



**Australian Chicken Meat
Federation (ACMF) Inc**

National Farm Biosecurity Manual FOR CHICKEN GROWERS

March 2010

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The National Farm Biosecurity Manual for Chicken Growers has been approved by all signatories to the Emergency Animal Disease Response Agreement as part of the National Disease Risk Mitigation Program referred to in section 14 of said Agreement.

The Manual is maintained and distributed by the Australian Chicken Meat Federation. It is available in PDF format from the ACMF website www.chicken.org.au.

Any comments should be addressed to ACMF, P.O. Box 579, North Sydney NSW 2059 or sent to acmf@chicken.org.au.

Background

A National Farm Biosecurity Manual for Poultry Production was produced by a Biosecurity Consultative Group (BCG), established as a resolution of the 2007 Government–Industry Avian Influenza Forum. Membership of the group included representatives from each of the following organisations and poultry industry sectors:

- Commonwealth Department of Agriculture, Fisheries and Forestry
- Animal Health Australia
- Australian Chicken Meat Federation Inc.
- Australian Chicken Growers' Council
- Australian Egg Corporation Limited
- Australasian Turkey Federation
- Free Range Egg and Poultry Australia
- Australian Duck Meat Association
- Emu Industry Federation of Australia
- Australian Ostrich Association
- Game bird industry
- NSW Department of Primary Industries
- Queensland Department of Primary Industries and Fisheries

The purpose of the Manual was to establish a minimum set of biosecurity standards, applicable to all poultry producers (including ratites).

Manual adapted for the commercial chicken meat industry

The present document is an adaptation of the generic poultry manual to reflect the requirements as they apply to the commercial chicken meat industry. Reference to other sectors has been removed and some industry specific arrangements have been reflected in the present text.

The sector specific manuals, such as this one, must, as a minimum, satisfy the requirements stipulated in the generic manual but may provide more specific guidance or additional requirements that reflect the characteristics of the industry sector.

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

Scope

The Manual applies to commercial meat chicken farms (broiler farms) from the time of delivery of birds, until pick-up, slaughter or disposal of live birds. While the Manual stipulates the minimum requirements for any meat chicken farm, it should be noted that biosecurity measures in place on breeder farms would generally be much more stringent, reflecting the economic importance and the extended life cycle of breeder flocks. The pick-up and transport to the processing plant is covered in Appendix 10.

Implementation

The adoption of the new Poultry Meat Production and Processing Food Standard (PPPFS) currently being finalised by FSANZ and to be implemented over the coming two years in a consistent way by all States and Territories presents a good opportunity to promote adoption of the biosecurity standards set out in this Manual. While the biosecurity requirements in this Manual are in some areas broader than what is strictly required from a food safety point of view, it is the industry's expectation that adoption of the measures stipulated in this Manual will meet the PPPFS requirements as far as the production phase is concerned.

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MEAT CHICKEN PRODUCTION BIOSECURITY

OBJECTIVES

- ❖ *To prevent the introduction of infectious disease agents to chicken.*
- ❖ *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.*

Biosecurity and quarantine are integral parts of any successful poultry production system. Biosecurity refers to those measures taken to prevent or control the introduction and spread of infectious agents to a flock. Such infectious agents, whether they cause clinical or subclinical disease, significantly reduce the productivity, profitability and long term financial viability of a poultry operation.

Biosecurity is about managing risk to meet the objectives stated above. It is essential that a risk assessment be conducted for each enterprise to establish what level of risk exists in each phase of its operations and to identify and implement control measures appropriate to these levels of risk.

This Manual identifies areas of risk common to most broiler farms, and appropriate measures to minimise these risks. When undertaking the risk assessment underpinning the farm-specific biosecurity measures, it is important to take into account all factors that may impact on the biosecurity of the production area. These factors should include location and layout of property and production area, source of water supply, disease status of the district, proximity to other production areas with avian species, presence and type of wildlife, and interface with the organisations and/or individual clients that are being supplied. These interactions include pick-ups, servicemen, industry personnel, contractors, and deliveries of day-old chicks and feed.

An additional element in the prevention of introduction and spread of disease is the use of vaccination. The Manual does not cover this aspect but the importance of an appropriate vaccination strategy is acknowledged and vaccination as a possible risk management measure should form part of the overall biosecurity assessment and strategy.

The purpose of the Manual is to establish a minimum set of biosecurity guidelines, applicable to all meat chicken producers from hatcheries to the point of delivery at the processor. Commercial enterprises which raise meat chickens for the purposes of breeding fall within the scope of this Manual.

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

A biosecurity self audit/auditable checklist for continuous improvement is attached as Appendix 9. This document may also form the basis for either 2nd or 3rd party audits where this is required.

Biosecurity is like any other insurance policy and as such it is a prudent investment.

MAJOR ROUTES FOR DISEASE AND PATHOGEN TRANSMISSION

POULTRY

- ❖ Transfer of birds from production area to production area
- ❖ Dead bird disposal

OTHER ANIMALS

- ❖ Wild birds
- ❖ Feral and domestic animals, including other livestock and pets
- ❖ Insects
- ❖ Rodents – rats/mice
- ❖ Domestic birds

PEOPLE

- ❖ Farm personnel and family members living on site
- ❖ Contractors, maintenance personnel, neighbours, serviceperson, visitors
- ❖ Disease can be transmitted by, for example, hands, boots, clothing, dirty hair

EQUIPMENT

VEHICLES

AIR

- ❖ Transmission as an aerosol or dust

WATER SUPPLY

- ❖ Water supplies may become contaminated with faeces from contact with avian or other animal species.

FEED

- ❖ Feed may be contaminated by the raw materials used, post-production and during transport, or by exposure to rodents and birds on the property. Bacteria and mould in poor quality or damaged feed may also be a concern.

LITTER

- ❖ Transport of litter material on and off the farm site as well as storage of used litter on site may be a biosecurity risk.

DEFINITION OF THE CONCEPT OF PRODUCTION AREA AND PROPERTY

In this document, **the production area** includes the poultry sheds, the ranges used for free range production, the areas used for feed storage and handling and the area immediately surrounding the sheds, including pick-up areas.

The property is the land on which the production area is located and typically includes the facility manager's home and may include other farm land used for livestock or cultivation. The boundary of the production area and the boundary of the property may be the same.

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

LEVELS OF BIOSECURITY

LEVEL 1 – ROUTINE BIOSECURITY PROCEDURES

These procedures should be implemented and followed on a daily basis. They give a high degree of assurance that diseases and pathogens will not be carried into poultry production areas and will reduce the risk of transmission between production areas. These should be seen as a minimum requirement.

ACTION PLAN FOR SUSPECTED EMERGENCY ANIMAL DISEASE

Each owner must establish and document clear guidelines regarding the circumstances when a emergency animal disease alert should be raised (e.g. an unusual increase in mortality or drop in production), and who must be informed. 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 the absolute minimum and special precautions must be taken as outlined in the section Level 2 – High Risk Biosecurity Procedures.

LEVEL 2 – HIGH RISK BIOSECURITY PROCEDURES

In the event of an outbreak of an emergency disease or serious endemic disease, High Risk Biosecurity Procedures will be implemented.

In the case of an emergency animal disease and where applicable, standard operating procedures (SOPs) will be implemented in line with the relevant AUSVETPLAN disease strategy.

FREE RANGE PRODUCTION OPERATIONS

This Manual applies equally to conventionally housed birds and free-range operations. It is recognised that free-range birds will have some exposure to wild birds. However, in these environments measures should be taken to minimise the congregation of waterfowl and the impacts of wild birds generally, and these measures should be documented.

While footbaths are not appropriate for a free range paddock, a system should be implemented to monitor and control any potential hazardous organic material or litter from entering free range paddocks and these measures should be documented. Paragraph 4.3.4 covers some specific range management issues to be followed by free range operations.

Good fencing is required around free range farms to prevent entry of animals such as dogs, foxes and cats. In many situations, however, fencing alone is insufficient to stop such intrusions; therefore, some free range enterprises keep specially trained dogs with the chickens, as a protection against other animals and also against unauthorised human entry. Guard dogs such as these are not regarded as a biosecurity risk but rather as a biosecurity tool.

THE TERM “POULTRY”

The term “Poultry” in the remainder of this document refers to meat chickens. For other poultry species, please refer to the generic poultry farm biosecurity manual “National Farm Biosecurity Manual, Poultry Production” (Department of Agriculture, Fisheries and Forestry, 1st Edition, 2009) or the sector specific manual relevant to the particular species concerned where available.

LEVEL 1 – ROUTINE BIOSECURITY PROCEDURES

1. DOCUMENTATION AND TRAINING

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

- 1.1 Each production facility must keep a copy of this National Farm Biosecurity Manual (the Manual) readily accessible to staff.
- 1.2 Staff must be provided with training in the relevant parts of the Manual and such training is to be recorded.

2. FACILITY STANDARDS

Objective: To limit and control access to poultry production areas by people and prevent as much as possible access by livestock, wild birds and other animals (including rodents).

- 2.1 The production area must have a perimeter fence or otherwise well defined boundary (e.g. creek, vegetation) establishing a clearly defined biosecurity zone.
- 2.2 If livestock graze the property then the production area must have a stock proof fence. Grazing near sheds (i.e. on part of the production area as defined in this Manual) is only permitted where the grazing area is separated by a stock proof barrier from the area used by poultry, effectively preventing transmission of contaminants from grazing livestock to poultry, and the grazing area is not used for access to other parts of the production area. Drainage from livestock pastures or holding areas must not enter poultry enclosures or areas that can be accessed by poultry (e.g. through fences).
- 2.3 A sketch or map of the layout of the property, showing the production area, sheds, ranges, access roads and gates must be created and maintained up-to-date.
- 2.4 The main entrance to the production area must be capable of being closed off to vehicle traffic (e.g. lockable gate which, where feasible, should be kept locked at all times) and must display appropriate signage including “Biosecure Area No Entry Unless Authorised” or similar wording. In addition, signage must direct visitors to contact the producer before proceeding i.e. telephone number and/or enquire at house.
- 2.5 There must be a parking area for vehicles not entering the production area. There must be a change area away from sheds with clean protective clothing and boots provided.

- 2.6 Entry to sheds must only be made through entrances where a footbath exists containing a suitable disinfectant used in accordance with company or manufacturer's instructions and changed on a regular basis. There must be provision for scraping the soles of boots before dipping to ensure the sanitiser is making contact with the soles of the boots. An alternative system using separate production area and shed footwear may be used. Facilities for hand sanitation must also be placed at the entry of each shed.
- 2.7 Adequate dead bird disposal method must conform with applicable environmental compliance requirements (collection as per Appendix 7, composting as per Appendix 8, incineration with after-burner).
- 2.8 All poultry housing must be designed and maintained so as to prevent the entry of wild birds and limit the access of vermin as far as is practical.
- 2.9 Landscape – trees and shrubs should be selected to minimise wild bird attraction, particularly in free-range operations. The area around sheds must be kept free from debris and vegetation should be mown regularly to discourage wild birds, insects and rodents which are potential disease vectors.

Vegetation buffers for environmental compliance should not be compromised. Trees may be used as shelter belts, along fence lines and on free range premises to provide shade and protect birds from harsh weather conditions.

- 2.10 Drainage – The production area should be adequately drained to prevent accumulation and stagnation of water likely to attract water fowl, especially in the areas around sheds and range areas. Standing water may also increase the presence of insects which can act as significant disease vectors.
- 2.11 An appropriate vermin control strategy and plan must be developed and implemented, including rodents, foxes, and wild dogs and cats.
- 2.12 A baiting program for rodents must be implemented where a risk assessment deems this necessary (live rodents, droppings, nests). Such a baiting program must include the following features:
 - 2.12.1 Bait stations must be numbered and a map kept of their location.
 - 2.12.2 Bait stations must be placed at regular intervals around the sheds. The number of bait stations should be increased in areas where there are signs of increased rodent activity.
 - 2.12.3 Bait stations must be designed to minimise the opportunity for other mammals and birds to access the bait.

- 2.13 Drinking water for poultry, as well as cooling water used in poultry sheds, must meet appropriate water standards. The drinking water standard can be found in Appendix 4. Water that does not meet the standard must be treated (e.g. Chlorination, Ultraviolet, Iodine) to ensure that the standard is met. See also section 4.1 below.

All surface water (dam, river etc) must be treated before being used as drinking water for poultry. See also section 4.1 below.

Treated water supply must be kept in a closed system from the point of treatment to the drinker.

- 2.14 Sheep and other domestic stock must not have access to the production area at any time except under the specific condition stipulated in 2.2 above. Dogs and cats must not enter sheds unless dogs are part of the flock security strategy (see Free Range Production Operations, page 11).
- 2.15 Only commercially produced avian species are to be kept in the production area and no other avian species (including aviary birds and pet birds) or pigs are to be kept on the property.
- 2.16 If more than one commercially produced avian species is kept in the production area, the species should be housed and managed separately, with suitable biosecurity arrangements for each species. Shared equipment should be cleaned and disinfected between use.
- 2.17 Feeding systems must wherever possible be closed to ensure that feed in silos and feed delivery systems are protected from access and contamination by wild birds and rodents. Feed spills should be cleaned up without delay to prevent the congregation of wild birds.
- 2.18 Where bird weighing is practiced, it must be carried out using the production area's own weighing frames and scales. Company service personnel can use their own scales provided that they are cleaned and disinfected when moved between production areas.

3. PERSONNEL STANDARDS AND PROCEDURES

Objective: To minimise the risk of introducing or spreading a disease or contaminant through people movement, including:

- Staff (including production personnel and company service personnel)
- Contractors, Suppliers and other Service Personnel
- Visitors and family members

and to document such movements to facilitate tracing in case of a concern.

3.1 PRODUCTION PERSONNEL

Objective: To minimise the risk of introduction of disease or contaminants by production personnel

- 3.1.1 Production area personnel or any person residing on the property must not have contact with any other poultry, cage birds, emus, racing pigeons or pigs unless they have a complete head-to-toe shower and change into new protective footwear and clothing prior to entering the production area (see Appendix 1 “Personnel Quarantine Declaration”).
- 3.1.2 Production area personnel must wear laundered clean clothes each day at the commencement of their work. Personnel must ensure that they do not become contaminated by contact with avian species or pigs on their way to work. It is critical that boots worn in sheds are not worn or taken outside the production area. They are the most likely method for disease spread by personnel.

3.2 COMPANY SERVICE PERSONNEL

Objective: To minimise the risk of introduction of disease or contaminants by company service personnel

- 3.2.1 Company service personnel by necessity make multiple production area visits on a single day. Protective clothing and footwear, as approved by the production facility manager, should be worn in the production area. Hands must be sanitised before entering sheds.
- 3.2.2 Visits should always be made from ‘clean’ areas i.e. home, younger or healthy production area. In an emergency, visits may be made from production areas with lower standards of biosecurity after a shower and complete change of clothing.

3.3 REPAIR AND MAINTENANCE

Objective: To minimise the risk of introduction of disease or contaminants by contractors carrying out maintenance and repair work

- 3.3.1 Repair and maintenance contractors who have had contact with poultry or other birds that day must not enter sheds and/or ranges populated or ready to be populated with birds unless (a) it is an emergency and (b) they have showered from head-to-toe and changed clothes and boots and wear a hair covering.
- 3.3.2 Routine maintenance should be conducted, where possible, between batches prior to final disinfection where a batch system is practiced.
- 3.3.3 Tools taken into the production area must be cleaned before entry into sheds and must be free of dust and organic matter.

3.4 CONTRACTORS, SUPPLIERS, OTHER SERVICE PERSONNEL AND VISITORS

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

- 3.4.1 Visitors' Log – a record must be kept of all visitors to the poultry sheds and poultry ranges including contractors and company personnel (see Appendix 2B regarding details to be recorded and a possible format). The only exceptions are detailed below in 3.4.3.
- 3.4.2 Conditions of entry to poultry sheds and poultry ranges – all visitors must agree to comply with the entry conditions as stipulated in Appendix 2A (which must be displayed prominently near the Visitors' Log). All visits must be approved by the Manager before visitors may enter sheds and ranges. This requirement also applies to vaccination crews.
- 3.4.3 Exeptions – The only people who may enter the sheds and poultry ranges without signing the Visitors' Log are farm personnel covered by the Personnel Quarantine Declaration (Appendix 1) and members of pick-up crews, provided that they have signed an appropriate Personnel Quarantine Declaration as specified by the relevant processor and the relevant processor records details (name, date, farm) of those involved in pick-ups in a manner that will assist rapid identification and tracing of contacts in the case of a biosecurity concern. It is recommended that the pick-up foreman sign the visitors' log for the entire crew. All members of pick-up crews must be fully aware of the appropriate biosecurity measures applicable to pick-ups (see also Appendix 10). Not all the entry conditions detailed in Appendix 2A may apply to the pick-up crews.

- 3.4.4 Any authorised visitor, including neighbours, friends, other producers or equipment suppliers, likely to have been exposed that day to poultry, other birds or pigs must not enter the sheds unless they have had a head-to-toe shower and changed clothes and boots or must limit their visit to the property's residence while wearing clean clothes.
- 3.4.5 All visitors should park their vehicles outside the production area unless it is essential that the vehicle be taken on site e.g. some maintenance contractors. Visitors entering sheds or ranges must complete and sign the Visitors' Log (see Appendix 2B).

3.5 REQUIREMENTS FOR SPECIFIED MOVEMENTS

Objective: To minimise the risk of introduction of disease or contaminants by specified movements

- 3.5.1 Pick up of poultry– Pick-up crews should work from youngest to oldest or all young birds or all old birds on a shift basis in accordance with the processing company's pick up biosecurity procedures. Pick-up crews must not keep birds at their home.
- 3.5.2 Day-old chick delivery -Trucks and dollies must be cleaned and disinfected each day and between properties not owned/operated by the same entity. Drivers must sanitise their hands and boots before and after each delivery on the production area.
- 3.5.3 Litter delivery and collection of used litter - Trucks carrying new or old litter must be cleaned and disinfected between production areas.
- 3.5.4 Other deliveries (e.g. gas and feed drivers) – drivers must not enter sheds and thus are not required to sign the visitors' book.
- 3.5.5 There must be a system for tracing movements of delivery personnel (e.g. through delivery dockets and feed company records).

3.6 ENTRY PROCEDURES FOR BIRD SHEDS AND RANGES

Objective: To prevent the introduction of disease agents and contaminants into bird sheds and ranges through people movements.

Any person entering sheds must sanitise hands and use footbaths (unless separate shed boots are being used) before entering each shed.

- 3.6.1 Soles of boots must be scraped before disinfecting in the footbaths.

- 3.6.2 A hand sanitiser must be available at all shed entrances and must be used before entering.
- 3.6.3 Facilities should be available for the cleaning and disinfection of equipment before entry.

4. OPERATIONAL STANDARDS

4.1 WATER SUPPLY (SEE ALSO 2.13)

Objective: To ensure that water used in poultry sheds for drinking, cooling and cleaning, is of a standard suitable for livestock.

The use of a suitably treated water supply is critical to achieving good biosecurity. In general, water with a high level of organic matter is unsuitable for chlorination alone, 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 essential but complex, and any water treatment process should be monitored regularly.

- 4.1.1 For a chlorinated water supply the treatment must achieve a level of 1.0 – 2.0 ppm free available chlorine (FAC) at the point of use.
- 4.1.2 When chlorinating water, there must be a minimum of 2 hours contact time between chlorine and water prior to use.
- 4.1.3 Testing must be conducted and recorded daily (see Appendix 5) and a maintenance program needs to be in place.
- 4.1.4 The effectiveness of water treatment systems, including alternative systems (e.g. Ultraviolet), must be validated before use and treatment systems require a programme of maintenance and monitoring to ensure effectiveness. Production area records able to demonstrate the effectiveness of water treatment must be kept. Microbiological validation of the efficacy of the treatment system must be carried out at least annually.
- 4.1.5 Drinking water quality must be maintained at a standard suitable for use in livestock (Appendix 4).
- 4.1.6 Guidelines regarding the chlorination of surface water are available in Appendix 3.

4.2 VERMIN BAITING (SEE ALSO 2.11 & 2.12)

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

- 4.2.1 Bait stations must be checked weekly and fresh baits laid as required.
- 4.2.2 A record should be kept of each inspection and activity noted (see Appendix 6).

4.3 CLEANING AND GROUND MAINTENANCE

Objective: To hinder the introduction of disease agents and contaminants into poultry sheds and enclosures and reduce the attraction of rodents and birds to production areas.

- 4.3.1 Feed spills must be cleaned up as soon as practicable. Feed attracts birds and rodents to the production area.
- 4.3.2 Grass on and around the production area must be kept cut – long grass attracts rodents and favours the survival of viruses and bacteria.
- 4.3.3 Footbaths must be inspected daily (e.g. for excessive organic matter) and the contents replaced as required to achieve an adequate concentration of suitable disinfectant used according to company or manufacturer's recommendations.
- 4.3.4 On free-range production sites, the following applies:
Manure deposits outside the hatch openings must be removed after each batch.
Ramps to free range area must be scraped and cleaned after each batch.
- 4.3.5 The production area must be adequately drained to prevent accumulation and stagnation of water, especially in the areas around sheds and range areas.

4.4 RECORD KEEPING

Objective: To assist early detection of animal health issues and the response to any biosecurity breach.

- 4.4.1 Bird mortality must be recorded on a regular basis to assist monitoring for any unusual animal health problems potentially indicating a biosecurity breach.
- 4.4.2 A record of bird movements must be maintained to facilitate tracing in case of an animal health or food safety concern.

4.5 END OF BATCH PROCEDURES

Objective: To minimize the risk of introducing or spreading disease or contaminants by delivery and pick-up operations.

- 4.5.1 After final pick-up the shed doors must be kept closed except during litter removal. After washing and disinfecting, shed doors must be kept closed. If drying is a problem, ventilate using fans or place bird wire screens in shed doorways. Wild birds must be kept out after disinfection.
- 4.5.2 Litter and manure must not be stockpiled in the production area (as defined under Definitions on page 10) and litter and manure must be stored in an appropriately designed storage area, off the production area, with sufficient buffering zone from the bird sheds and enclosures.

5. PROCESSOR OR FARM SPECIFIC ADDITIONAL BIOSECURITY REQUIREMENTS

Objective: To build on the generic meat chicken biosecurity requirements and reflect specific additional requirements and operational procedures.

Any additional requirements that must be followed by a particular farm(s) should be added here.

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.

1. ACTION PLAN FOR SUSPECTED EMERGENCY ANIMAL DISEASE

- 1.1 Each processor must establish and document clear guidelines regarding the circumstances when an emergency animal disease alert should be raised (e.g. an unusual increase in mortality or drop in production), and who must be informed. The action plan must also clearly state that, if an alert is raised, movement of birds must cease immediately, other movements on and off the production area and the property must be limited to the absolute minimum, and special precautions must be taken as outlined in the section Level 2 – High Risk Biosecurity Procedures.

2. FACILITIES

- 2.1 Gates must be kept locked.
- 2.2 Shed doors must be locked at night.
- 2.3 Facilities for the cleaning and disinfection of equipment coming on and off the production area must be in place.

3. PERSONNEL

- 3.1 No visitors are to enter the production area unless absolutely essential. Company personnel will discontinue routine visits except on suspicion of problems.
- 3.2 Repairs and maintenance – no routine work, only emergency work to be carried out.

4. OPERATIONAL

- 4.1 Essential visits – head-to-toe shower before and after visit. A complete change of clothes, footwear, hair covering and breathing protection is required. Used clothing and all used personal protection equipment must remain on the property.
- 4.2 Any vehicle which must enter the property must be washed and disinfected at the wash pad before and after going onto the property (e.g. feed trucks, gas). Vehicle driver cabins must also be sanitised inside (e.g. Glen 20 disinfectant).
- 4.3 No birds or litter to be moved on or off properties until disease status is clarified.

- 4.4 If a major outbreak should occur, further measures will be stipulated by the processor and/or the state's Chief Veterinary Officer.

5. STANDARD OPERATING PROCEDURES (SOPs)

Standard Operating Procedures will be available for any specific outbreak of an Emergency Animal Disease from Animal Health Australia in accordance with AUSVETPLAN.

**APPENDIX 1 – PERSONNEL QUARANTINE DECLARATION
(Production Area Employee)**

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 i.e. no poultry or birds of any type (e.g. 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.
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. For example, on other properties or at hatcheries, processing plants, by-product plants, laboratories or with pick-up crews, unless I shower and change clothes before commencing work.
5. I will not visit poultry abattoirs, pig production areas or poultry shows unless approved by my employer and appropriate quarantine measures are taken.

Signature Date

Residential Address
.....

APPENDIX 2A – ENTRY CONDITIONS FOR VISITORS TO POULTRY SHED AND/OR RANGE AREAS

Entry to poultry sheds and/or range areas is subject to the following conditions:

	All visitors must wear protective clothing provided.
	All visitors must wear protective boots .
	All visitors must sanitise boots in the footbath provided on entering production area/shed, or change into a separate pair of shed boots.
	All visitors must sanitise hands before entering sheds.
	Visitors who keep poultry, caged birds or pigs at home, must have had a full head-to-toe shower and must be wearing freshly laundered clothes.
	Visitors who have been in contact with any avian species or untreated poultry manure on the same day, must have had a full head-to-toe shower and must be wearing freshly laundered clothes.

APPENDIX 2B – VISITORS’ LOG

By signing this visitors’ log, you agree to comply with the conditions as detailed in the accompanying list of conditions of entry. All visitors entering poultry sheds or ranges must sign this log.

DATE	NAME	COMPANY	POULTRY CONTACT IN LAST 36 HOURS	REASON FOR VISIT	TIME IN	SIGNATURE	TIME OUT	SIGNATURE

APPENDIX 3 – SURFACE WATER TREATMENT

Objective: To eliminate as much as possible infection or contamination by means of contaminated water, particularly through contamination by faeces from infected wild birds, e.g. ducks.

WATER TREATMENT CHECKLIST

Reminder - Untreated drinking water should not be supplied to farmed birds. 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 systems.

Surface water provided to birds for drinking and surface water used for cooling must be treated. Wash-down water should also be treated prior to use.

All surface water that comes from sources other than the mains (e.g. from dams, rivers) should be treated on the farm before being used for poultry. Bore water should be tested and if not satisfying the water quality guidelines set out in Appendix 4 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 systems. Water provided to birds for drinking and that used for cooling must be treated. Wash-down 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 birds 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.

APPENDIX 3 – SURFACE WATER TREATMENT (Continued)

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 with 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 concentrations checked again in 1 hour.

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

UV 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 tank 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.

Source: AI Preparedness Document for Australian Meat Chicken Growers, Australian Chicken Meat Federation Inc., April 2006.

APPENDIX 4 – WATER QUALITY GUIDELINES

Drinking Water Standards Microbiological Analysis - Maximum Permissible Levels

Bacterial Standards (Organisms / 100ml)	
Bacteria	Poultry (max)
Total colony count	≤1,000
E. Coli (Faecal coliforms)	NIL
Coliforms	≤100

APPENDIX 7 – DEAD BIRD COLLECTION

Objective: To eliminate as much as possible infection or contamination spreading between sheds and between batches.

1. Birds must be collected regularly from property. Frequency of collection will be determined by factors such as type of poultry, size and climatic conditions. Birds should be stored in a freezer if the frequency of collection is likely to cause environmental impacts or increased biosecurity risk.
2. If used, the freezer must have sufficient capacity to adequately handle carcasses between collections and must be cleaned and sanitised between batches.
3. Collection area must be as far as practical away from the production area so that the collection vehicle does not enter the site. For example a shed could be provided on a concrete base with doors on both sides, one for birds in, the other for birds out. Birds must not be left in the public view.
4. All containers used for collecting dead birds must be washed and disinfected before returning them to the production area.

APPENDIX 8 – DEAD BIRD COMPOSTING

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

Composting is the aerobic microbial breakdown of organic matter, usually incorporating a thermophilic¹ phase. The adoption of composting systems for poultry waste has received attention due to its ability to reduce litter volume, dispose of carcasses, stabilise nutrients and trace elements and reduce pathogens.

1. Rodents, cats, dogs, feral animals, scavenging birds and flies must be kept away from composting carcasses.
2. Composting areas must be away from sheds and boundary fences.
3. Composting area 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 returning them to the production areas and when moving between sheds.
5. Adequate Instructions / Guidelines for safe composting must be used.

¹ Thermophilic phase – a phase during which there is a temperature rise in the compost sufficient to inactivate pathogenic micro-organisms

APPENDIX 9 – PRODUCTION AREA AUDIT CHECKLIST

National Farm Biosecurity Manual – Meat Chicken Production

Audit Checklist

Audit Date: _____			
Auditor's Name	_____	Auditor's Signature	_____
Auditee's Name	_____	Auditee's Signature	_____

1.0	DOCUMENTATION and TRAINING	PARAGRAPH REF.	YES	NO	N/A	CORRECTIVE ACTION
1.1	Is a copy of the current National Biosecurity Manual held on the production area and readily available	1.1				
1.2	Have staff been given instruction in the relevant parts of the Manual	1.2				
1.3	Is a record kept of all relevant training received by employees	1.2				
1.4	Is a bird mortality register being maintained	4.4.1				
1.5	Is an appropriate bird movement register being maintained	4.4.2				
NOTES						

2.0	FACILITY STANDARDS	PARAGRAPH REF.	YES	NO	N/A	CORRECTIVE ACTION
2.1	Does the production area have a perimeter fence and can access routes be closed off to prevent vehicle entry.	2.1 2.4				
2.2	Is there a sketch or map clearly defining the production area and the property, including all access roads and gates	2.3				
2.3	Is there adequate signage to inform visitors of the Biosecure Area and what action they should take.	2.4				
2.4	Is there an off-site parking area for visitors	2.5				

2.5	Are footbaths available and used at all entrances allowing personnel access to sheds.	2.6				
2.6	Are the footbaths inspected daily and replenished as required.	4.3.3				
2.7	<i>Alternative to 2.5 and 2.6: Is a separate pair of boots available and used for each poultry enclosure.</i>	2.6				
2.8	Is the area around the sheds neat and tidy. Eg mown grass.	2.9				
2.9	Is hand sanitiser or washing facilities available and used at all entrances allowing personnel access to sheds	2.6				
2.10	Are other livestock excluded from the production area or effectively restricted to areas so that their faeces cannot come in contact with poultry either directly or indirectly, e.g. water draining into poultry areas/sheds.	2.2 2.14				
2.11	Are the sheds bird proof	2.8				
2.12	Are no other pet caged or aviary birds or pigs held on the property	2.15				
NOTES						

3.0	PERSONNEL STANDARDS	PARAGRAPH REF.	YES	NO	N/A	CORRECTIVE ACTION
3.1	Is there a signed Personnel Quarantine Declaration for each employee.	3.1.1				
3.2	Is there a Visitors' Log and are all production area visitors required to complete their details in the book.	3.4.2				
3.3	Are the conditions of entry to the production area prominently displayed near the Visitors' Log	3.4.1				

NOTES

4.0	WATER TREATMENT	PARAGRAPH REF.	YES	NO	N/A	CORRECTIVE ACTION
4.1	Is there a water sanitising system in place for the production area.	2.1.13 4.1				
4.2	If chlorination is used, is the level tested daily and recorded.	4.1.3 4.1.2				
4.3	If another sanitising system is used, is there a system in place to ensure that the water is being sanitised effectively.	4.1.4				
4.4	Is the effectiveness of the sanitising confirmed by independent microbiological testing on an annual basis if required.	4.1.4				

NOTES

5.0	VERMIN CONTROL PROGRAM AND RODENT BAITING PROGRAM	PARAGRAPH REF.	YES	NO	N/A	CORRECTIVE ACTION
5.1	Is there an appropriate vermin control strategy documented	2.11				
5.2	Is there a rodent baiting program in place in the production area.	2.12				
5.3	Is there a plan showing the location of bait stations.	2.12.1				
5.4	Are the baits regularly checked for activity and replaced; and is there a record of this process.	2.12 4.2				

NOTES

6.0	CLEANING AND GROUND MAINTENANCE	PARAGRAPH REF.	YES	NO	N/A	CORRECTIVE ACTION
6.1	Has spilt feed been cleaned up around silos	2.17 4.3.1				
6.2	Is the feed system closed to prevent contamination of feed by rodents and birds.	2.17				
6.3	Is there adequate drainage of the production area and in particular the area around the sheds.	2.10 4.3.5				
6.4	<i>For free range production only:</i> Are ramps to the outside area and the area around the hatch openings cleaned after each batch	4.3.4				

NOTES

7.0	DEAD BIRD DISPOSAL	PARAGRAPH REF.	YES	NO	N/A	CORRECTIVE ACTION
7.1	Is there an appropriate procedure in place for the disposal of dead birds.	2.7				
7.2	Is the procedure both environmentally sound and biosecure.	2.7				
NOTES						

8.0	FACILITY/COMPANY SPECIFIC REQUIREMENTS	PARAGRAPH REF.	YES	NO	N/A	CORRECTIVE ACTION
8.1						
8.2						
8.3						
8.4						
8.6						
8.7						
8.8						
NOTES						

APPENDIX 10 –PICK-UP AND TRANSPORT TO PROCESSING PLANT

An issue that deserves a special mention is biosecurity during pick-up and transport to a processing plant. During that procedure, the aim of appropriate biosecurity measures is to prevent the spread of any disease or microbial contamination from one farm to another. This can happen readily through the movement of people, vehicles and equipment, for example transport crates, and measures have to be taken by all those involved in this operation to minimise the likelihood of such exposure.

In the majority of commercial arrangements, the processor is responsible for organising pick-up and transport, while the task is often carried out by specialised contractor crews. The onus is on the processor to ensure that those involved in this operation are fully aware of the biosecurity requirements and have appropriate standards of procedures implemented and enforced. This must include procedures to ensure that all equipment and vehicles being moved onto the farm are cleaned every day or prior to moving from a farm with older birds to one with a younger flock. It also should include a requirement that all pick-up personnel sanitize their boots and their hands prior to entering the first shed on a farm. Any person engaged in pick-up and/or transport of poultry must sign a personnel quarantine declaration (Appendix 1 may be adapted for this purpose). Processors must maintain a record of who worked on which properties and the date pick-up occurred. To assist rapid tracing of movements when necessary, it is recommended practice for the pick-up foreman to sign the visitors' log when arriving at the farm.

The table below should assist in clarifying the roles and responsibilities for contract growers, by listing the main steps and procedures that need to be considered, and giving an indication of who is responsible for each step and who is usually expected to undertake the necessary action.

For arrangements that differ from the contract grower/processor situation (found in the majority of meat chicken operations), the responsibilities may shift more towards the grower, however the tasks and actions to be undertaken remain the same, and these need to be assigned and carried out appropriately.

TASK / ACTION	RESPONSIBILITY	EXECUTION
Scheduling farms for daily pick-up from youngest to oldest bird population	Processor	Pick-up Crew
Scheduling farms for daily pick-up so that farms or flocks with real or suspected health issues are picked up last	Processor	Pick-up Crew
Cleaning of crates, modules and trailers before the start of work each day	Processor	Processor
Cleaning catching barriers, all other machinery and equipment, vehicles, trucks, forklifts etc. before the start of work each day	Catching Contractor	Catching Contractor
Disinfecting shoes and hands at the start and at the conclusion of work in each shed	Pick-up Crew	Each Member of Pick-up Crew
All personnel involved in pick-up operation to wear clean clothes and boot (at beginning of each shift)	Pick-up Crew	Each Member of Pick-up Crew

In addition to the above daily requirements, every 12 months all personnel should be screened for:

- Nil contact with poultry, pet birds or pigs in home environment.
- Nil contact with commercial caged birds, racing pigeons, hatcheries and non-commercial aviaries.

The practice of partial depopulation, while important to the industry's economic viability, is recognised as having the potential of introducing new disease or contamination into the remaining flock. For this reason, it is particularly important to be meticulous about the biosecurity measures taken at each step.