA would like to thank AgriFutures Australia and Animal Health Australia for the development of key documents that this document is based.

P: +61 (0) 419 891 494

E: contact@sfmca.com.au

W: www.sfmca.com.au

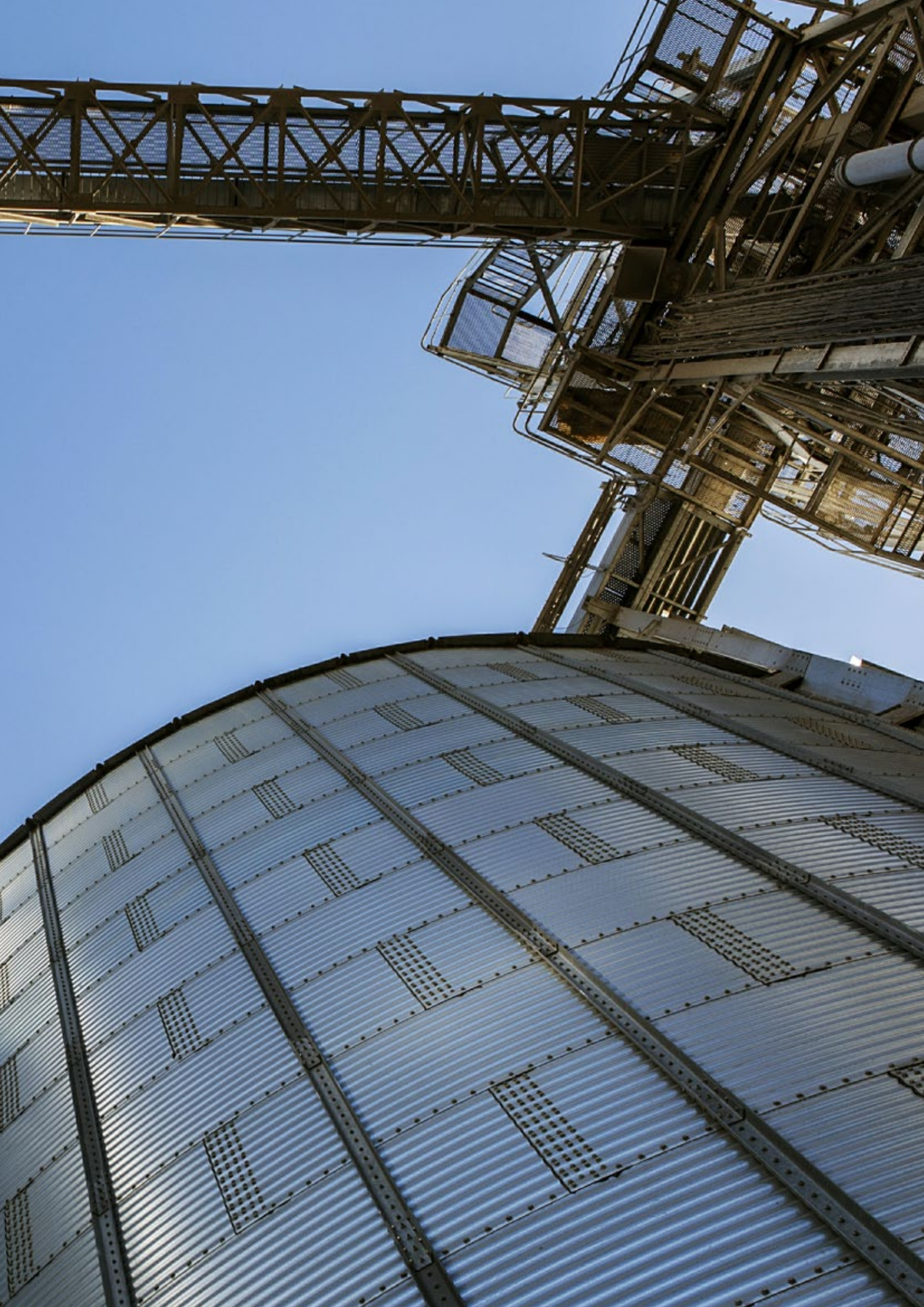
PO Box 151, Curtin ACT, Australia 2605

CONTENTS

Introduction	1
About this manual.....	2
FeedSafe® and risk assessment.....	4
Purpose of the document	4
Disease transmission.....	5
Definitions of ‘feed mill’ and ‘property’	5
Levels of biosecurity	6
Routine biosecurity procedures	6
Action plan for suspected emergency plant/animal disease	6
General biosecurity obligation or duty.....	6
High risk biosecurity procedures.....	6
Routine biosecurity procedures.....	7
Manage inputs	7
1. Potable Water	7
2. Purchase of feed inputs.....	7
3. Receiving of feed ingredients	8
4. Manage the movement of employees and family	9
5. Manage the movement of visitors, contractors, suppliers and other service personnel.....	9
6. Manage the movement and use of equipment	10
7. Manage the movement and use of vehicles.....	10
Manage production practices	11
8. Maintenance	11
9. Storage of Ingredients	11
10. Manage pests and vermin	11
11. Manage feral animals and wildlife	12
12. Site standards.....	12
13. Personnel standards.....	13
14. Feed manufacturing process	13

Train – plan – record	14
15 Training	14
16. Documentation & record keeping	14
Manage outgoing products	15
17. Scheduling deliveries.....	15
18. Feed delivery	15
19. Delivery trucks.....	16
20. Delivery of feed during high level biosecurity incidents	16
Glossary	18
References	20
Water Quality and Biosecurity	20
Appendix 1	21
Biosecurity Checklist	21
Appendix 2	38
Emergency Disease/Pest Action Plan	38
Appendix 3	40
Personal Quarantine Declaration	40
Appendix 4	41
Visitor and Vehicle Register	41
Appendix 5	42
Visitor Risk Assessment Protocol	42
Appendix 6	43
Pest Control Inspection and Activity Record	43





INTRODUCTION

This manual has been produced as a tool to assist feed mills in translating biosecurity practices into operating procedures and work instructions. Feed manufacturing and delivery is a fundamental part of the production chain and having good biosecurity practices in this area will help to reduce the risk of disease spread.

Feed mill hygiene is essential not only for feed quality and safety, but also for biosecurity. Biosecurity in the feed mill refers to the measures put in place to protect livestock against exposure to endemic and emergency diseases via the manufacture and delivery of feed. It also aims to limit the spread of these diseases within livestock and, in the case of zoonotic diseases, human populations. Infectious diseases, whether they cause clinical (obvious) or subclinical (hidden) disease, significantly reduce the productivity, profitability and long-term financial viability of livestock. Biosecurity in the feed mill also includes preventing the spread of diseases, pests and weeds to or from other primary industries (e.g. crops, horticulture).

These guidelines were developed based on information provided by industry and in conjunction with the Stock Feed Manufacturers' Council of Australia and the FeedSafe® Feed Mill Hygiene Guidelines. Consequently, a series of steps should be taken to help maximise feed biosecurity (Stewart et al 2019):

- 1. Assess biological hazard risk:** Feed manufacturing facilities must take a proactive approach to understanding biological hazards for their own operations and the security of their customers. The biosecurity procedures employed by a specific feed mill may not be the same as other feed mills depending on the customers they serve and the associated risk tolerance vs. price for mitigation strategies that are employed.
- 2. Define protocols to prevent entry of hazard into the feed mill:** The most important part of a feed mill biosecurity plan is to prevent hazards from entering the feed mill. Identifying and eliminating high risk ingredients, minimising entry via people and equipment, covering all open points of entry when not being used, and other strategies can be used to prevent hazard entry into the feed mill.
- 3. Utilise mitigation strategies to minimise risk:** Not all hazards can be prevented from entering the feed mill and consequently mitigation strategies should be utilised. The best option is to identify the mitigation strategies that are effective against the specific hazards of concern and utilise a combination of point-in-time mitigants as well as those that have residual effectiveness for continued protection through the remainder of the feed supply chain. Some mitigation strategies have multiple benefits. As an example, dust collection and elimination not only creates a safer and better environment for the workers, but can also eliminate a major point of contamination.
- 4. Feed mill decontamination:** While it is extremely difficult to completely accomplish, a feed mill decontamination strategy must be developed and should include a combination of physical cleaning, chemical cleaning, disinfection and, if applicable, the use of high heat as the final step.

About this manual

This biosecurity manual outlines best management practice that should be followed wherever possible and practicable to achieve the following objectives that will:

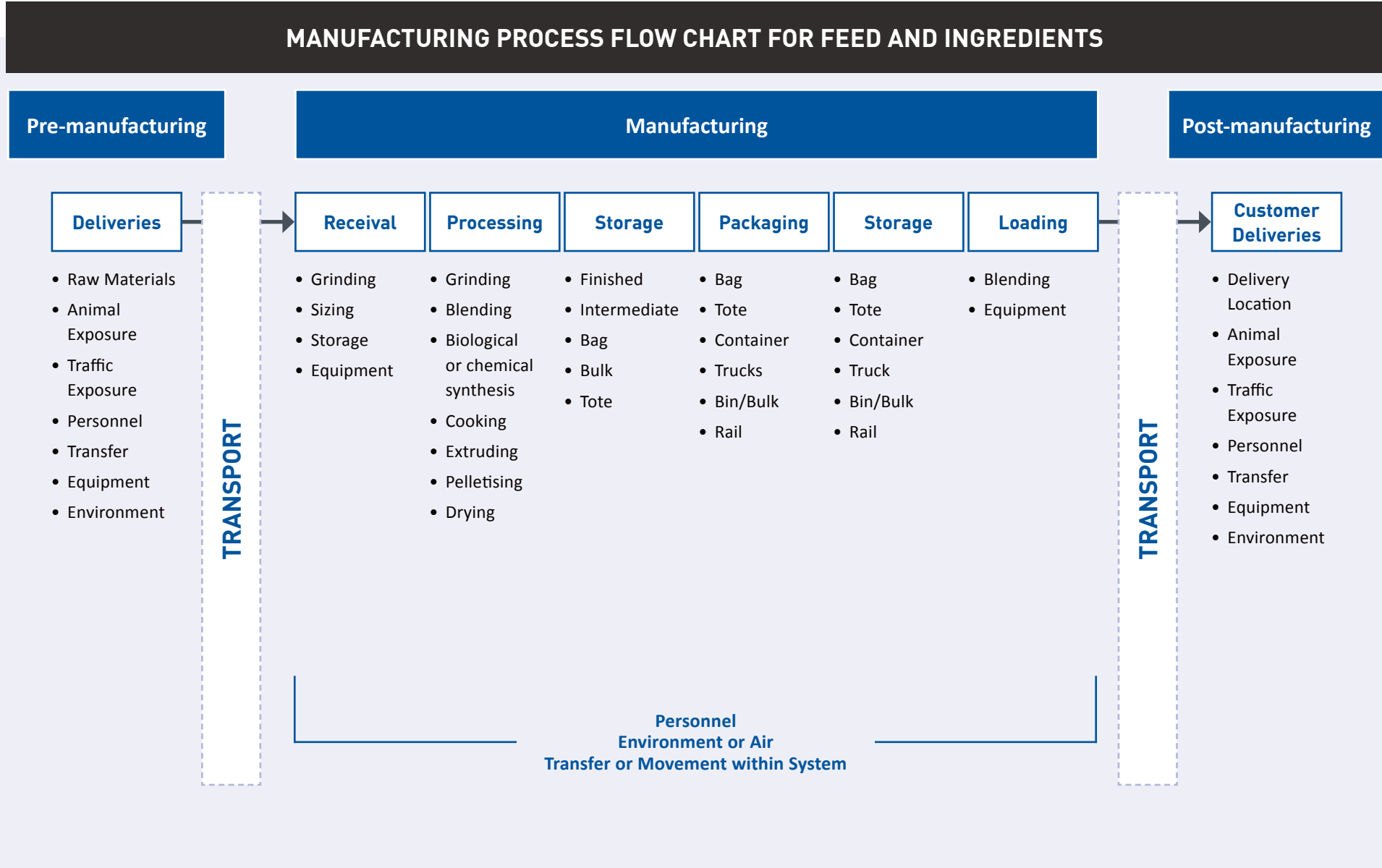
- protect feed mill operations against the entry of disease and subsequent spread to livestock operations.
- minimise the incidence and spread of microorganisms of public health significance.
- minimise the incidence and spread of microorganisms, pests and weeds that may impact national or international trade.

By implementing the measures outlined in this manual, feed mill operators not only benefit by reducing the risk of diseases, pests and weeds in the feed mill, but also supports the plant and animal industries in meeting their commitments with respect to the relevant Cost Sharing Deeds for Emergency Disease/Pest Responses (known as the Emergency Animal Disease Response Agreement or Emergency Plant Pest Response Deed).

The Australian feed mill industry has developed this biosecurity manual detailing measures which aim to meet the above-mentioned objectives. These measures cover areas of risk common to all feed mills and take into account appropriate measures to minimise these risks.

The approach taken is to treat the feed mill as a system that has inputs and outputs and a number of procedures which are used to turn the inputs into outputs. There are also a number of activities that must be undertaken to ensure the system is in order and operating to a standard that meets stakeholder requirements. These standards set the minimum requirements for a feed mill, however there may be additional practices required by customers that will need to be negotiated between the parties as to extra or higher standards being applied.

Points of exposure for a feed mill (AFIA, 2016)



FeedSafe[®] and risk assessment

Many of the practices detailed in this manual are currently covered, in part or in whole, within the requirements of FeedSafe[®]. However, FeedSafe[®]-accredited feed mill operators should ensure that the required linkages are made between the current elements of FeedSafe[®] and the practices set out in the biosecurity manual. It must be noted that not all feed mills are accredited with FeedSafe[®] and usually do not operate under an accreditation scheme. It is the responsibility of the purchaser to ensure their feed is accredited with FeedSafe[®].

Additionally, management practices employed will vary from site to site. It is important then, that a risk assessment be conducted for each enterprise to establish the level of risk that exists in each phase of operations at that site and to identify and implement control measures appropriate to these risks.

When undertaking the risk assessment to determine the feed mill-specific biosecurity measures, it is important to take into account all factors that may impact on sound biosecurity arrangements. These factors include:

- the size of the operation
- the location and layout of the property and feed mill
- sources of water supply
- feed ingredients and additives (domestic and international supply)
- the disease status of the district in which the feed mill is located and the district from which products are sourced
- proximity of the feed mill to livestock production sites and the type of wildlife present around the mill
- customer/supplier interactions (pick-ups, service, trades, industry personnel, contractors, deliveries of livestock and feed, etc.)
- customer requirements
- any other operational management considerations

A sample of a biosecurity self-audit checklist to guide continuous improvement is attached at Appendix 1.

FeedSafe[®] accredited feed mills will have procedures in place for managing and minimising food safety risks (e.g. Salmonella) within the stock feed being produced. These procedures are also considered good practice for feed mill biosecurity during the manufacturing process.

Purpose of the document

- To provide a set of minimum biosecurity practices expected for the manufacture and delivery of feed produced by livestock and aquatic feed mills.
- To reduce the risk of feed contamination at the feed mill.
- To reduce the risk of disease spread onto and between farms resulting from feed deliveries.

This document should serve as a guide for minimising biosecurity risks in the manufacture and delivery of feed. It is a catch-all document. There will be duplication between the *Australian Code Of Good Manufacturing Practice For The Feed Milling Industry 2009* and this document.

Disease transmission

Diseases can be spread in many ways including:

Animals

- wild birds
- feral and domestic animals including livestock, predators and pets
- insects
- rodents e.g. rats and mice
- domestic birds e.g. poultry
- products that include ingredients of animal origin e.g. processed meats

People

- feed mill personnel and family members living on site
- clients – producers who collect, transport and utilise feed stuffs
- contractors, maintenance personnel, neighbours, service personnel and visitors
- disease transmitted on hands, boots, clothing, hair

Vehicles and equipment

- utilities, front-end loaders, trucks
- veterinary equipment
- spray packs
- tools

Air

- as an aerosol e.g. dust, bacteria, viruses, moulds

Feed and water supply

- faeces from avian or other pest animal species
- raw materials used for the production of feed e.g. prohibited pig feed
- post-production contamination or spoilage during transport and storage
- bacteria and mould in poor quality or damaged feed
- restricted animal material (RAM)
- pollutants and infectious micro-organisms

Definitions of ‘feed mill’ and ‘property’

In this document, the feed mill includes the receival, storage, and production areas, as well as the staff amenities and offices. Adjoining roads and laneways, hard stand areas and maintenance areas also form the feed mill.

The property is the land on which the feed mill is located and may include other land used for purposes other than feed milling. In some instances, the boundary of the feed mill and the boundary of the property may be the same.

LEVELS OF BIOSECURITY

Routine biosecurity procedures

These procedures must be implemented and followed on a daily basis. They give a high degree of assurance that diseases and pests will not be carried into the feed mill and will reduce the risk of transmission between production runs. These should be seen as the minimum requirements for industry.

Action plan for suspected emergency plant/animal disease

Each owner/manager must establish and document clear guidelines regarding the circumstances when a report needs to be raised alerting relevant authorities to a suspected emergency plant/animal disease event (e.g. an unusual appearance of suspicious products or contaminants in feed inputs, reports of clinical signs of disease in target animals) and who must be informed. The feed mill's Emergency Disease Action Plan should also clearly state that, if an emergency plant/animal disease is suspected, movements on and off the feed mill and the property must be ceased where possible and special precautions must be taken as outlined by the plan. Appendix 2 provides a proforma for such a document.

General biosecurity obligation or duty

In a number of states, the Government has legislated that any person has a responsibility for biosecurity. This general biosecurity obligation or duty means everyone must take all reasonable steps to ensure they do not spread a pest, disease or contaminant. This includes restricting movements of and containing a pest, disease, contaminant or restricting movements of animals, plants, soil and equipment that could carry a pest, disease or contaminant. This obligation or duty also applies to feed mill employees and contractors.

High risk biosecurity procedures

In the event of an outbreak of an emergency plant/animal disease (exotic or serious endemic disease), high risk biosecurity procedures will be implemented under the guidance of the state government department responsible for agriculture, in accordance with other relevant documents (e.g. AUSVETPLAN or PLANTPLAN and standard operating procedures).

ROUTINE BIOSECURITY PROCEDURES

Manage inputs

The most effective component of a feed mill biosecurity plan is the prevention of entry of hazards.

1. Potable Water

OBJECTIVE: To ensure that water used in the feed mill is of a suitable quality.

There are a number of references that can be used for further information. Please see the Reference list at the end of this document for further information.

- 1.1 The use of a suitable water supply is important for good biosecurity. In general, water with a high level of organic matter is unsuitable. It may be necessary to seek expert advice to ensure a safe water supply.
- 1.2 Seek expert advice on water treatment options if water testing shows the available water to be of unsuitable quality.
- 1.3 If water treatment systems are used, the system must be regularly monitored and tested to ensure effectiveness.
- 1.4 The treated water supply should be kept in a closed system from the point of treatment to the point of use.

2. Purchase of feed inputs

OBJECTIVE: To manage the introduction and movement of grains, roughages, additives and feed ingredients in a way that minimises the risk of introducing or spreading diseases, pests and weeds.

- 2.1 Purchase feed inputs from preferred and approved suppliers that maintain an accredited quality assurance program which includes a biosecurity component.
- 2.2 Feed ingredients should be sourced through an approved supplier that meets the feed mill's biosecurity and food safety standards.

- 2.3 Ensure feed commodities are fit for purpose. All purchased feed inputs (i.e. ingredients and additives) must be accompanied by a commodity vendor declaration stating that it meets Australian legislation regarding chemical residues/ contaminants and is fit for the purpose of feeding to livestock.
- 2.4 Undertake a risk assessment of all products being purchased. The following questions will assist ¹:
 - a. Where does it come from?
 - b. Are there plant or animal diseases or pests of concern in the region the product is sourced from?
 - c. What production methods were used e.g. broadacre using mechanical harvesting or small household, organic or synthetic fertilisers?
 - d. Is it bagged in clean new or recycled bags?
 - e. If bulk product, what was carried in the truck in the loads prior to this delivery?
 - f. How long since the product was manufactured?
- 2.5 Develop a supplier verification program that includes specific requirements for the ingredients being purchased. This may also include verification of ingredient-supplier protocols and on-site manufacturing facility reviews and assessments. Communicating your safety expectations to your ingredient supplier is an important step in preventing the entry of a biological hazard.

3. Receival of feed ingredients

OBJECTIVE: To manage the receival of feed ingredients in a manner that minimises the risk of contamination of feed whilst being received.

- 3.1 Delivery vehicles carrying feed ingredients must provide a signed declaration of cleanliness before loading and identity of the previous three loads. Any vehicle carrying feed ingredients must not have carried products that may contaminate the feed (e.g. chicken litter, municipal waste, animal based fertilisers or restricted animal material (RAM) in the previous three loads).
- 3.2 On ground visual checks are to be conducted to verify the cleanliness of vehicles entering the site. The frequency of checks should be in accordance with individual company risk ratings.
- 3.3 All feed ingredients must be inspected as part of the receival process. Weed seeds, odours, discoloured and deformed grains, fines etc should be checked for unusual signs.
- 3.4 Feed spills are to be cleaned up as soon as practicable. Spilt and spoiling feed attracts pests and vermin to the feed mill.
- 3.5 Minimising the contamination of feed when unloading in drive-over pits is essential. The use of drive-over mats is a useful way of minimising contamination of the feed. Mud, dust, etc can carry weed seeds and diseases.
- 3.6 It is recommended that high risk products, such as meat meal, soybean meal and canola meal should be tested for Salmonella. Testing should be based on a frequency related to risk.
- 3.7 Product delivered in reused bags is of a higher risk than the same product in new bags. Product must not be accepted if in reused bags from regions (domestic or international) with known disease risks.
- 3.8 Traceability of ingredients is a mandatory element within FeedSafe[®], and maintaining records that document information such as the date of receival, time, lot number during unloading, allows for a quick response if a pest or disease is suspected. It also allows for product recall as per FeedSafe[®] standards.

¹ For additional questions refer to: www.swinehealth.org/wp-content/uploads/2018/09/Feed-Ingredient-Safety.pdf

4. Manage the movement of employees and family

OBJECTIVE: To minimise the risk of introduction and spread of disease or contaminants by feed mill employees or family.

- 4.1 Feed mill personnel must wear laundered clean clothes each day at the commencement of their work.
- 4.2 Do not take boots that are worn at the feed mill outside the feed mill unless cleaned prior to re-entering the feed mill, as they are the most likely method of diseases being spread by personnel.
- 4.3 Protective clothing and footwear must be worn in the feed mill area at all times and removed prior to exiting.
- 4.4 Hands must also be sanitised and disinfected on entering and leaving the feed mill.
- 4.5 Personal quarantine declarations (Appendix 3) must be completed by all employees annually.
- 4.6 Food should only be consumed in designated areas to minimise the potential of feed being contaminated.

5. Manage the movement of visitors, contractors, suppliers and other service personnel

OBJECTIVE: To minimise the risk of introduction and spread of disease or contaminants by contractors, suppliers, service personnel and visitors.

- 5.1 Be aware of the potential for the introduction and transmission of an emergency disease by visitors. Ensure visitors are provided information on essential biosecurity practices for the site.
- 5.2 Wherever possible, control the access of visitors/suppliers to the designated feed mill area. Signage will play an important part in ensuring procedures and risks are reinforced to visitors.
- 5.3 Ensure that all visitors entering the feed mill are directed to a designated meeting place away from the main feed mill area, preferably the office, before access is allowed to the main feed mill area.
- 5.4 Maintain a register of visitors and vehicles (including contractors) to the feed mill (Appendix 4) which includes a record of:
 - date
 - time in
 - name(s)
 - company
 - contact number (i.e. mobile number)
 - motor vehicle registration number
 - signature
 - biosecurity risk assessment
 - time out
- 5.5 Assess all visitors (including contractors) entering the feed mill for their biosecurity risk prior to being granted access to the feed mill complex and surrounds. The risk assessment must consider the potential for visitors to have been previously exposed to a disease and the subsequent potential for them to introduce a disease into the feed mill (Appendix 5).

- 5.6 Those visitors allowed to enter the feed mill must follow the same hygiene procedures employees undertake.

6. Manage the movement and use of equipment

OBJECTIVE: To prevent the introduction of disease agents and contaminants into the feed mill through the movement of equipment.

- 6.1 Employees and contractors can use their own tools and personal equipment (e.g. laptops, cameras or phones), noting the equipment must be cleaned, ensuring it is free of organic matter.
- 6.2 Be aware of the potential for introduction and transmission of disease by borrowed/hired or second-hand equipment.
- 6.3 Wherever possible, do not use the same equipment for handling feed and waste. If you must use equipment for multiple purposes, then wash and disinfect it between uses to ensure that manure does not contaminate feed commodities.
- 6.4 If any equipment is taken into the production area/s, it needs to be assessed as to its risk and washed and disinfected prior to entry and exit as required.

7. Manage the movement and use of vehicles

OBJECTIVE: To minimise the risk of site contamination due to the movement of vehicles.

- 7.1 Be aware of the potential for introduction and transmission of diseases by visiting vehicles and machinery.
- 7.2 Limit the entry of non-feed mill vehicles, machinery and equipment into areas of the feed mill beyond the specified delivery areas.
- 7.3 There must be a designated parking area for vehicles not entering the production area.
- 7.4 All visitors should park their vehicles outside the production area unless it is essential that the vehicle be taken on site e.g. maintenance contractors. Ensure that all vehicles and machinery entering the feed mill area are directed to specified locations and delivery areas within the feed mill.
- 7.5 If any vehicle is taken into the production area/s, it needs to undergo a risk assessment, washed and disinfected prior to entry and exit as determined by the production area manager.
- 7.6 Delivery vehicles need to have mud, dust and dirt removed from the underbelly (including wheel arches, mud flaps, tailgate) or drive-over covers put in place before unloading into grain pits.
- 7.7 Trucks containing livestock, livestock products, contaminated/not washed down or vehicles loaded or contaminated by other organic commodities that aren't destined for use at the feedmill should not be admitted into the feedmill area.

Manage production practices

8. Maintenance

OBJECTIVE: To minimise the introduction of disease, pests and contaminants into the feed mill and reduce the attraction of rodents and birds to production areas.

- 8.1 Grass on and around the feed mill site should be kept cut; long grass attracts rodents and favours the survival of viruses, fungi, moulds and bacteria.
- 8.2 Maintenance operations should not present any hazard to the integrity of product. As much as possible, maintenance should be conducted between production runs. Ensure that all hardware is removed in the clean-up.
- 8.3 Ensure perimeter fences and barriers are adequately maintained to minimise exposure of the feed mill to wildlife, feral animals and vermin.

9. Storage of Ingredients

OBJECTIVE: To minimise the risk of contamination of feed ingredients whilst being stored prior to use.

- 9.1 Store ingredients and additives in a manner that reduces contamination by livestock, vermin, insects, wildlife, feral and domestic animals, and other feed types.
- 9.2 Stock should be rotated on a first in, first used basis.
- 9.3 Feed spills must be cleaned up as soon as practicable. Spilled and spoiling feed attracts pests and vermin to the feed mill.
- 9.4 The integrity of the feed ingredients must be maintained during storage, with adequate procedures in place to prevent cross contamination. Ensure that the storage of animal products (ruminant feed ban) is complied with. Restricted animal material (RAM) must not be fed to any ruminants and must therefore be segregated from other feeds. There are specific regulations in each state dealing with the storage of RAM.
- 9.5 Medications (S4 products) must be kept in a locked environment so that unauthorized or inappropriate access and use is eliminated. Access to these products and records of use should be controlled by strict protocols.

10. Manage pests and vermin

OBJECTIVE: To minimise the potential for introducing infectious agents and pathogens by pests and vermin through their presence in the production and storage areas.

- 10.1 Implement and maintain a pest and vermin control program. This must ensure the bait stations are numbered, secure and tamperproof with a map kept of the stations' locations.

- 10.2 Bait stations must be checked in accordance with the pest management plan and fresh baits set as required.
- 10.3 Records must be kept of each inspection and pest activity noted (see Appendix 6). Employees/managers should review historical activity reports as part of a trend analysis of pest and vermin activity. Adjustments to the pest and vermin control program should be made based on this analysis.
- 10.4 Bait stations should be placed away from areas where contamination of feed products can result.
- 10.5 Toxic baits are not permitted in the production, receival or load out areas. Only approved, fit for purpose baits are permitted to be used. At no time are grain/pellets or powder baits permitted, wax blocks should be used (grain/pellet or powder has a high potential for contamination of product).

11. Manage feral animals and wildlife

OBJECTIVE: To minimise the risk of site and feed ingredient contamination by managing feral animals and wildlife.

- 11.1 Be aware of the potential for introduction and transmission of pests and diseases by feral animals and wildlife.
- 11.2 Where possible, minimise the potential for introduction and transmission of disease and pests by feral animals and/or wildlife through control mechanisms.

12. Site standards

OBJECTIVE: To minimise potential sources of contamination onto the site through people, pests, raw materials, vehicles and equipment.

- 12.1 The site must be secure with all access onto the site controlled.
- 12.2 Roadways must be maintained regularly to minimise any puddles, mud and dust.
- 12.3 The hardstand in both the receiving and load out areas must be clean and free of rubbish, mud, dust, feed, grain or animal matter (including bird and rodent faeces) to minimise possible contamination of raw materials and finished feed.
- 12.4 To avoid cross contamination, traffic flow for incoming (receiving) and outgoing (load out) traffic should be separate.
- 12.5 All feed and grain spills must be cleaned up as soon as practical. Spilt feed is an attractant for pest animals to enter the site.
- 12.6 Site must be maintained in a clean and hygienic condition with cleaning procedures and schedules in place. Line surveys should be conducted regularly as verification that feed mill hygiene practices are working.
- 12.7 Cleaning and flushing of equipment must be conducted regularly, as per site hygiene procedures.
- 12.8 Assess the site for no-walk zones or even hygienic zoning as it may be appropriate to include in the biosecurity risk assessment for feed mills that have a higher risk of introducing pests or diseases.

13. Personnel standards

OBJECTIVE: To minimise the risk of contamination arising from staff, contractors, family and general visitors.

- 13.1 All staff working on site must wear clean work-specific clothing and footwear, including appropriate personal protective equipment (PPE) at the commencement of each work shift and change if required (e.g. after cleaning machinery) to minimise contamination.
- 13.2 All visitors (including contractors) on site must be signed in and inducted in on-site biosecurity and safety.

14. Feed manufacturing process

OBJECTIVE: To minimise the risk of feed contamination during the manufacturing process.

- 14.1 Feed movement should flow in one direction to minimise the risk of contamination. If due to the design of the feed mill and surrounds this is not possible then risk mitigation steps must be assessed, recorded and, if possible, implemented.
- 14.2 Procedures to prevent the cross contamination of feed mixes must be in place. This may include sequencing, and regular cleaning and flushing schedules. Records must be kept.
- 14.3 Sequencing must occur in the following order:
 - a. oldest raw materials in stock
 - to
 - b. most recently received stock
- 14.4 If possible, dedicated production lines should be in place to avoid any cross contamination.
- 14.5 Flushing and cleaning between feed types and between species must occur and be conducted in accordance with the risk mitigation schedule of the site.
- 14.6 Different pieces of equipment in feed manufacturing will require different levels and frequency of cleaning. A robust cleaning schedule must identify each piece of equipment and their individual cleaning requirements and frequency. Compliance with the schedule, including verification of the cleaning effectiveness should be monitored.
- 14.7 Certain feed safety control procedures (e.g. Salmonella) must be followed as per individual site protocols. This may include:
 - Higher manufacturing temperature for certain feeds
 - The post-pelleting cooling area should have especially high cleanliness standards. This phase of production presents the highest risk of feed contamination as product is subjected to no further treatment processes that can address contamination issues.
- 14.8 Ensure that the ban on feeding of animal products (ruminant feed ban) to ruminants is complied with. Restricted animal material (RAM) must not be fed to ruminants. This includes any material that may contain or may have been in contact with RAM, including the flushings. There are specific regulations in each state prohibiting the feeding of RAM and outlining labelling requirements for both RAM and non-RAM feeds.

- 14.9 Critically assess the reuse of grain cleaner and dust collection materials, floor sweepings, including those from the unloading process. It has been well established that dust and other screened particles can act as a carrier for pests and diseases.
- 14.10 Cleaning of equipment is required regularly. The required frequency will vary with the feed being produced and the ingredients being used. Mitigation strategies that may be possible in some feed mill systems may not work in others because of differences in facility design and equipment, manufacturing operations, and other associated risk factors.
- N.B.: The surface type (concrete, plastic, rubber, stainless steel, etc.) impacts pathogen survivability in the presence of different decontamination procedures. Stainless steel and smooth plastic surfaces, while easier to clean than tires, rubber belts, or polyethylene totes, are more difficult to disinfect due to the formation of biofilms that protect the bacteria or virus from a chemical disinfectant. Therefore, both cleaning and sanitisation is often necessary, noting that in some instances this is nearly impossible based on current equipment design constraints.
- 14.11 Limiting and controlling dust created during manufacture should be a priority, as it can serve as a vector for pest and disease transmission as well as for general hygiene purposes.

Train – plan – record

15 Training

OBJECTIVE: To ensure awareness by and training of all feed mill employees in all relevant biosecurity requirements.

- 15.1 Ensure that all employees involved in the daily monitoring and handling of feed (e.g. feed receipt) are aware of the importance of the early detection of contamination (pest, disease, chemical) and know what to do if they suspect raw materials, intermediate, or final product has been contaminated. Standard operating procedures are to be developed and put into practice.
- 15.2 All employees involved in the usage and application of disinfectants and herbicides must be competent to do so. Refer to AgChem and VetChem training where appropriate. Maintain the necessary safety data sheets for all products being used.
- 15.3 All feed mill staff, including delivery drivers, must be inducted and trained in biosecurity practices (including the Emergency Disease Action Plan). Records of training are to be kept.
- 15.4 Training must be provided to all staff annually in line with FeedSafe® standards.

16. Documentation & record keeping

OBJECTIVE: To assist in the early detection of feed contamination and the response to any biosecurity breach.

- 16.1 A sketch or map of the layout of the property, showing the production area, sheds, paddocks, access roads and gates must be created and kept up to date.
- 16.2 Maintain records and documentation in line with previous sections of this manual.
- 16.3 Each site must have an Emergency Disease Action Plan and make available a copy of the plan for all staff.

- 16.4 Receiving of product must be accompanied by a commodity vendor declaration (CVD). Product must not be unloaded until appropriate documentation is received.
- 16.5 Documentation, including batch processing records, verifying that product has been treated in accordance with established procedures must be kept.
- 16.6 All products being received will have specified sampling procedures and receiving testing in place. The results must be recorded and kept for an appropriate period of time.

Manage outgoing products

17. Scheduling deliveries

OBJECTIVE: To minimise the spread of pests and disease as a result of feed deliveries.

- 17.1 Scheduling of deliveries should always be:
 - a. breeder first, or designated delivery vehicles and drivers for breeder farms only
 - b. youngest to oldest
 - c. clean to dirty, or lowest risk profile to highest risk profile.
- 17.2 If deliveries cannot meet the scheduling listed in 17.1, truck(s) must undergo a stand down period of at least 24 hours and must be flushed and appropriately cleaned before delivering to a breeder farm.
- 17.3 Communication between feed mills, external contractors, and clients regarding any known disease outbreaks is paramount when scheduling delivery routes.
- 17.4 During times of high-risk feed delivery, such as during a disease outbreak, truck routes should be altered where possible to avoid driving past clean farms after delivering to a known 'dirty' farm. Amend routes as required to avoid any known areas of disease. Very defined procedures will need to be followed and deliveries will be under government control.
- 17.5 Movement restrictions may prohibit entry of vehicles onto sites where disease outbreaks have been confirmed or are under investigation by government authorities. Deliveries are to be approved by the responsible government in these circumstances.

18. Feed delivery

OBJECTIVE: To minimise the spread of pests and disease as a result of feed deliveries.

- 18.1 Drivers must complete a personal quarantine declaration, stating that they have no contact with birds, poultry or pigs (see Appendix 3). Declarations are to be kept on-file by the feed mill.
- 18.2 Drivers must commence each day in clean and appropriate work attire.
- 18.3 Drivers must follow individual on-farm biosecurity procedures, including shutting gates and keeping to roadways.
- 18.4 Drivers must not enter production areas (e.g. sheds or range areas).

- 18.5 Feed spills must be cleaned up as soon as possible and disposed of on-farm using equipment kept on farm. Records must be maintained, and notification must be made back to the feed mill.
- 18.6 Where available, wheel wash or vehicle wash down facilities or unload pit protection mats should be used prior to entering the farm or unloading.
- 18.7 Drivers must follow the direction of on-farm personnel regarding:
 - a. the use of biosecurity personal protective equipment (e.g. overalls, boot covers, hair nets, gloves). All used items must be disposed of on-farm prior to leaving.
 - b. the use of sanitation equipment for footwear and hands prior to and after unloading feed.
 - c. Items that cannot be brought on-site.

19. Delivery trucks

OBJECTIVE: To minimise the spread of pests and disease as a result of feed deliveries.

Note: Given many feed mills and/or customers use freight contractors to move stock, discussions should be held between the freight contractor and the purchaser of their services as to biosecurity requirements when delivering feed to site.

- 19.1 A full truck decontamination should occur:
 - a. weekly
 - b. immediately before leaving and after returning from a disease infected farm
 - c. when changing from broiler or grower to breeder feed delivery.
- 19.2 Drivers must keep the truck cabin in a clean and tidy condition. This includes no rubbish, only approved passengers, no pets, no dust and no used biosecurity personal protective equipment.
- 19.3 Cabins need to be cleaned and disinfected daily. Key areas include the foot well and dust on the dashboard.
- 19.4 When requested, trucks must use feed mill approved wash down facilities before returning to and entering the feed mill.

20. Delivery of feed during high level biosecurity incidents

OBJECTIVE: To minimise the spread of pests and disease as a result of feed deliveries.

To be used in instances where an endemic or exotic disease outbreak has occurred or is occurring.

Please note that access to farms in certain areas (e.g. restricted and control zones) will only be allowed under permit by the state/territory government in an emergency disease response. There will be strict decontamination protocols for both the delivery vehicle and the people involved. In some cases, vehicle(s) may not be allowed out once it has entered into these zones.

- 20.1 The infected farm must be scheduled as the last delivery for the day.

- 20.2 Drivers must wear biosecurity PPE, including hair nets, when delivering feed. All used PPE must be left and disposed of on-farm.
- 20.3 When feed silos are positioned at the outlet fan end of any shed, hair nets and masks must also be worn by the delivery driver.
- 20.4 A full change of clothing may be required between farms of similar disease status.
- 20.5 Truck cabins must be cleaned of organic material and disinfected after every delivery.
- 20.6 Trucks must use wheel and vehicle wash down facilities, where available, before and after going onto the property and before returning to the feed mill.
- 20.7 All deliveries to disease control zones will be under government supervision so liaison with the relevant authority will be required.
- 20.8 If something occurs during the delivery run and the driver is unsure of the next step, stop and ask for the feed mill for advice.

GLOSSARY

Additives Any intentionally added component of feed not normally consumed as a feed ingredient, which affects the characteristics of feed or animals fed with it. It includes a pre-mix which consists only of feed additive components.

Animal by-products Products of animal origin that are not for consumption but are destined for industrial use (e.g. hides and skins, fur, wool, hair, feathers, hooves, bones, fertiliser).

Animal products Meat, meat products and other products of animal origin (e.g. eggs, milk) for human consumption or for use in animal feedstuff.

Clean Removal of organic material from the item being treated.

Control area A declared area in which the conditions applying are of lesser intensity than those in a restricted area (the limits of a control area and the conditions applying to it can be varied during an outbreak according to need).

Declared area A defined tract of land that is subjected to disease control restrictions under emergency animal disease legislation. Types of declared areas include restricted area, control area, infected premises, dangerous contact premises and suspect premises.

Decontamination Includes all stages of cleaning and disinfection. It is rare that 100% decontamination can be attained or proved in field situations.

Disinfection The application, after thorough cleaning, of procedures intended to destroy the infectious or parasitic agents of animal diseases, including zoonoses; applies to premises, vehicles and different objects that may have been directly or indirectly contaminated.

Disinfectant A chemical used to destroy disease agents outside a living animal.

Cont'd

Emergency Response Action Plan	A plan to cover the period between the time an EAD is first suspected by the mill, and the time of confirmation or clearance of the disease or pest.
Feed	Any single material, or multiple materials, whether processed, semi-processed or raw, which is intended to be fed directly to food-producing animals for the maintenance of life, normal growth, production, work and reproduction. It includes a pre-mix, block, lick or loose lick. It includes a feed additive or a feed ingredient.
Feed Mill	Includes the receipt, storage, and production areas, as well as the staff amenities and offices. Adjoining roads and laneways, hard stand areas and maintenance areas also form the feed mill.
Ingredients	A nutritive component part or constituent of any combination or mixture making up a feed. Ingredients may be of plant or animal (including aquatic) origin or other organic or inorganic substances.
Manufactured Feed	Any feed which has undergone a manufacturing, treatment or mixing process.
Property	The property is the land on which the feed mill is located and may include other land used for purposes other than feed milling. In some instances, the boundary of the feed mill and the boundary of the property may be the same.
Sterilisation	The removal or destruction of all forms of life. In the context of disease control, this refers to the removal or destruction of microorganisms on an item or surface.



REFERENCES

Australian Code of Good Manufacturing Practice for the Feed Milling Industry (2009). Stock Feed Manufacturers Council of Australia, Canberra.

Draft Feed Mill Biosecurity Guidelines for the Chicken Meat Industry (June 2019) Agrifutures, Wagga Wagga.

Biosecurity For Feed: Guidance for Developing Biosecurity Practices for Feed and Ingredient Manufacturing. (April 2016) American Feed Industry Association.

National Biosecurity Manual for Beef Cattle Feed Lots (2013). Animal Health Australia, Canberra.

National Farm Biosecurity Manual for Chicken Growers (2018). Australian Chicken Meat Federation, Sydney.

A Review of Strategies to Impact Swine Feed Biosecurity, Kansas State University <https://www.asi.k-state.edu/research-and-extension/swine/File%201.pdf>

National Biosecurity Guide for the Livestock and Poultry Feed Sector (2018). Animal Nutrition Association of Canada, Ottawa

Recommendations for the Development of a Biosecurity Plan in the EU Compound Feed Industry V1 (June 2019). European Feed Manufacturers Federation, Brussels.

Water Quality and Biosecurity

Drinking water quality and its impact on the health and performance of pigs. (September 2018) Pork CRC. <http://porkcrc.com.au/wp-content/uploads/2018/08/2A-118-Drinking-Water-Quality-Final-Report.pdf>

National Water Biosecurity Manual – Poultry Production. (November 2019). Australian Government Department of Agriculture. http://www.agriculture.gov.au/pests-diseases-weeds/protect-animal-plant/bird-owners/water_biosecurity

Water quality for livestock. (November 2019) Department of Primary Industries and Regional Development Western Australia. <https://www.agric.wa.gov.au/livestock-biosecurity/water-quality-livestock?nopaging=1>

Water for livestock: interpreting water quality tests. (April 2014) NSW Department of Primary Industries http://www.dpi.nsw.gov.au/_data/assets/pdf_file/0018/111348/water-for-livestock-interpreting-water-quality-tests.pdf

APPENDIX 1

Biosecurity Checklist

Biosecurity Standard	Audit Direction Advice Includes reference to FeedSafe and other guidance documents	Priority	Yes No N/A	Observations & Comments
Manage inputs				
1 Potable Water				
OBJECTIVE: To ensure that water used in the feed mill is of a suitable quality.				
1.1	Is the water supply fit for purpose and suitable for the livestock being watered?			
1.2	Do you seek expert advice on water treatment options when water testing shows the available water to be of unsuitable quality?	Must		
1.3	If a water treatment system is used, is the system regularly monitored and tested to ensure effectiveness of treatment?	Must		
1.4	Is the treated water supply kept in a closed system from the point of treatment to the point of use?	Should		

Cont'd

2 Purchase of feed inputs					
OBJECTIVE: To manage the introduction and movement of grains, roughages, additives and feed ingredients in a way that minimises the risk of introducing or spreading diseases, pests and weeds.					
2.1	Do you purchase feed inputs from preferred and approved suppliers that maintain an accredited quality assurance program which includes a biosecurity component?		Must		
2.2	Do you source feed ingredients from an approved supplier that meets the feed mill's biosecurity and food safety standards?		Must		
2.3	a. Do you ensure feed commodities are fit for purpose before use?	All purchased feed must be accompanied by a commodity vendor declaration stating that it meets Australian legislation regarding chemical residues/contaminants and fit for the purpose of feeding to livestock.	Must		
	b. Do you receive a Commodity Vendor Declaration for each consignment of feed ingredients?				
2.4	Has a risk assessment of all products being purchased been undertaken?	<p>The following questions will assist²:</p> <ul style="list-style-type: none"> • Where does it come from? • Are there plant or animal diseases or pests of concern in the region the product is sourced from? • What production methods were used (e.g. broadacre using mechanical harvesting or small household, organic or synthetic fertilisers)? • Is it bagged in clean new or recycled bags? • If bulk product, what was carried in the truck in the loads prior to this delivery? • How long since the product was manufactured? 	Must		

Cont'd

2.5	Has a supplier verification program been implemented that includes specific requirements for the ingredients being purchased?	This may also include verification of ingredient-supplier protocols and on-site manufacturing facility reviews and assessments. Communicating your safety expectations to your ingredient supplier is an important step in preventing the entry of a biological hazard.	Must		
3 Reveal of feed ingredients					
OBJECTIVE: To manage the reveal of feed ingredients in a manner that minimises the risk of contamination of feed whilst being received.					
3.1	Do you receive a signed "declaration of cleanliness" for all delivery vehicles carrying feed ingredients before unloading?	This document can also be used to identify the contents of the previous three loads. Any vehicle carrying feed ingredients must not have carried products that may contaminate the feed (e.g. chicken litter, animal-based fertilisers or restricted animal material (RAM)) in the previous three loads.	Must		
3.2	Do you undertake on-the-ground visual checks to verify the cleanliness of vehicles entering the site?	The frequency of checks should be in accordance with individual company risk ratings.	Must		
3.3	Are all feed ingredients visually inspected as part of the reveal process?	Weed seeds, discoloured and deformed grains, fines etc should be checked for unusual signs.	Must		
3.4	Are feed spills cleaned up as soon as practicable?	Spilt and spoiling feed attracts pests and vermin to the feed mill.	Must		
3.5	Do you minimise the contamination of feed when unloading in drive-over pits?	The use of drive-over mats is a useful way of minimising contamination of the feed. Mud, dust, etc can carry weed seeds and diseases.	Must		

Cont'd

3.6	Are high risk products, such as meat meal, soybean meal and canola meal tested for Salmonella prior to use?	Testing should be based on a frequency related to the risk and in line with the company's risk ratings.	Should		
3.7	Is product accepted if in reused bags from regions (domestic or international) with known disease risks?	Product delivered in reused bags is of a higher risk than the same product in new bags.	Must		
3.8	Are you able to identify the source of all products used and where your products go to?	Traceability of ingredients is a mandatory element within FeedSafe®, and maintaining records that document information such as the date of receipt, time, lot number during unloading, allows for a quick response if a pest or disease is suspected. It also allows for product recall as per FeedSafe® standards.	Must		
4 Manage the movement of employees and family					
OBJECTIVE: To minimise the risk of introduction and spread of disease or contaminants by feed mill employees or family.					
4.1	Do feed mill personnel wear laundered clean clothes each day at the commencement of their work?		Must		
4.2	Do your staff take boots that are worn at the feed mill outside the feed mill?	Do not take boots that are worn at the feed mill outside the feed mill unless cleaned prior to re-entering the feed mill, as they are the most likely method of diseases being spread by personnel.	Must		
4.3	Are protective clothing and footwear worn in the feed mill area at all times and removed prior to exiting?		Must		
4.4	Are hands sanitised and disinfected on entering and leaving the feed mill?		Must		
4.5	Are personal quarantine declarations (Appendix 3) completed by all employees annually?		Must		
4.6	Is food only consumed in designated areas to minimise the potential of feed being contaminated?		Should		

5 Manage the movement of visitors, contractors, suppliers and other service personnel

OBJECTIVE: To minimise the risk of introduction and spread of disease or contaminants by contractors, suppliers, service personnel and visitors.

5.1	Are all visitors provided information on essential biosecurity practices for the site prior to entry?	Be aware of the potential for the introduction and transmission of an emergency disease by visitors	Must		
5.2	Is the access of visitors/suppliers to the designated feed mill area controlled?	Wherever possible, control the access of visitors/suppliers to the designated feed mill area. Signage will play an important part in ensuring procedures and risks are reinforced to visitors.	Must		
5.3	Are there protocols in place to ensure that all visitors entering the feed mill are directed to a designated meeting place away from the main feed mill area, preferably the office, before access is allowed to the main feed mill area?		Must		
5.4	Is a register of visitors and vehicles (including contractors) to the feed mill (Appendix 4) maintained?	<p>The register will include a record of:</p> <ul style="list-style-type: none"> • date • time in • name(s) • company • contact number • motor vehicle registration number • signature • biosecurity risk assessment • time out 	Must		

Cont'd

5.5	Are all visitors (including contractors) assessed prior to entering the feed mill for their biosecurity risk?	The risk assessment must consider the potential for visitors to have been previously exposed to a disease and the subsequent potential for them to introduce a disease into the feed mill (Appendix 5).	Must		
5.6	Do those visitors allowed to enter the feed mill follow the same hygiene procedures employees undertake?		Must		
6 Manage the movement and use of equipment					
OBJECTIVE: To prevent the introduction of disease agents and contaminants into the feed mill through the movement of equipment.					
6.1	Do those employees and contractors that use their own tools and personal equipment (e.g. laptops, cameras or phones), clean the equipment, ensuring it is free of organic matter prior to entry to the feed mill?		Must		
6.2	Is the potential risk for introduction and transmission of disease by borrowed/hired or second-hand equipment listed in the risk register?		Should		
6.3	Does the same equipment be used for the handling of feed and waste?	If you must use equipment for multiple purposes, then wash and disinfect it between uses to ensure that manure does not contaminate feed commodities.	Should		
6.4	Is equipment that is taken into the production area/s, assessed as to its risk and washed and disinfected prior to entry and exit as required?		Must		

Cont'd

7 Manage the movement and use of vehicles

OBJECTIVE: To minimise the risk of site contamination due to the movement of vehicles.

7.1	Are all staff aware of the potential for introduction and transmission of diseases by visiting vehicles and machinery?		Must		
7.2	Is the entry of non-feed mill vehicles, machinery and equipment into areas of the feed mill beyond the specified delivery areas restricted?		Must		
7.3	Is there a designated parking area for vehicles not entering the production area?		Must		
7.4	Do all visitors park their vehicles outside the production area unless it is essential that the vehicle be taken on site e.g. maintenance contractors?	Ensure that all vehicles and machinery entering the feed mill area are directed to specified locations and delivery areas within the feed mill.	Must		
7.5	If any vehicle is taken into the production area/s, is a risk assessment undertaken and the vehicle, washed and disinfected prior to entry and exit as determined by the production area manager.		Must		
7.6	Are the delivery vehicles cleaned of mud, dust and dirt from the underbelly (including wheel arches, mud flaps, tailgate) or drive-over covers put in place before unloading into grain pits?		Must		
7.7	Are trucks containing livestock, livestock products, contaminated/not washed down or vehicles loaded or contaminated by other organic commodities that aren't destined for use at the feedmill admitted into the feedmill area?		Must		

Cont'd

8 Maintenance					
OBJECTIVE: To minimise the introduction of disease, pests and contaminants into the feed mill and reduce the attraction of rodents and birds to production areas.					
8.1	Is the grass on and around the feed mill site kept cut?	Long grass attracts rodents and favours the survival of viruses, fungi, moulds and bacteria	Must		
8.2	Do maintenance operations present a hazard to the integrity of product being manufactured?	As much as possible, maintenance should be conducted between production runs. Ensure that all hardware is removed in the clean-up.	Must		
8.3	Are all perimeter fences and barriers adequately maintained to minimise exposure of the feed mill to wildlife, feral animals and vermin?		Must		
9 Storage of Ingredients					
OBJECTIVE: To minimise the risk of contamination of feed ingredients whilst being stored prior to use.					
9.1	Are all ingredients and additives stored in a manner that reduces contamination by livestock, vermin, insects, wildlife, feral and domestic animals, and other feed types?		Must		
9.2	Is stock rotated on a first in, first used basis?		Must		
9.3	Are feed spills cleaned up as soon as practicable?	Spilled and spoiling feed attracts pests and vermin to the feed mill.	Must		
9.4	Is the integrity of the feed ingredients maintained during storage, with adequate procedures in place to prevent cross contamination?	Ensure that the storage of animal products (ruminant feed ban) is complied with. Restricted animal material (RAM) must not be fed to any ruminants and must therefore be segregated from other feeds. There are specific regulations in each state dealing with the storage of RAM.	Must		

Cont'd

9.5	Are medications (S4 products) kept in a locked environment so that unauthorized or inappropriate access and use is eliminated?	Access to these products and records of use should be controlled by strict protocols.	Must		
10	Manage pests and vermin				
OBJECTIVE: To minimise the potential for introducing infectious agents and pathogens by pests and vermin through their presence in the production and storage areas.					
10.1	Is a pest and vermin control program implemented and maintained?	This must ensure the bait stations are numbered, secure and tamperproof with a map kept of the stations' locations.	Must		
10.2	Are bait stations checked in accordance with the pest management plan and fresh baits set as required?		Must		
10.3	a. Are records kept of each inspection and pest activity noted (see Appendix 6)? b. Do employees/managers review historical activity reports as part of a trend analysis of pest and vermin activity? c. Are adjustments to the pest and vermin control program made based on this analysis?		Must		
10.4	Are bait stations placed away from areas where contamination of feed products can result?		Should		
10.5	Are only approved, fit for purpose baits used?	Toxic baits are not permitted in the production, receipt or load out areas. At no time are grain/pellets or powder baits permitted within the mill, wax blocks should be used. Grain/pellet or powder has a high potential for contamination of product.	Must		

Cont'd

11 Manage feral animals and wildlife					
OBJECTIVE: To minimise the risk of site and feed ingredient contamination by managing feral animals and wildlife.					
11.1	Are staff aware of the potential for the introduction of disease by feral animals and wildlife?	Be aware of the potential for introduction and transmission of pests and diseases by feral animals and wildlife.	Must		
11.2	Is the introduction and transmission of disease and pests by feral animals and/or wildlife through control mechanisms minimised?		Must		
12 Site standards					
OBJECTIVE: To minimise potential sources of contamination onto the site through people, pests, raw materials, vehicles and equipment.					
12.1	Is the site secure with all access onto the site controlled?		Must		
12.2	Are roadways maintained regularly to minimise any puddles, mud and dust?		Must		
12.3	Is the hardstand in both the receiving and load out areas clean and free of rubbish, mud, dust, feed, grain or animal matter (including bird and rodent faeces)?		Must		
12.4	Is the traffic flow for incoming (receiving) and outgoing (load out) traffic separate?		Should		
12.5	Are all feed and grain spills cleaned up as soon as practical.	Spilt feed is an attractant for pest animals to enter the site.	Must		
12.6	Is the site maintained in a clean and hygienic condition with cleaning procedures and schedules in place?	Line surveys should be conducted regularly as verification that feed mill hygiene practices are working.	Must		
12.7	Is the Cleaning and flushing of equipment conducted regularly, as per site hygiene procedures?		Must		

13 Personnel standards

OBJECTIVE: To minimise the risk of contamination arising from staff, contractors, family and general visitors.

13.1	Are all staff working on site wearing clean work-specific clothing and footwear, including appropriate personal protective equipment (PPE) at the commencement of each work shift and changed if required (e.g. after cleaning machinery) to minimise contamination?		Must		
13.2	Are all visitors (including contractors) on site signed in and inducted in on-site biosecurity and safety?		Must		

14 Feed manufacturing process

OBJECTIVE: To minimise the risk of feed contamination during the manufacturing process.

14.1	Does the feed movement flow in one direction to minimise the risk of contamination?	If due to the design of the feed mill and surrounds this is not possible then risk mitigation steps must be assessed, recorded and, if possible, implemented.	Should		
14.2	a. Are procedures to prevent the cross contamination of feed mixes in place? b. Records must be kept.	This may include sequencing, and regular cleaning and flushing schedules.	Must		
14.3	Is sequencing used in the following order: a. oldest raw materials in stock? b. most recently received stock?		Must		
14.5	Is flushing and cleaning between feed types and between species occurring and conducted in accordance with the risk mitigation schedule of the site?		Must		

14.6	Is a robust cleaning schedule that identifies each piece of equipment and their individual cleaning requirements and frequency in place?	Different pieces of equipment in feed manufacturing will require different levels and frequency of cleaning.	Must		
14.7	Are there certain feed safety control procedures (e.g. <i>Salmonella</i>) followed as per individual site protocols?	<p>This may include:</p> <ul style="list-style-type: none"> • Higher manufacturing temperature for certain feeds. • The post-pelleting cooling area will have especially high cleanliness standards. This phase of production presents the highest risk of feed contamination as product is subjected to no further treatment processes that can address contamination issues. 	Must		
14.8	Are the bans on feeding of animal products (ruminant feed ban) to ruminants and feeding of prohibited pig feed (swill to pigs) complied with?	Restricted animal material (RAM) must not be fed to ruminants. This includes any material that may contain or may have been in contact with RAM, including the flushings. There are specific regulations in each state prohibiting the feeding of RAM and outlining labelling requirements for both RAM and non-RAM feeds.	Must		
14.9	Has the reuse of grain cleaner and dust collection materials, floor sweepings, including those from the unloading process been critically assessed?	It has been well established that dust and other screened particles can act as a carrier for pests and diseases.	Must		

Cont'd

14.10	Is the cleaning of equipment performed regularly?	<p>The required frequency will vary with the feed being produced and the ingredients being used. Mitigation strategies that may be possible in some feed mill systems may not work in others because of differences in facility design and equipment, manufacturing operations, and other associated risk factors.</p> <p>N.B.: The surface type (concrete, plastic, rubber, stainless steel, etc.) impacts pathogen survivability in the presence of different decontamination procedures. Stainless steel and smooth plastic surfaces, while easier to clean than tires, rubber belts, or polyethylene totes, are more difficult to disinfect due to the formation of biofilms that protect the bacteria or virus from a chemical disinfectant. Therefore, both cleaning and sanitisation is often necessary, noting that in some instances nearly impossible based on current equipment design constraints.</p>	Must		
14.11	Is dust created during manufacture limited and controlled?	Dust can serve as a vector for pest and disease transmission as well as for general hygiene purposes.	Should		

Cont'd

Train – plan – record					
15 Training					
OBJECTIVE: To ensure awareness by and training of all feed mill employees in all relevant biosecurity requirements.					
15.1	Are all employees involved in the daily monitoring and handling of feed (e.g. feed receipt) aware of the importance of the early detection of contamination (pest, disease, chemical) and know what to do if they suspect raw materials, intermediate, or final product has been contaminated?	Standard operating procedures are to be developed and put into practice.	Must		
15.2	Are all employees involved in the application of disinfectants and herbicides competent to do so?	Refer to AgChem and VetChem training where appropriate. Maintain the necessary safety data sheets for all products being used.	Must		
15.3	Are all feed mill staff, including delivery drivers, inducted and trained in biosecurity practices (including the Emergency Disease Action Plan)?	Records of training are to be kept.	Must		
15.4	Is training provided to all staff annually in line with FeedSafe® standards?		Must		
16 Documentation & record keeping					
OBJECTIVE: To assist in the early detection of feed contamination and the response to any biosecurity breach.					
16.1	Is a sketch or map of the layout of the property, showing the production area, sheds, paddocks, access roads and gates created and kept up to date?		Must		
16.2	Are records and documentation in line with previous sections of this manual maintained?		Must		
16.3	Does the site have an Emergency Disease Action Plan and is it available for all staff?		Must		

16.4	Is the receipt of product accompanied by a commodity vendor declaration (CVD)?	Product must not be unloaded until appropriate documentation is received.	Must		
16.5	Is documentation, including batch processing records, verifying that product has been treated in accordance with established procedures kept?		Must		
16.6	Do all products being received have specified sampling procedures and receipt testing in place?	The results must be recorded and kept for an appropriate period of time.	Must		
Manage outgoing products					
17 Scheduling deliveries					
OBJECTIVE: To minimise the spread of pests and disease as a result of feed deliveries.					
17.1	Are deliveries scheduled so that it is always: a. breeder first, or designated delivery vehicles and drivers for breeder farms only b. youngest to oldest c. clean to dirty, or lowest risk profile to highest risk profile.		Should		
17.2	If deliveries cannot meet the scheduling listed in 17.1, truck(s) is a stand down period of at least 24 hours enforced and flushed and appropriately cleaned before delivering to a breeder farm?		Must		
17.3	Is communication between feed mills, external contractors, and clients regarding any known disease outbreaks considered when scheduling delivery routes?		Must		

Cont'd

18 Feed delivery					
OBJECTIVE: To minimise the spread of pests and disease as a result of feed deliveries.					
18.1	Have drivers completed a personal quarantine declaration, stating that they have no contact with birds, poultry or pigs (see Appendix 3)?	Declarations to be kept on-file by the feed mill.	Must		
18.2	Do drivers commence each day in clean and appropriate work attire?		Must		
18.3	Do drivers follow individual on-farm biosecurity procedures, including shutting gates and keeping to roadways?		Must		
18.4	Do drivers remain outside of production areas (e.g. sheds or range areas)?		Must		
18.5	Are feed spills cleaned up as soon as possible and disposed of on-farm using equipment kept on farm?	Records must be maintained, and notification must be made back to feed mill.	Must		
18.7	Do drivers follow the direction of on-farm personnel regarding: <ul style="list-style-type: none"> a. the use of biosecurity personal protective equipment (e.g. overalls, boot covers, hair nets, gloves)? b. the use of sanitation equipment for footwear and hands prior to and after unloading feed? c. Items that cannot be brought on-site? 	All used items must be disposed of on-farm prior to leaving.	Must		

Cont'd

19 Delivery trucks

OBJECTIVE: To minimise the spread of pests and disease as a result of feed deliveries.

19.1	Is a full truck sanitation implemented: d. Weekly? e. immediately before leaving and after returning from a disease infected farm? f. when changing from broiler or grower to breeder feed delivery?		Should		
19.2	Do drivers keep the truck cabin in a clean and tidy condition?	This includes no rubbish, no passengers, no pets, no dust and no used biosecurity personal protective equipment.	Must		
19.3	Are truck cabins cleaned and disinfected daily?	Key areas include the foot well and dust on the dashboard.	Must		

APPENDIX 2

Emergency Disease/Pest Action Plan

This document details the actions (and responsibilities) that are to be undertaken in the event that an emergency disease/pest outbreak is suspected at the feed mill.

[A] Important Contact Details

	Name	Contact Number
Property name or PIC number		
Manager		
Person responsible for the ED Action Plan		
Government Biosecurity Officer/ Veterinarian		
Emergency Animal Disease Watch Hotline		
Emergency Plant Pest Hotline		

[B] Management Commitment

Management undertakes that unfamiliar signs of disease/pests be investigated, and the following actions undertaken, without delay, if an emergency disease is suspected.

[C] Action Plan

Develop an action plan allocating responsibilities to relevant personnel.

1. Contact the relevant authority through the district veterinary officer or the Emergency Animal Disease Watch Hotline 1800 675 888 or Emergency Plant Pest Hotline 1800 084 881.

Responsibility:

2. Follow all instructions as directed by the relevant authority.

Responsibility:

3. Do not dispatch any feed/ingredients from the feed mill until authorised by the relevant authority
Responsibility:
4. Ensure suspect feed/ingredients are isolated within the feed mill property.
Responsibility:
5. Ensure movement of all feed/ingredients within the property, and surrounds, is restricted.
Responsibility:
6. Delay or halt the delivery of all commodities.
Responsibility:
7. Secure the feed mill property perimeter, limiting access to the affected area and ensuring all vehicles and visitors only enter the farm under controlled conditions.
Responsibility:
8. Do not move personnel and machinery from affected areas unless a person's health is in jeopardy. Do not let these people or machinery leave the property until cleared by officials.
Responsibility:
9. Ensure that any livestock, livestock products, personnel, equipment or machinery do not leave the feed mill property until authorised by the relevant authority.
Responsibility:
10. Compile a list of all feed and ingredients (quantities, identification and location), personnel and machinery movements over the past seven days. Prepare a site plan that details current allocations of ingredients.
Responsibility:
11. Ensure all staff are made aware of the actions being taken and their individual responsibilities to this plan.
Responsibility:
12. Ensure that customers are advised if they are immediately affected by the delay in the supply of product.
Responsibility:
13. If an emergency disease/pest is identified, the feed mill will follow the requirements of the relevant AUSVETPLAN, and directions from the relevant authority.
Responsibility:

APPENDIX 3

Personal Quarantine Declaration

I, hereby agree to abide by MY EMPLOYER'S BIOSECURITY rules and standards.

I understand that the following quarantine rules/standards apply at all times:

1. No avian species are to be kept at my place of residence e.g. no poultry or birds of any type (including ostriches, aviary birds or racing pigeons). If any exemptions to this are approved by the employer, I must shower and change clothes before entering the production area.
2. No pigs are to be kept at my place of residence e.g. domesticated or feral. If any exemptions to this are approved by the employer, I must shower and change clothes before entering the production area.
3. If I undertake feral pig hunting/trapping activities, I will shower, change clothes and decontaminate any vehicles used in this pursuit before entering the production area.
4. No untreated livestock manures from other properties are to be used at my place of residence.
5. No member of my household is to work in any area where contact can be made with poultry or pigs (for example, on other properties or at hatcheries, processing plants, by-product plants, laboratories or with pick-up crews), unless all household members shower and change clothes before commencing work, and no work clothes are kept on household premises.
6. I will not visit poultry abattoirs, pig production areas or poultry shows unless approved by my employer and appropriate quarantine measures are taken.
7. Note: that in the event of an emergency animal disease outbreak additional quarantine/biosecurity requirements may be enforced and that employees will be notified of any amendments.

Signature:

Date:

.....

Residential Address:

.....

This document is an example of what can be included in your organisation's declaration. Please modify to suit your needs

APPENDIX 4

Visitor and Vehicle Register

Date	Time In	Name	Company	Mobile No.	Vehicle Registration	Signature	Risk Assessment Result	Time Out

APPENDIX 5

Visitor Risk Assessment Protocol

Date		Visitors Name:	
Service of occupation		Contact Number:	
Time in:		Time out:	
Reason for visit			

Farm visitors can be classified by the risk they represent: What are you?

Low-Risk Visitors	<p>Come from urban areas and do not contact livestock. They present almost no risk of introducing disease</p> <p>No need to impose restrictions</p>
Low-Risk Visitors	<p>Are those people that travel from farm-to-farm, but do not directly come in contact with livestock or manure</p> <p>Need to ensure footwear/clothing are clean</p>
High-Risk Visitors	<p>Are those people that travel from farm-to-farm and work directly with livestock or manure. These people must be the most diligent with their biosecurity practices.</p> <p>Need to ensure footwear/clothing is cleaned and disinfected or clean footwear/ clothing is provided before access to animals is permitted</p>
Comments:	

Farm Biosecurity Website: www.farmbiosecurity.com.au/toolkit/records

This document is an example of what can be included in your organisation's declaration. Please modify to suit your needs.

APPENDIX 6

Pest Control Inspection and Activity Record

Date	Time	Bait Station No.	Activity Level	Corrective Action	Name/Initials
			0 1 2 3		
			0 1 2 3		
			0 1 2 3		
			0 1 2 3		
			0 1 2 3		
			0 1 2 3		
			0 1 2 3		
			0 1 2 3		
			0 1 2 3		

Activity Level

- 0 No activity
- 1 Slight activity
- 2 Half baits consumed
- 3 All baits consumed

Farm Biosecurity Website: www.farmbiosecurity.com.au/toolkit/records

This document is an example of what can be included in your organisation’s declaration. Please modify to suit your needs.