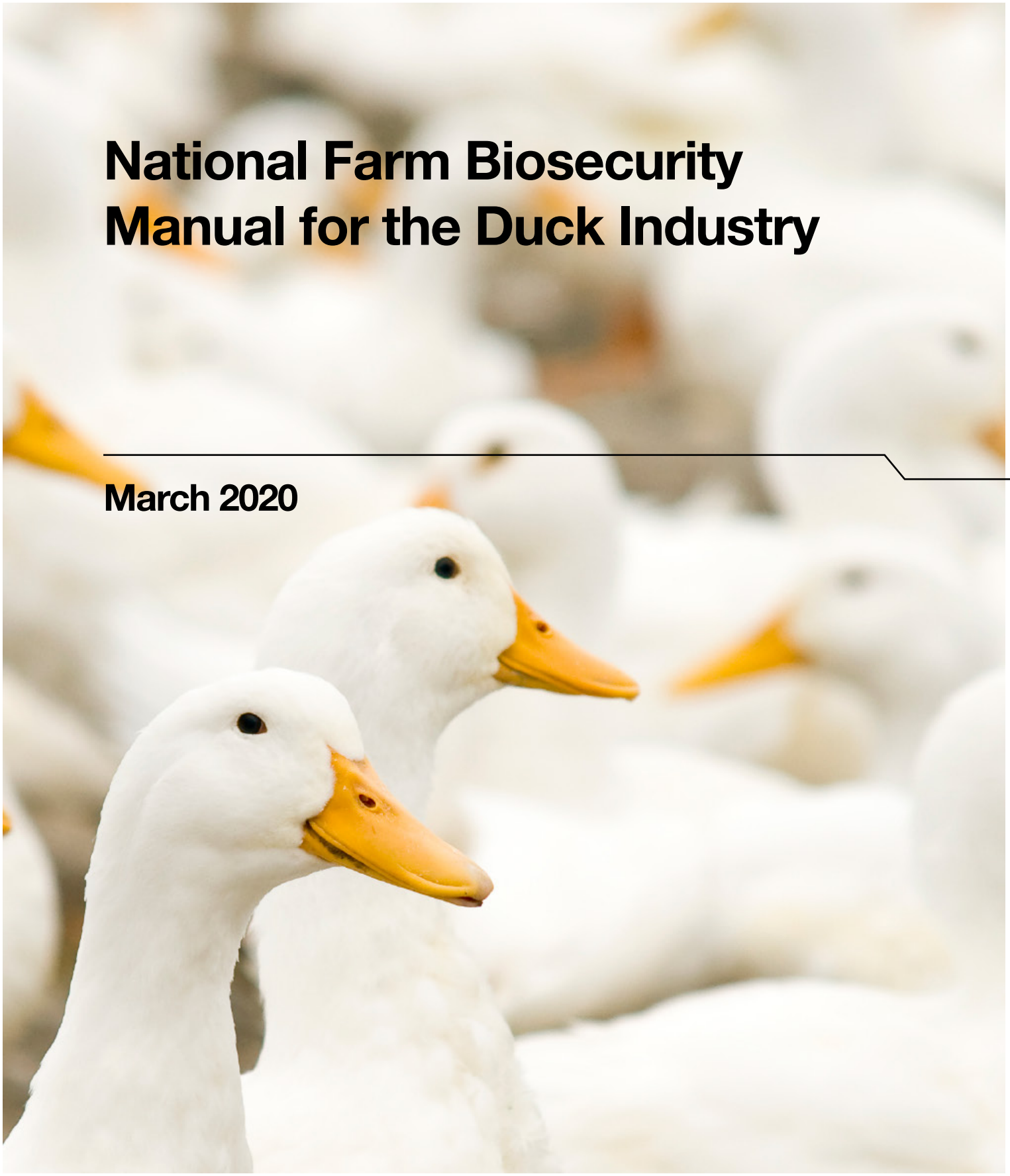
National Farm Biosecurity Manual for the Duck Industry

March 2020



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Images: Pepe's ducks and AHA

PEPE'S DUCKS LTD. BARN RAISED

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ANIMAL HEALTH AUSTRALIA

AHA facilitates innovative partnerships between the Australian Government, state and territory governments, major livestock industries and other stakeholders. We work with our members and stakeholders to strengthen Australia's national animal health system and maximise confidence in the safety and quality of Australia's livestock products in domestic and overseas markets.

AUSTRALIAN DUCK MEAT ASSOCIATION

ADMA is a not-for-profit organisation representing the interests of Australian duck farmers. ADMA is an advocacy body for the sector and has a role in supporting industry wide initiatives.

FARM BIOSECURITY

The Farm Biosecurity program is a joint initiative of AHA and Plant Health Australia on behalf of their members. Its goal is to help producers reduce the risks posed by diseases, pests and weeds to crops and livestock. This national awareness campaign provides information about on-farm biosecurity measures which help prevent emergency animal disease outbreaks and exotic plant pest incursions. It encourages producers to identify risks to their livestock, crops and plant products, and to minimise those risks through good practices.

www.farmbiosecurity.com.au

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National Farm Biosecurity Manual for the Duck Industry

1 About this manual

The *National Farm Biosecurity Manual for the Duck Industry* is an important tool for meeting our shared responsibility for biosecurity. It has been developed to reduce the risk of entry and spread of diseases.

The manual establishes a minimum set of biosecurity guidelines for the duck industry. These guidelines are applicable to all duck farmers - from hatcheries to the point of delivery at the processor, commercial enterprises raising ducks for egg and/or meat production, human consumption, and breeding.

Using this manual will benefit the industry and associated enterprises by preserving duck health and reducing unnecessary production costs associated with the presence of diseases, pests and weeds. To help achieve a good level of biosecurity, recommended practices are suggested under each principle on the following pages. These are examples of what can be done to assist operators in implementing biosecurity practices.

The *Emergency Animal Disease Response Agreement* (EADRA) is a cost sharing deed between governments and livestock industries and includes an obligation by each industry party to develop a program that minimises the risk of disease introduction and spread. The Australian Duck Meat Association (ADMA) developed this biosecurity manual, as part of its ongoing commitment to the EADRA, for its members to implement.

This manual also complies with the legislation of Food Standards Australia & New Zealand (FSANZ), which is the governing body for production and processing of all foods within Australia. The Australia New Zealand food standards code must be met as a condition of trading and it is emphasised that the code applies to the entire supply chain (e.g. farm to fork).

Individual farmers and companies may wish to develop enhanced biosecurity manuals, which should nevertheless incorporate these minimum standards, in addition to any specific company requirements.

Goals

- To prevent the introduction of infectious disease agents to duck production facilities
- To prevent the spread of disease agents from an infected area to an uninfected area
- To minimise the incidence and spread of microorganisms of public health significance

Broadly speaking, biosecurity is a set of measures designed to manage risks and prevent, or control, the

introduction and spread of diseases within and between enterprises. Practising biosecurity measures can significantly minimise the impacts of clinical or subclinical disease and support the productivity, profitability and long-term financial viability of a duck production facility. In addition, following a biosecurity plan will improve the duck industry's ability to withstand an emergency disease outbreak event and minimise the associated economic, social and animal welfare impacts.

The aim of this manual is to identify and recommend appropriate measures to minimise risks common to all duck enterprises. Establishing the existing level of risk within an enterprise is essential to ensure appropriate control measures are implemented. When undertaking the risk assessment, it is important to consider all factors that could impact on the biosecurity of the production area. These considerations should include the location and layout of the property and production area, water supply source, disease status of the district, proximity to other production areas with other avian species, presence and type of wildlife, and interface with the organisations and/or individual clients being supplied. These interactions include pick-ups, service people, industry personnel, contractors feed, and deliveries of new ducks and ducklings.

In this manual, a biosecurity self-audit/auditable checklist, designed for continuous improvement, is provided. This document may also form the basis for second- or third-party audits, as required.

Biosecurity is like any other insurance policy - it is a prudent investment.

Potential biosecurity risks

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Disease, pathogens and pests can spread into and within a duck production facility without immediate detection. The most likely source is the introduction of new ducks to the facility and contact with other bird species.

Ducks

- Transfer of ducks between production areas
- Dead duck disposal

Other animals

- Other poultry species
- All wild and domestic birds
- Feral animals
- Domesticated animals - including other livestock and pets
- Insects
- Rodents – rats and mice

People

- Farm personnel and family members living on-site
- Contractors, maintenance personnel, neighbours, service people and visitors
- Dirt/manure/contaminants on hands, boots, clothing and hair

Vehicles/equipment

- Dirt/manure/contaminants carried on cars, trucks, tractors, scales, husbandry equipment and service provider equipment

Feed and water

- Contamination or spoilage of raw materials
- Contamination or spoilage of feed during transport and storage
- Faecal and urine contamination from the same species or other species e.g. rodents and wild birds
- Bacteria and mould found in poor quality or damaged feed
- Bacteria in untreated water or contamination of urine and faecal matter in water points

Litter

- Transporting litter material on and off-site
- Storing used litter on farms
- Utilizing used litter as a fertiliser

Air

- Transmission through aerosols, droplets or dust particles.

Definitions of ‘production area’ and ‘property’

In this manual, **production area** includes duck sheds, any ranges used for free range production, shavings/ litter sheds, the areas used for feed storage and handling, any dedicated staff amenities, delivery access routes and the area surrounding the sheds (including pickup areas).

Property is the land where the production area is located, and typically includes the facility manager’s home. It also includes other production land used for livestock or cultivation. The boundary of the production area, and the boundary of the property, can be the same.

Any reference to **sheds** refers to roofed buildings capable of, and used for, holding ducks securely within its perimeter. Any reference to range is a reference to a fenced outdoor area that are, or at times are, accessed by the ducks being farmed.

Access should always be made through ‘least risk’ areas (e.g. production areas of younger or healthy ducks). In an emergency, access can be made through a ‘high-risk’ area, after a shower and complete change of clothing. The term ‘high-risk’ area includes production areas with minimum standards of biosecurity, multi-age flocks or endemic disease problems.

Levels of biosecurity overview

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LEVEL 1 – Principles of biosecurity

The following six principles of biosecurity provide guidelines for the ongoing management practices for:

- farm inputs – stock, water, feed, bedding
- the movement of people vehicles and equipment
- production practices
- feral animals, pests and vermin
- outgoing products
- training, planning and recording.

Farmers can achieve these biosecurity principles by adopting appropriate management practices, as recommended in this manual, on an ongoing basis. By doing so, there will be a high degree of assurance that diseases and pathogens will not be carried into the duck production areas and reduce the risk of transmission between production areas. Level 1 principles are the minimum requirements.

It is important to remember that in the event of an Emergency Animal Disease (EAD) outbreak or serious spread of an endemic disease, more stringent on-farm practices will need to be implemented. The extent of this will be guided by state or territory governments, who are responsible for implementing standard operating procedures that are in line with the relevant AUSVETPLAN disease strategy (see www.animalhealthaustralia.com.au/ausvetplan).

Action plan for suspected emegency animal disease

Each production facility must establish and document clear guidelines for circumstances when an emergency animal disease alert should be raised, and who must be informed (e.g. in the event of an unusual increase in mortality, or a drop in production). The action plan must also clearly state that, if an alert is raised, movements on and off the production area, and the property, must be limited to an absolute minimum, and special precautions outlined in 'Level 2 – High Risk Biosecurity Procedures' must be followed. Appendix 1 provides a template for an EAD Action Plan.

EMERGENCY ANIMAL DISEASE WATCH HOTLINE

1800 675 888

LEVEL 2 – High-risk biosecurity procedures

In the event of an outbreak of an EAD or serious endemic disease, high-risk biosecurity procedures will be implemented.

In the case of an EAD, where applicable, standard operating procedures will be implemented by government response personnel in line with the relevant disease AUSVETPLAN manual. The relevant government department will inform you of these procedures.

Guidelines to EAD alert

A clear and precise action plan should be activated if an EAD is evident or suspected.

Examples of issues that may trigger an alert are:

1. rapid increase in mortality
2. evidence of visual discomfort in the flock
3. sudden change to the characteristics of faecal matter
4. rapid reduction in feed and water consumption
5. change in movement patterns within the shed
6. drop in egg production by 10%.

A farmer following a daily routine of movement through a shed will quickly note any of the points above.

Should observations of a flock trigger an alert, a response must be immediate. Do not wait for possibilities or situations to unfold.

This is to take place regardless of the day of week or hour of the day.

If an EAD is suspected, the following procedures should be implemented by a farmer:

1. make immediate contact with their company livestock manager who will notify the local veterinary advisor/vet consultant, or phone the EAD Watch Hotline (1800 675 888)
2. lock the main gate to the production site
3. restrict entry to the site, other than essential services
4. restrict entry to the suspect shed, other than essential tasks
5. limit discussion of potential disease outbreak to the immediate sectional/farm manager
6. wait for further direction and remain on the site.

Level 1 – Principles of biosecurity

1.0 Manage farm inputs – stock, water, feed, bedding

PRINCIPLE 1.1: Ducks and other animals

Objective: To manage the introduction and movement of ducks and other animals in a way that minimises the risk of introducing or spreading diseases and pests.

1.1.1 Inspect newly hatched ducklings and assess for health status prior to unloading from delivery tubs.

1.1.2 Segregate, observe and treat (as necessary) newly introduced ducks for a period of two weeks.

1.1.3 Ensure only commercially produced and authorised ducks are kept in the production area. No other avian species, including aviary birds and pet birds, or pigs are to be kept on the property.

1.1.4 Ensure dogs, cats and wild birds do not enter sheds at any time.

1.1.5 If livestock graze the property, ensure the production area has a stock-proof fence to provide a barrier from the production area used by ducks. Grazing near sheds, defined in this manual as part of the production area, is only permitted where the grazing area is separated by a stock-proof barrier from the area used by ducks, and where the grazing area is not used for access to other parts of the production area.

PRINCIPLE 1.2: Water

To ensure water used in duck sheds for drinking, cooling and cleaning, is suitable for ducks.

1.2.1 Ensure the quantity and quality of water and delivery system provided is suitable for the type and age of the ducks.

1.2.2 The *National Water Biosecurity Manual Poultry Production (2009)* is the Australian reference for safe water for duck production. Test all water supplies every six months to ensure they meet the required standards and retain records of these tests (Appendix 8).

1.2.3 If water tests fail the six-month testing, establish a maintenance program and monitor and record daily (Appendix 10).

1.2.4 Treat water that does not meet the standard through either: chlorination, ultra-violet, iodine or reverse osmosis, to ensure the standard is met.

1.2.5 Treat all surface water, such as dam and river water, in accordance with the *National Water Biosecurity Manual Poultry Production (2009)* before being used as duck drinking water and ensure drinking water quality is maintained at a suitable standard for use in duck production (Appendix 8).

1.2.6 The use of suitably treated water is critical to achieving good biosecurity. In general, chlorination alone is unsuitable for water with a high-level of organic matter, while ultraviolet treatment is of little use for turbid water. It may be necessary to seek expert advice to ensure a safe water supply. Effective treatment of surface water to reduce contamination is complex, but essential. Any water treatment process should be monitored regularly (Appendix 9).

1.2.7 Ensure the effectiveness of alternative systems (i.e. ultraviolet treatment) is validated before use, and maintain and monitor to ensure effectiveness.

1.2.8 Ensure production area records demonstrating the effectiveness of water treatment are kept. Carry out microbiological validation of the treatment system's effectiveness annually, or as approved by the processor.

1.2.9 Water from reticulated domestic supply or secure and clean underground bore water is ideally kept in a closed system from supply point to the ducks with no open exposure to the air.

1.2.10 For a chlorinated water supply, the treatment must:

a. achieve a level of 1.0 – 2.0 ppm free available chlorine at the point of use

b. have a minimum of two hours contact time prior to use. Guidelines for chlorinating surface water are available in Appendix 9.

1.2.11 Ensure the water system in place in duck sheds is fit for purpose with no excessive flows or leaking pipes. Excessive water in duck sheds can increase effluent production through increased surface water and wetting litter, which may require additional management practices to mitigate the risk of reduced hygiene, food safety concerns and mortality rates due to *Riemerella anatipestifer* infection.

PRINCIPLE 1.3: Feed

Objective: To manage the introduction and movement of duck feed stuffs in a way that minimises the risk of introducing or spreading diseases and pests.

1.3.1 Only purchase duck feeds from reputable suppliers who can provide assurances of their handling and storage processes.

1.3.2 Inspect duck feed on delivery for evidence of pests, damage and contaminants.

1.3.3 Store duck feed in a manner that prevents contamination by livestock, vermin, insects, wildlife, feral and domestic animals and other feed types.

1.3.4 Manage feeding systems to ensure feed in silos and feed delivery systems are protected from contamination by feral animals, wild birds and rodents.

1.3.5 Clean up feed spills immediately to prevent the attraction of feral birds and rodents to the production area.

PRINCIPLE 1.4: Bedding

Objective: To manage the introduction and movement of bedding in a way that minimises the risk of introducing or spreading diseases and pests.

1.4.1 Ensure shaving or litter material storage facilities are:

a. in the production area

b. weather and wild bird proof

c. managed to minimise contamination from pests, vermin and other livestock or domestic animals.

1.4.2 Ensure used litter and manure is not stockpiled in the shed area (i.e. the production zone). Store litter and manure in an appropriately designed storage area, with a sufficient buffering zone from the duck sheds and enclosures. The storage area must be located in a position that will not compromise biosecurity.

1.4.3 Remove all litter before the introduction of the next batch of breeder ducks.

1.4.4 Perform a full or partial cleanout for growers as required with any company risk management procedures.

2.0 Manage the movement of people, vehicles and equipment

PRINCIPLE 2.1: Production personnel

Objective: To minimise the risk of introducing diseases or contaminants by production personnel.

2.1.1 Ensure staff, or any person residing on the property, do not have contact or become contaminated through contact with any other non-company avian species or pigs. If contact has occurred, the person must be excluded from the property for a period of 72 hours.

2.1.2 Ensure staff wear clean clothes at the beginning of each workday.

2.1.3 All staff should be vaccinated against the seasonal influenza virus every year.

2.1.4 Staff returning from international travel must notify management and abide with any company risk management procedures (e.g. quarantine periods). Clothing and footwear worn during international poultry farm visits should be discarded or not be worn in Australian duck production facilities.

2.1.5 Report gastroenteritis symptoms to management to limit the risk of possible food borne pathogen transmission.

2.1.6 Ensure production personnel always access production areas from a 'low-risk' area (e.g. young or healthy flocks) to a 'high-risk' area (e.g. old, quarantined or disease risk flocks). Movement from a 'high-risk' area to a 'low-risk' area must not occur within 24-hours, unless it is an emergency where access is permitted through a 'high-risk' area after a shower and complete change of clothing. The term 'high-risk' area includes production areas with minimum standards of biosecurity, multi-age flocks or endemic disease problems (Appendix 4).

2.1.7 Movement between different commercial enterprises requires a minimum quarantine period of 48 hours.

2.1.8 Ensure all production personnel agree to comply with the entry conditions as stipulated in the Personnel Quarantine Declaration (Appendix 5).

PRINCIPLE 2.2: Contractors, suppliers, other service personnel and visitors

Objective: To minimise the risk of introducing diseases or contaminants by contractors, suppliers, service personnel and visitors.

2.2.1 Ensure all contractors, suppliers, service personnel and visitors agree to comply with the entry conditions as stipulated in the Contractor's Quarantine Declaration if entering the production area/s (Appendix 6).

2.2.2 Contractors, suppliers, service personnel and visitors must declare any overseas travel that has occurred in the five days prior to their visit and follow any company risk management procedures and quarantine periods. If there was contact with any avian species or pigs while travelling within the five days prior to the visit, entry into production areas is not permitted unless it is approved by company management.

2.2.3 Use a visitor log to provide a system for tracing the movement of all personnel entering a production site (Appendix 7).

2.2.4 Ensure the following people do not enter sheds:

a. drivers from non-duck deliveries (e.g. gas and feed carriers)

b. repair and maintenance contractors who have had contact with poultry or other birds that day unless, (a) it is an emergency, and (b) they have showered thoroughly and changed clothing and boots and covered their hair

c. any authorised visitor, other farmers or equipment suppliers, likely to have been exposed to poultry, other birds or pigs in the 72 hours prior to their visitation unless, they have had a thorough shower and change of clothing and boots. If not, they must limit their visit to the property's residence while wearing clean clothes.

2.2.5 Where a batch system is practiced, routine maintenance should be conducted, between batches, prior to final disinfection.

2.2.6 Drivers must wear protective clothing, such as dust coats or overalls when entering a production area.

2.2.7 Where applicable, contractors, suppliers, service personnel and other visitors must be provided with training in general biosecurity, welfare and other relevant parts of this manual, and such training is to be recorded.

2.2.8 Pick-up crew members must be company trained in biosecurity and duck handling techniques (as set out in relevant state or territory welfare legislation) and should enter the farm only after meeting premises entry conditions.

PRINCIPLE 2.3: Entry procedures for duck sheds

Objective: To prevent the introduction of disease agents and contaminants into duck sheds through the movement of people.

2.3.1 Ensure protective clothing and footwear is worn in the production area at all times.

2.3.2 Ensure hand sanitiser is available at approved entrances to sheds and used before entering and leaving sheds.

2.3.3 Use separate shed boots or high-quality disposable boot covers before entering and leaving each shed. If these are not provided, footbaths should be used.

2.3.4 Ensure boots worn in the sheds are not worn or taken outside the production area, as they are the most likely method for spreading disease.

2.3.5 Scrape boot soles before using footbaths to remove organic matter and to ensure the disinfectant is making complete contact with the soles.

2.3.6 Inspect footbaths daily for excessive organic matter and replace disinfectant at least weekly to ensure adequate concentration according to company or manufacturer's recommendations.

PRINCIPLE 2.4: Equipment

Objective: To prevent the introduction of disease agents and contaminants into duck sheds through the movement of equipment.

2.4.1 Ensure that tools and equipment used by company service personnel (i.e. laptops, cameras or phones) are cleaned to remove dust and organic matter prior to entering the production area. Practical equipment that cannot be cleaned (e.g. electronic equipment) should not be transferred between production areas.

2.4.2 Clean and disinfect duckling delivery tubs after each use, preferably each day.

2.4.3 Check and disinfect crates used for pick-up prior to leaving the processing plant.

PRINCIPLE 2.5: Vehicles

Objective: To prevent the introduction of disease agents and contaminants into duck sheds through the movement of vehicles.

2.5.1 Check and disinfect pick-up vehicles prior to leaving the processing plant.

2.5.2 All visitors should park their vehicles outside the production area, unless it is essential the vehicle be taken on site (e.g. some maintenance contractors).

2.5.3 Signage should be erected to communicate parking for visitors and 'no go' zones.

2.5.4 Trucks carting new or old litter, feed and gas must undergo a tire wash between production areas.

2.5.5 Trucks carting old litter must only do so when depopulation has occurred. If farms are not completely depopulated, complete cleaning of trucks and equipment between production areas is required.

2.5.6 Clean and disinfect duckling delivery trucks after each use, preferably each day.

2.5.7 Ensure that all vehicles taken into the production area/s undergo a tire wash prior to entry.

3.0 Manage production practices

PRINCIPLE 3.1: Animal health management

Objective: To manage the prevention and control of animal diseases on-farm by regularly monitoring livestock health.

3.1.1 Maintain a record of duck movements (all birds/eggs in, throughout the production area and all birds out) to facilitate tracing in case of an animal health or food safety concern.

3.1.2 Inspect all ducks thoroughly twice daily.

3.1.3 Record duck mortality and egg production (in breeder flocks) daily to highlight unusual health problems. If there are unexplained disease-related mortalities of 1% or more in 24 hours, seek advice from company management and/or a veterinarian and investigate.

3.1.4 Ensure vaccines and medications are used as per the manufacturer recommendations unless directed by a veterinarian and administered under veterinary and/or grow-out manager supervision.

3.1.5 Ensure all medication withholding periods are observed.

PRINCIPLE 3.2: Production area management

Objective: To design, maintain and operate duck production areas (including sheds) that will assist in providing a biosecure area.

3.2.1 Ensure all duck production areas, shavings/litter sheds and water storages remain wild bird, rodent and feral animal proof.

3.2.2 Establish the production area as a clearly defined biosecurity zone using a perimeter fence or a well-defined boundary fence marked with clear signage.

3.2.3 The main entrance to the production area must be closed off to vehicle traffic with a lockable gate, which should be kept locked at all times, when possible.

3.2.4 Display appropriate signage at the entrance, such as '*Biosecure Area - No Entry Unless Authorised*'. Effective signage should also direct visitors to contact the farmer before proceeding (i.e. telephone number and/or enquire at house).

3.2.5 Facilities should be available for the cleaning and disinfecting of equipment and vehicles before entry to the production site.

3.2.6 Ensure all duck sheds are lockable and kept locked when unattended.

3.2.7 Ensure the production area remains free from rubbish and clutter and keep dust creation to a minimum.

3.2.8 Ensure drainage from livestock pastures or holding areas does not enter duck sheds and production areas.

3.2.9 Keep grass short on and around the production area to avoid rodents and the survival of viruses and bacteria. Vegetation should be poisoned in the immediate area of the outer shed wall with an approved herbicide.

3.2.10 Trees and shrubs should be set back from the immediate shed area to help disperse air. Vegetation should be carefully selected to minimise wild bird attraction. Vegetation buffers for environmental compliance should not be compromised.

3.2.11 The minimum buffer distance between different duck enterprises and entities should ideally be 3 km.

PRINCIPLE 3.3: Carcass, effluent and waste management

Objective: To minimise the spread of disease and manage the disposal of dead animals and waste in a manner appropriate for the production system.

3.3.1 Ensure dead duck disposal methods conform to environmental compliance requirements (e.g. incineration with after burner and collection procedures as listed in Appendices 2 and 3).

3.3.2 Perform dead duck composting in sealed buildings or containers as far away as possible from existing farming operations or production sites. Thoroughly clean and sanitise equipment moved between the composting site and production site.

3.3.3 Consider and document in your biosecurity plan, whole of farm disposal method options specific to the duck production property (e.g. incineration, burial or composting options available for mass disposal in the event of an EAD outbreak[1]).

3.3.4 Ensure effluent is contained and disposed of in a manner that conforms to environmental compliance requirements. Do not dispose of effluent in other livestock production areas. If the property has external surface effluent ponds, management must be implemented to negate the risk these pose to the duck production areas and wild bird populations.

3.3.5 Ensure used litter is managed in conjunction with advice set out in Principle 1.4 of this manual.

3.3.6 Ensure premises waste is disposed of correctly.

1 Whole of farm disposal options can be found in the AUSVETPLAN Disposal Procedures manual (2015) www.animalhealthaustralia.com.au/download/2621/

4.0 Manage feral animals, pests and vermin

PRINCIPLE 4.1: Feral animals/wildlife control

Objective: To minimise the potential for introducing infectious agents and pathogens by pests (wildlife, feral, domestic and livestock animals) through their presence in the production area.

4.1.1 Implement and maintain a pest control program for wildlife, feral animals and domestic species to minimise contamination of duck production sheds/areas.

4.1.2 Design and maintain all duck housing to prevent the entry of wild birds, feral animals and other pests.

4.1.3 Monitor and manage feral animal and wildlife populations to prevent an impact on the ducks.

PRINCIPLE 4.2: Vermin control

Objective: To minimise the potential for introducing infectious agents and pathogens by vermin, in particular rodents, through their presence in the production area.

4.2.1 Implement vermin baiting programs which include the following features:

a. bait stations that are checked weekly and replenished as needed. It is recommended that bait types are rotated every six months to avoid resistance

b. a record kept of each inspection, noting all activity (Appendix 11)

c. monitored and managed vermin populations to prevent an impact on the ducks.

4.2.2 Design and maintain all duck housing to limit the entry of vermin.

4.2.3 Include bait stations on the production site map, and define by number, and place a minimum of 20 metres apart. The number of bait stations should be increased in areas where there are signs of increased rodent activity.

4.2.4 Ensure the design of bait stations minimises the opportunity for other animals and birds to access the bait.

5.0 Manage outgoing products

PRINCIPLE 5.1: Farm outputs

Objective: To minimise the risk of introducing or spreading diseases or contaminants by pick-up operations

5.1.1 Prior to pick-up, flock records must be examined by the referring company representative to ensure compliance with state or territory biosecurity legislation.

5.1.2 The person in charge of pick-up will need to accept the flock following observations and consultation with the farmer.

5.1.3 The welfare and condition of livestock is the responsibility of the pick-up supervisor, or the appointed responsible driver, until vehicles reach the processing plant and are accepted by the site supervisor or person responsible.

5.1.4 After final pick-up, keep shed doors closed when not in use, except during litter removal. After washing and disinfecting, if drying is a problem, ventilate using fans or bird wire screens in shed doorways ensuring wild birds are kept out of sheds at all times.

5.1.5 Follow all aspects of catching and transporting outlined in training and in accordance with state or territory government animal welfare legislation. Provisions for poultry transport are outlined in the Australian animal welfare standards and guidelines for land transport of livestock.[2]

6.0 Train, plan and record

PRINCIPLE 6.1: Biosecurity planning and staff instruction

Objective: To ensure awareness by, and training of, all production area staff in all relevant biosecurity requirements.

6.1.1 Ensure that all staff involved in the daily monitoring and handling of ducks are aware of the importance of early detection of diseases and know what to do if they suspect a duck may be exhibiting symptoms of disease.

2 www.animalwelfarestandards.net.au/files/2015/12/Land-transport-of-livestock-Standards-and-Guidelines-Version-1.-1-21-September-2012.pdf

6.1.2 Ensure that a copy of this Manual is readily accessible to staff in each production facility.

6.1.3 Provide staff with annual training in all aspects of this manual as well as regular updates with veterinary support. Such training is to be recorded.

6.1.4 Maintain a register recording training and compliance of contractors and other service personnel.

6.1.5 Create and maintain a map drawn to scale of the property layout, showing the production area sheds, access roads and gates, and keep the map in this Manual.

6.1.6 Ensure that the EAD Action Plan (Appendix 1) is readily accessible to staff in each production facility.

PRINCIPLE 6.2: Chemical usage, animal treatments and storage

Objective: To ensure staff awareness of, and training in, the safe usage and storage of all relevant chemicals used on site.

6.2.1 Ensure all staff are competent in the usage and application of all farm chemicals and animal treatments.

6.2.2 Ensure chemicals and animal treatments are used as per the manufacturer's instructions and that with-holding periods and export slaughter intervals are observed to ensure chemical contamination does not occur.

6.2.3 Keep material safety data sheets for all chemicals held on site on hand at all times.

6.2.4 Store all chemicals used in the production zone in a safe protective unit (as required by state law).

Level 2 – High-risk biosecurity procedures

Objective: To increase biosecurity protection, by minimising movements to protect the property, as much as possible, from the increased threat of a disease being introduced from the outside, in the face of a suspected outbreak of an emergency disease or a serious endemic disease.

7.0 Action plan for a suspected emergency animal disease

7.1 Each processing company must establish and document clear guidelines regarding the circumstances when an EAD alert should be raised, and who should be informed (e.g. when experiencing an unusual increase in mortality or drop in production). The action plan must also clearly state that, if an alert is raised, the movement of ducks must cease immediately. All other movements, on and off the production area and the property, must be limited to a minimum, and special precautions must be taken as outlined below.

8.0 Facilities

8.1 Gates must be kept locked.

8.2 Shed doors must be locked at night.

8.3 Facilities for the cleaning and disinfection of equipment coming on and off the production area must be in place.

9.0 Personnel/Visitors

9.1 No visitors are to enter the production area unless absolutely essential. Company personnel will discontinue all non-critical visits.

9.2 Routine repairs and maintenance must be restricted, apart from any authorised emergency work.

9.3 All visitor and vehicle movements on and off the production property must be recorded.

10.0 Operations

10.1 Essential visitors must shower thoroughly before and after visits. A complete change of clothing, footwear, hair covering and breathing protection is required. Used clothing, and all used personal protection equipment, must remain on the property for disposal.

10.2 Any vehicle entering the production area must be washed and disinfected before and after property access, such as feed and gas carriers. Vehicle driver cabins must also be sanitised inside with an approved spray disinfectant.

10.3 No ducks or litter should be moved on or off properties until disease status is clarified.

11.0 Standard operating procedures (SOPs)

11.1 If a major EAD outbreak should occur, further measures (including movement controls) and SOPs will be implemented by government response personnel in line with the relevant disease AUSVETPLAN manual. The relevant government department will inform you of these procedures.

Production site area internal audit checklist

Level 1 Audit

Audit date:	**Property Name:**
Auditor's Name:	**Auditee's Name:**
Auditor's Signature	**Auditee's Signature**

1.1	**Duck and other animal movements**	**YES**	**NO**	**N/A**	**CORRECTIVE ACTION**
1.1.1	Are all ducklings inspected for their health status and assessed prior to unloading from delivery tubs?				
1.1.2	Are all newly introduced ducks segregated, observed and provided treatment as necessary?				
1.1.3	Are there avian species other than the commercially produced and authorised ducks or pigs kept in the production area?				
1.1.4	Do dogs, cats and wild birds enter the duck sheds at any time?				
1.1.5	If livestock graze the property, does the production area have a stock-proof fence?				
NOTES:					
1.2	**Water**	**YES**	**NO**	**N/A**	**CORRECTIVE ACTION**

1.2.1	Is the quantity and quality of water and the delivery system suitable for the type and age of the ducks?				
1.2.2	Are all water supplies tested every six months to ensure that each facility meets the required standards outlined in the *National Water Biosecurity Manual Poultry Production (2009)*?				
	Are records of these tests retained?				
1.2.3	If the water tests have failed the six-monthly testing, is monitoring conducted and recorded daily and a maintenance program in place (Appendix 10)?				
1.2.4	When water does not meet the standard is it treated through: chlorination, ultra-violet, iodine or reverse osmosis, to ensure the standard is met?				
1.2.5	Is all surface water (such as dam and river water) treated in accordance with the national water biosecurity manual before being used as duck drinking water?				
	Is the drinking water quality maintained at a standard suitable for use in duck production (Appendix 8)?				
1.2.6	Is effective treatment/s of surface water implemented to reduce contamination? Is this process monitored regularly?				
1.2.7	Is the effectiveness of alternative systems (e.g. ultraviolet treatment) validated before use, and monitored to ensure ongoing effectiveness?				
1.2.8	Are production area records demonstrating the effectiveness of water treatment kept? Is a microbiological validation of the treatment system's effectiveness carried out annually, or as approved by the processor?				
1.2.9	Is water from a reticulated domestic supply or secure and clean underground bore water kept in a closed system from supply point to the ducks with no open exposure to the air?				

1.2 Water *(Continued)*

1.2.10	Is the level of 1.0 – 2.0ppm free available chlorine achieved for chlorinated water at the point of use?				
	When chlorinating water, is the minimum two hours contact time prior to use achieved?				
1.2.11	Is the water system in place in duck production sheds fit for purpose with no excessive flows or leaking pipes to reduce the risk of *Riemerella anatipestifer* infection?				
NOTES:					
1.3	**Feed**	**YES**	**NO**	**N/A**	**CORRECTIVE ACTION**
1.3.1	Are duck feeds purchased from reputable suppliers who can provide assurances with their handling and storage processes?				
1.3.2	Is all duck feed inspected on delivery for evidence of pests, damage and contaminants?				
1.3.3	Is all duck feed stored in a manner that prevents contamination by livestock, vermin, insects, wildlife, feral and domestic animals and other feed types?				
1.3.4	Are the feeding systems managed to ensure feed in silos and feed delivery systems are protected from contamination by feral animals, wild birds and rodents?				
1.3.5	Are feed spills cleaned up immediately to prevent the attraction of feral birds and rodents to the production area?				
NOTES:					

1.4	Bedding	YES	NO	N/A	CORRECTIVE ACTION
1.4.1	Are the shavings/litter storage facilities located in the production area?				
	Are the shavings/litter storage facilities weather and wild-bird proof?				
	Are the shavings/litter facilities managed to minimise contamination from pests, vermin and other livestock or domestic animals?				
1.4.2	Is used litter and manure stockpiled in the shed area (i.e. the production zone)?				
	Is litter and manure stored in an appropriately designed storage area, with a sufficient buffering zone from the duck sheds and enclosures? Is the storage area located in a position that will not compromise biosecurity?				
1.4.3	Is all litter removed before the introduction of the next batch of breeder ducks?				
1.4.4	Is a full or partial cleanout performed between batches of grower ducks as required with any company risk management procedures?				
NOTES:					

2.1	Production personnel	YES	NO	N/A	CORRECTIVE ACTION
2.1.1	Do staff, or any person residing on the property, have contact with any other non-company avian species or pigs?				
2.1.2	Do staff wear clean clothes at the beginning of each workday?				
2.1.3	Are all staff vaccinated against the seasonal influenza virus every year?				
2.1.4	Do staff returning from international travel notify management and abide with any company risk management procedures (e.g. quarantine periods)?				
2.1.5	Are prolonged gastroenteritis symptoms reported to management?				
2.1.6	Do production personnel work from a 'low-risk' area (e.g. young or healthy flocks) to a 'high-risk' area (e.g. old, quarantined or disease risk flocks)? Does movement from a 'high-risk' area to a 'low-risk' area occur after 24 hours?				
2.1.7	Is a minimum quarantine period of 48 hours adhered to when moving between different commercial enterprises?				
2.1.8	Has each staff member signed a *Personnel Quarantine Declaration* (Appendix 5)?				
NOTES:					
2.2	**Contractors, suppliers, other service personnel and visitors**	**YES**	**NO**	**N/A**	**CORRECTIVE ACTION**

2.2.1	Has each contractor and visitor signed a *Contractor's Biosecurity Declaration* (Appendix 6)?				
2.2.2	Do contractors, suppliers, service personnel and visitors must declare any overseas travel that has occurred in the five days prior to their visit and follow any company risk management procedures and quarantine periods?				
2.2.3	Is there a visitor's log (Appendix 7) available to all visitors accessing the production area?				
2.2.4	Are all visitors (e.g. other farmers or equipment suppliers) that are likely to have been exposed that day to poultry, other birds or pigs, had a thorough shower and changed their clothing and boots before entering the production area?				
	Are repair and maintenance contractors, who have had contact with poultry or other birds that day, only allowed to enter sheds populated, or ready to be populated, with ducks when , (a) it is an emergency, or (b) they have showered thoroughly, changed clothing and boots, and covered their hair?				
	Are drivers from deliveries, other than young ducks, allowed to enter the sheds?				
2.2.5	For batch systems, is routine maintenance conducted between batches and prior to final disinfection?				
2.2.6	Are drivers made to wear protective clothing, such as dust coats or overalls, when entering a production area?				
2.2.7	Are contractors, suppliers, service personnel and other visitors (where applicable) provided with training in general biosecurity, welfare and other relevant parts of this manual?				
2.2.8	Are pick-up crew members trained in company biosecurity and duck handling techniques (as set out in relevant state or territory welfare legislation), and do they only enter the farm after meeting premise entry conditions?				
NOTES:					
2.3	**Entry procedures for duck sheds**	**YES**	**NO**	**N/A**	**CORRECTIVE ACTION**

2.3.1	Is protective clothing and footwear worn at all times in the production area?				
2.3.2	Is a hand sanitiser available at all entrances to duck sheds and production areas and used before entering these areas?				
2.3.3	Are separate shed boots or high-quality disposable boot covers used before entering and leaving each shed? If not, is a footbath provided?				
2.3.4	Are boots worn in the sheds or the production area taken outside this area/s?				
2.3.5	Are there provisions for scraping/brushing boot soles before dipping, to ensure the sanitiser is making complete contact with the soles?				
2.3.6	Are footbaths inspected daily for excessive organic matter and is the footbath disinfectant changed at least weekly to ensure adequate concentration according to company or manufacturer's recommendations?				
NOTES:					
2.4	**Equipment**	**YES**	**NO**	**N/A**	**CORRECTIVE ACTION**
2.4.1	If company service personnel use their own tools and equipment (e.g. laptops, cameras or phones) are they cleaned prior to entering the production area?				
2.4.2	Are all duckling delivery tubs cleaned and disinfected after each use or as a minimum at the end of each days use?				
2.4.3	Are all crates used for duck pickup checked and disinfected prior to leaving the processing plant?				

2.4 Equipment *(Continued)*

NOTES:					
2.5	**Vehicles**	**YES**	**NO**	**N/A**	**CORRECTIVE ACTION**
2.5.1	Are all pickup vehicles checked and disinfected prior to leaving the processing plant?				
2.5.2	Do all visitors park their vehicles outside the production area, unless it is essential that the vehicle is taken on site?				
2.5.3	Is signage erected to communicate parking for visitors and 'no go' zones?				
2.5.4	Are all trucks carting new or old litter, feed or gas cleaned and disinfected between production areas?				
2.5.5	Are trucks carting old litter only doing so when depopulation has occurred?				
	If farms are not completely depopulated, does complete cleaning of trucks and equipment occur between production areas?				
2.5.6	Are all duckling delivery trucks cleaned and disinfected after each use, preferably each day?				
2.5.7	Are all vehicles taken into the production area/s undergo a tire wash prior to entry?				
NOTES:					

3.1	**Animal health management**	**YES**	**NO**	**N/A**	**CORRECTIVE ACTION**

3.1.1	Are records of duck movements (all birds/eggs in, throughout the production area and all birds/eggs out) maintained to facilitate tracing in case of an animal health or food safety concern?				
3.1.2	Are all ducks inspected thoroughly twice daily?				
3.1.3	Is duck mortality and egg production (in breeder flocks) recorded on a daily basis to highlight unusual health problems?				
	Is advice from company management and/or a veterinarian sought, and an investigation conducted, if there are unexplained disease-related mortalities of 1% or more in 24 hours?				
3.1.4	If medications and vaccinations are used, are they used as per the manufacturer's directions and administered under vet and/or grow-out manager supervision?				
3.1.5	If medications have been used have the withholding periods been observed and documented.				
NOTES:					
3.2	**Production practices**	**YES**	**NO**	**N/A**	**CORRECTIVE ACTION**

3.2.1	Are all duck production areas, shavings/litter sheds and water storages maintained to be wild bird, rodent and feral animal proof?				
3.2.2	Does the production area have a perimeter fence, or well defined boundary fence, marked with clear signage?				
3.2.3	Is the main entrance to the production area closed to vehicle traffic with a lockable gate, which is kept locked at all times?				
3.2.4	Does the entrance display appropriate signage, such as *'Biosecure Area - No Entry Unless Authorised'*? Is there signage to direct visitors to contact the farmer before proceeding, i.e. telephone number and/or enquire at house.				
3.2.5	Are there facilities made available for the cleaning and disinfecting of equipment and vehicles before entry to the production site?				
3.2.6	Are all duck sheds lockable, and kept locked when unattended?				
3.2.7	Is dust creation kept to a minimum?				
	Is the production area maintained in a neat and tidy state?				
3.2.8	Is the drainage from livestock pastures or holding areas prevented from entering the duck sheds and production areas?				
3.2.9	Is the grass on and around the production area kept short to avoid rodents and the survival of viruses and bacteria? Is the vegetation poisoned in the immediate area of the outer shed wall with an approved herbicide?				
3.2.10	Are trees and shrubs set back from the immediate shed area?				
3.2.11	Is the minimum buffer distance between different commercial entities 3km?				
NOTES:					
3.3	**Carcass and effluent management**	**YES**	**NO**	**N/A**	**CORRECTIVE ACTION**

3.3.1	Do dead duck disposal methods conform to environmental compliance requirements? (e.g. incineration with after burner and collection procedures as listed in Appendices 2 and 3)				
3.3.2	Is dead duck composting performed in sealed buildings or containers as far away as possible from existing farming operations or production sites?				
	Is equipment that is moved between the composting site and production site thoroughly cleaned and sanitised?				
3.3.3	Are whole of farm disposal method options specific to the duck production property (e.g. incineration, burial or composting options available for mass disposal in the event of an EAD outbreak), considered and documented in your biosecurity plan?				
3.3.4	Is effluent contained and disposed of in a manner that conforms to environmental compliance requirements?				
3.3.5	Is litter managed in conjunction with advice set out in 1.4 of this manual?				
3.3.6	Is premises waste disposed of correctly?				
NOTES:					

4.1	**Pests**	**YES**	**NO**	**N/A**	**CORRECTIVE ACTION**

4.1.1	Is an appropriate pest control strategy documented?				
4.1.2	Is all duck housing designed and maintained to prevent the entry of wild birds, feral animals and other pests?				
4.1.3	Are feral animals, weeds and wildlife populations monitored and managed to prevent any impact on the ducks?				
NOTES:					

4.2	**Vermin**	**YES**	**NO**	**N/A**	**CORRECTIVE ACTION**
4.2.1	Are the bait stations checked weekly and replenished when necessary?				
	Is a record kept of each inspection, noting all activities?				
	Is the vermin monitored and managed to prevent an impact on the ducks?				
4.2.2	Are the duck sheds designed and maintained to limit the entry of vermin?				
4.2.3	Is there a plan showing the location of bait stations?				
4.2.4	Are bait stations designed to minimise the opportunity for other animals and birds to access the bait?				
NOTES:					

5.1	**Farm outputs**	**YES**	**NO**	**N/A**	**CORRECTIVE ACTION**

5.1.1	Prior to pick-up, are flock records examined by the referring company representative to ensure compliance with state or territory biosecurity legislation?				
5.1.2	Will the person in charge of pickup accept the flock following observations and consultation with the farmer?				
5.1.3	Does the pickup supervisor or the appointed responsible driver understand they are responsible for the welfare and condition of the ducks until the vehicles reach the processing plant and are accepted by the site supervisor or person responsible?				
5.1.4	Are the shed doors kept closed when not in use, except during litter removal?				
5.1.5	Are all aspects of catching and transporting outlined in training and in accordance with state or territory government animal welfare legislation followed?				
NOTES:					

6.1	**Biosecurity planning and staff instruction**	**YES**	**NO**	**N/A**	**CORRECTIVE ACTION**
6.1.1	Are all staff that are involved in the daily monitoring and handling of ducks aware of the importance of early detection of diseases and know what to do if they suspect a duck may be exhibiting symptoms of disease?				
6.1.2	Is there a copy of this manual readily accessible to staff at each production facility?				
6.1.3	Are staff provided with training in all aspects of this manual?				

6.1 Biosecurity planning and staff instruction *(Continued)*

6.1.4	Is a register maintained of the training provided to contractors and staff?				
6.1.5	Is a map (drawn to scale) of the property layout, showing the production area sheds, access roads and gates, maintained and kept in this manual?				
NOTES:					
6.2	**Chemical usage, animal treatments and storage**	**YES**	**NO**	**N/A**	**CORRECTIVE ACTION**
6.2.1	Have farm staff been trained in the correct method and application of chemicals used on farm?				
6.2.2	Are the chemicals held on site used as per manufacturer's instructions ensuring withholding periods and export slaughter intervals are observed?				
6.2.3	Are the material data safety sheets for all chemicals used on farm kept on site?				
6.2.4	Are the chemicals used on site stored in a safe protective unit as per relevant state legislation?				
NOTES:					

Level 2 Audit

Audit date:	**Property Name:**
Auditor's Name:	**Auditee's Name:**
Auditor's Signature	**Auditee's Signature**

		YES	NO	Date to Implement / Comments
1	Is signage on display? (This includes biosecurity, production site entry details, shed and parking area signs etc.)			
2	Is a visitors' book and entry permit book in use, kept in good condition and located at production site entry? As per Appendix 7			
3	Are staff or contractor personnel quarantine declarations used as per Appendices 5 and 6? and up to date			
4	Is a vehicle sprayer available at the production site entry, in working order and a suitable chemical used?			
5	Is protective clothing and equipment available at the production site?			
6	Is the keeping of restricted animals and avian species observed on the production site and home site?			
7	Are permitted animals managed and kept out of the duck sheds and shavings/litter storage facility?			
8	Are footbaths maintained at the entry to the production site and main entries to sheds, and scrapers/brushes available?			
9	Are sheds bird-proof?			
10	Are bait stations serviced, spaced 20 metres apart at sheds, and recorded as per Appendix 11?			

11	Is incoming water within the guidelines? If not, is the water chlorinated and recorded as per Appendix 8 and Appendix 10?			
12	Are dead ducks disposed of in an approved manner? (Preferred methods include freezing and off-site disposal.)			
13	Is the production site clean and tidy free of clutter and rubbish? (e.g. cut grass, no litter and feed spillages, adequate drainage etc.)			
14	Are rubbish bin containers located at the production site entry and on the production site and regularly emptied?			
15	Are approved hand wash (and washing facility) available on the production site?			
16	Are shavings, sawdust or other approved litter material kept undercover in a rodent and wild bird proof facility?			
17	Are the production site entry gates and duck sheds lockable?			
18	Are sheds cleaned and sanitised between batches? (e.g. litter removed, walls and ceilings washed etc.)			
19	Are records kept for each batch, and located on the production site?			

Appendix 1 - Action plan

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Emergency Animal Disease (EAD) Action Plan

This document details the actions (and responsibilities) that are to be undertaken in the event that an EAD is suspected on-farm.

[A] Important Contact Details

	Name	Contact Number
Property Name/PIC		
Manager		
Person responsible for the EAD Action Plan		
Consultant Veterinarian		
District Veterinary Officer		
EAD Watch Hotline		**1800 675 888**

[B] Management Commitment

Management will investigate unfamiliar signs of disease, and the following actions will be 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 EAD Watch Hotline – 1800 675 888.
   Responsibility: _____ [Insert person responsible for action]
2. Follow all instructions as directed by the relevant authority.
   Responsibility: _____ [Insert person responsible for action]
3. Do not dispatch livestock from the farm until authorised by the relevant authority.
   Responsibility: _____ [Insert person responsible for action]
4. Ensure suspected livestock are isolated within the farm.
   Responsibility: _____ [Insert person responsible for action]

5. Ensure companion animals of the suspect livestock are segregated from other livestock
   Responsibility: _____ [Insert person responsible for action]
6. Ensure movement of all other livestock within the farm and surrounds is restricted
   Responsibility: _____ [Insert person responsible for action]
7. Delay or halt the shipment of livestock onto the farm.
   Responsibility: _____ [Insert person responsible for action]
8. Delay or halt the delivery of all non-essential commodities.
   Responsibility: _____ [Insert person responsible for action]
9. Secure the farm perimeter, limiting access to the farm and ensuring that all vehicles and visitors only enter the farm under controlled conditions.
   Responsibility: _____ [Insert person responsible for action]
10. Remove unnecessary personnel and machinery from the livestock feeding and holding areas.
    Responsibility: _____ [Insert person responsible for action]
11. Ensure that any personnel, equipment or machinery do not leave the farm until authorised by the relevant authority
    Responsibility: _____ [Insert person responsible for action]
12. Compile a list of all livestock (number of head, identification, and location), personnel and machinery movements over the past seven days. Prepare a site plan that details current allocations of livestock.
    Responsibility: _____ [Insert person responsible for action]
13. Ensure all staff are made aware of the actions being taken (staff meeting) and their individual responsibilities in regard to complying with this action plan.
    Responsibility: _____ [Insert person responsible for action]
14. If an EAD is identified the farm will follow requirements of the AUSVETPLAN and directions from the relevant authority as detailed in the Contingency Planning procedure.
    Responsibility: _____ [Insert person responsible for action]

Appendix 2 - Dead duck composting

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Objective: To eliminate, as much as possible, infection or contamination spreading between sheds and between batches, due to dead duck disposal.

Composting is the aerobic microbial breakdown of organic matter, usually incorporating a thermophilic (heat loving) phase. The adoption of composting systems for poultry waste has received attention due to its ability to reduce litter volume, dispose of carcases, stabilise nutrients and trace elements and reduce pathogens.

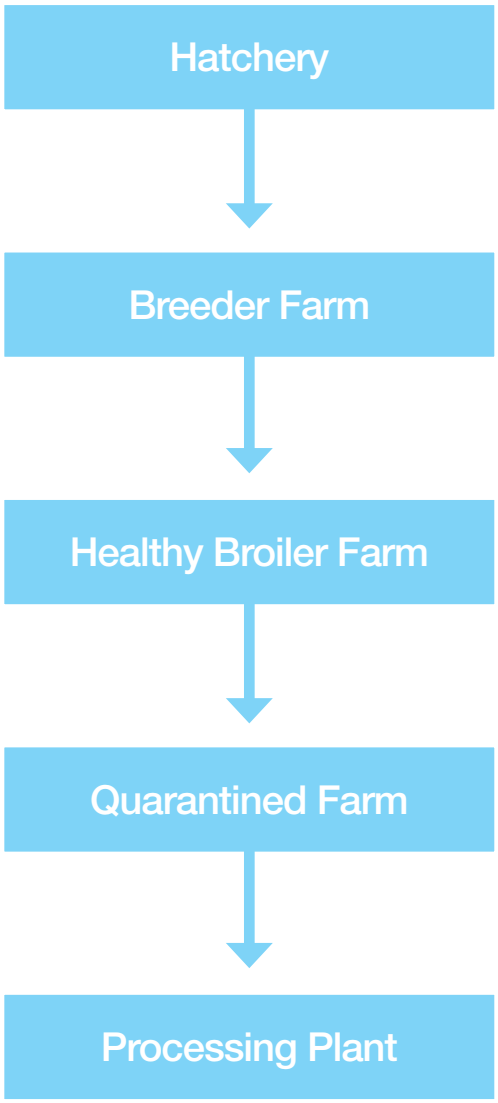
1. Rodents, cats, dogs, feral animals and scavenging birds must be kept away from composting carcasses.
2. Composting containers must be away from sheds and boundary fences (outside of the production area).
3. Composting containers must be kept neat and clean at all times.
4. Cleaning and disinfection of equipment, such as bins, buckets and wheelbarrows, must be done before being returned to the production areas, and when moving between sheds.
5. Composted material is not to be spread in the production area.
6. Adequate instructions/guidelines for safe composting must be in place and followed by all staff/contractors.
7. Dead ducks must not be buried within the production site.

Appendix 3 - Dead duck collection

Objective: To eliminate, as much as possible, infection or contamination spreading between sheds and between batches during the collection of dead ducks.

1. Freezing and off-site disposal is the recommended method for dead duck disposal. Dead ducks must either be collected from the production area daily or stored in a freezer if collection is less frequent.
2. If used, the freezer must have sufficient capacity to adequately handle carcasses between collections and must be cleaned and sanitised regularly. Freezing within a sealed plastic bag is recommended.
3. Dead ducks should be bagged and sealed within the shed area, and then moved to the freezer point.
4. The collection area must be as far away from the production area as possible, so that collection vehicles do not enter the site. Ducks must not be left in the public view.
5. All containers used for collecting dead ducks must be washed and disinfected before being returned to the production area.
6. Dead ducks must not be buried within the production site.

Appendix 4 - Biosecurity movement flow chart



Same day movement with the arrows is approved.

Any movement against the arrows requires a minimum break of 12 hours, except for movement from a "Quarantined Farm" and "Processing Plant", which requires a minimum break of 36 hours to any site

Appendix 5 - Personnel 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, poultry or birds of any type are or will be kept at my place of residence.
2. No pigs are or will be kept at my place of residence.
3. No untreated poultry manure from other properties is to be used at my place of residence.
4. No member of my household is to work in any area where contact can be made with poultry or pigs; e.g. on other properties or hatcheries, processing plants, by-product plants, laboratories or pick-up crews.
5. I will not visit poultry abattoirs, pig production areas or poultry shows or poultry farms unless approved by my employer, and appropriate quarantine measures have been taken.
6. I will not allow dogs to enter duck sheds at any time.
7. I agree to the terms and conditions of entry and understand that any information gained during my employment will remain confidential to the company.
8. I will inform the farm manager of my previous and daily movements prior to entering the Production Site (i.e. company or associated staff such as pick-up crews).
9. I will adhere to the minimum personal hygiene and sanitation standard.
10. I will inform the farm manager if I am suffering from gastroenteritis disease or diagnosed influenza.

Signature …… Date ……

Residential Address ……

Appendix 6 - Contractors quarantine declaration

I, ……..

of (address) ……

understand the following rules apply and I warrant to you that:

1. No avian species, poultry or birds of any type are or will be kept at my place of residence for the duration of this contract.
2. No pigs are, or will be, kept at my place of residence.
3. No member of my household works in areas where contact is, or will be, made with poultry, pigs, or any abattoir or slaughterhouse.
4. I will inform the production manager/grower of my previous movements on the day prior to entering the production site.
5. I will follow all instructions regarding protective clothing/boots given to me by the production manager/grower or company representative.
6. I agree to the terms and conditions and understand that any information gained during this visit will remain confidential to the company.

Signature …… Date ……

Residential Address ……

Appendix 7 - Visitors log

Property Name .....

By signing this visitors log, you are indicating that you comply with the following conditions of entry:

- Wear clean clothes/boots and required protective clothing
- Sanitise hands and boots at entry and exit of sheds
- Do not keep avian species or pigs at home
- No contact with other avian species or pigs in the past 72 hours
- Have not travelled internationally in the five days prior to the visit
- Are not currently suffering from gastrointestinal disease or diagnosed influenza

Date	**Name/Company**	**Contact details**	**Reason for visit / Service**	**Time In**	**Signature***	**Approved exemptions from entry conditions** (e.g. international travel).	**Time Out**

*Indicating you comply with all of the above entry conditions UNLESS approved exemptions apply (see next column).

Appendix 8 - Water quality guidelines

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Drinking Water Standards
Microbiological Analysis - Maximum Permissible Levels

Bacterial Standards (Organisms / 100ml)			
Bacteria	**Potable Water**	**Poultry (maximum)**	**Poultry (desirable)**
Total colony count	1000	1,000	Nil
E. Coli (Faecal coliforms)	Nil	Nil	Nil
Coliforms	Less than 100Nil	Less than 100	Nil

Appendix 9 - Surface water treatment

Water treatment checklist

Reminder – Untreated drinking water should not be supplied to farmed birds. All water that comes from sources other than the mains (e.g. from dams, rivers, or bores) should be treated on the farm before being used in sheds.*

**Bore water should be tested, and if not of potable water standard, must be treated.*

The objective of water treatment is to minimise bacteria, viruses, algae and other organisms that birds consume in their drinking water and that they are exposed to through shed cooling system. Water provided to birds for drinking and that is used for cooling must be treated. Washdown water should also be treated.

Chlorination

Chlorination is an excellent way to effectively treat your farm water. However, chlorination will only be effective if the water is already relatively free of organic matter and solids. Filtration of the water supply prior to chlorination will nearly always be necessary.

There are a number of different chlorination systems available to poultry farmers. These can be obtained from a range of specialist water treatment companies, pumping companies or swimming pool suppliers. Assistance with the installation, operation and maintenance of these systems is usually offered by the supplier, as are kits for monitoring chlorination levels.

To effectively treat a poultry water supply, the water with chlorine at a concentration of 5 ppm (or equivalent) must be held for a minimum of 1 to 2 hours in a holding tank.

This may require the use of a two-tank system, where water is being consumed by bords from one tank, while the other tank is refilled and stored with freshly chlorinated water until the required contact time of 1-2 hours has elapsed. Chlorine is more effective if the pH of the water is between 6 and 7 i.e. slightly acidic.

The chlorine concentration at the drinker must be at between 1 and 2 ppm (or equivalent) to ensure any contamination that might have occurred in the lines between the holding tank and the drinker has been effectively treated.

Water chlorination levels from drinkers in the shed should be monitored at least twice weekly to ensure the system is effectively treating the incoming water supply.

As a guide

- Fill the test tube with water from drinkers in the shed
- Insert test strips provided in the test kit) into the test tube
- Compare the colour of the chlorine square on the test strip with the chlorine colour squares on the standard colour chart (provided)
- Record the concentration level of the colour on the standard colour chart that which most closely matches the test strip colour
- If the chlorine concentration is less than 2 ppm or greater than 5 ppm the concentration should be rechecked in one hour. If the concentration remains outside these limits, the unit should be adjusted, and the concentration checked again in one hour.

Alternative chlorination monitoring systems are available from companies that supply chlorination equipment.

Ultraviolet treatment

Ultraviolet (UV) treatment is an alternative method of treating farm water. However, UV will only be effective on clean filtered water (not turbid water), and should only be considered on farms where the lines from the storage tanks to the drinkers and the drinkers themselves are clean, in good repair and are well maintained, such that the possibility of contamination after UV treatment is minimised. UV treatment units and water filtering systems are available from specialist water treatment or pumping companies.

Appendix 10 - Water sanitation record

Date	Time	Test Result	Corrective Action	Name or Initials

Test method .....

Appendix 11 - Rodent control record

Bait type: .....

Date	Time	Bait Station Number	Activity Level	Corrective Action	Name or Initials

Note: For activity level 0 = no activity. 1 = slight activity. 2 = half baits consumed. 3 = all baits consumed

Notes

Notes

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