



# **NATIONAL ANIMAL WELFARE STANDARDS**

FOR THE  
**CHICKEN MEAT  
INDUSTRY**

**The Hatchery & Chick Transport**

Note: For industry use only.

**National Animal Welfare Standards for the Chicken Meat Industry, Manual for The Hatchery and Chick Transport, 2008.**

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# Animal Welfare Manual for the Hatchery and Chick Transport

## 1. INTRODUCTION

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The 'National Animal Welfare Standards for the Chicken Meat Industry' aim to support existing regulatory frameworks and quality assurance requirements for commercial customers in the chicken meat industry. The Standards are based on Model Codes of Practice for poultry production, the Australian Standards and Guidelines for the Welfare of Animals, international and national guidelines and scientific evidence. It is intended these Standards be incorporated into industry and/or company quality assurance programs.

## 2. OBJECTIVES OF THIS MANUAL

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This manual, the 'Manual for the Hatchery and Chick Transport' provides the key practical animal welfare guidelines required to be followed for meat chicken farming in Australia. The comprehensive 'National Animal Welfare Standards for the Chicken Meat Industry' also contains the information in this manual, together with the full policy objectives and standards for the whole of industry.

This manual provides the key Standards, associated guidelines for the practices under each Standard and example recording sheets by which to implement the Standards.

### **This manual was developed to:**

1. provide a tool to incorporate the 'National Animal Welfare Standards for the Chicken Meat Industry' into company and enterprise QA programs;
2. provide a mechanism whereby companies can demonstrate their compliance with animal welfare Codes of Practice, other relevant legislation and be able to meet owner<sup>1</sup> requirements.

## 3. APPLICATION

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This 'Manual for the Hatchery and Chick Transport' contains 6 key Standards, each with a series of guidelines as a basis for developing standard operating procedures or practices at the enterprise. The standards are as follows:

- Standard 1. Planning and contingencies
- Standard 2. Maintenance and design of sheds, facilities and equipment
- Standard 3. Chick handling competency and training
- Standard 4. Egg Management
- Standard 5. Chick Management at the Hatchery
- Standard 6. Humane Destruction
- Standard 7. Transport of Chicks

<sup>1</sup>Throughout this document, owner means 'owner of the birds'.

Most of the activities specified in the above standards will already be part of the daily management practice and in most cases, simply checking to ensure that the practices outlined in the guidelines are demonstrated to be part of daily practice, will allow enterprises to make certain that all the key activities are being carried out to ensure good animal welfare outcomes.

There are explanatory notes beneath the guidelines where required to provide further information. These explanatory notes provide some information on targets as a guide, however it is recognised that more specific targets and actions will be determined by the owner for each enterprise.

Section 7 of this manual provides information on how to implement the Standards, including example recording sheets that can be used to demonstrate meeting the requirements of these standards as part of the existing enterprise production system.

These recording sheets should be integrated with existing recording practices and/or daily business practice. Where items listed in this manual are already recorded, no additional recording sheet is required.

The final pages in this manual include a checklist in order to work through each standard for the purposes of implementation.

It is not necessary to duplicate any records already available (for example, batch records).

Note: The guidelines in this manual for each standard are for guidance only – targets for meat chicken and hatchery enterprises are determined and provided by the owner and may vary by company depending on production requirements, breed, climate, facilities and practices.

If targets referred to in this manual are not developed, the company should consider seeking advice from a technical expert or professional towards developing appropriate targets. Records of communication with the owner should be kept.

There are similar standards and guidelines in the overarching 'National Animal Welfare Standards for the Chicken Meat Industry' for all other sectors to provide comprehensive animal welfare standards from hatching through the chain to processing.

## 4. RELEVANT REFERENCES

- National Animal Welfare Standards for Meat Chicken Farming. The Standards. (2008). (Australian Poultry Cooperative Research Centre, Armidale).
- National Animal Welfare Standards for Meat Chicken Farming. Animal Welfare Background Manual. (2008). (Australian Poultry Cooperative Research Centre, Armidale).
- Primary Industries Standing Committee. (2002). Model Code of Practice for the Welfare of Animals. Domestic Poultry, 4th edition (CSIRO Publications, East Melbourne).
- Primary Industries Standing Committee. (2006). Model Code of Practice for the Welfare of Animals. Land Transport of Poultry, 2nd Edition. (CSIRO Publications, East Melbourne).
- National Biosecurity Manual for Contract Meat Chicken Farming. (2008). (Australian Chicken Meat Federation, Sydney).

## 5. STANDARDS AND GUIDELINES

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### Standard 1. Planning and contingencies

#### Guidelines

**1.1 Contingency plans are in place for failure in power, water and feed supply.**

1.1.1 Note: This may include a back up system for managing feed, water and temperature and/or arrangements to obtain feed and water as required.

1.1.2 Note: For emergency events that are considered exceptional to normal daily practice, contingency arrangements/considerations and any actions taken to resolve the issue should be recorded. Any decision applied in an emergency situation should be made with consideration of the birds' welfare at all times.

**1.2 A system is in place to test alarms for mechanically ventilated sheds.**

1.2.1. Note: Staff are available to promptly respond on a 24 hour basis when alarms activate.

**1.3 There is a biosecurity system in place for the facility, visitors, staff and equipment.**

1.3.1 Note: procedures to include;

- sanitising hatchery equipment and facilities
- staff hygiene practices and visitors
- pest control (Note: wild bird and rodent control programs should be in place).
- farm vehicles
- disposal of egg and chick debris.

**1.4 A system is in place for annual review of all hatchery facility practices that impact on animal welfare.**

1.4.1 Note: This should be done with the owner and may include reviewing production records, practices, training, or conducting an internal audit to ensure animal welfare is well-managed, within targets and corrective actions are effective.

1.4.2 Note: Standard Operating Procedures should include contingencies outlining the appropriate actions in the event of power failure and/or equipment breakdown.

### Standard 2. Maintenance and design of sheds, facilities and equipment

#### Guidelines

**2.1 Facilities and equipment are designed, operated and maintained to ensure that temperature, humidity and ventilation targets are met as closely as practicable.**

**2.2 A system is in place for the repair and maintenance of alarms, heating and cooling systems, ventilation systems (natural or mechanical and other facility defects that may impact on chick welfare.**

2.2.1 Note: Records of major repairs/defects and actions taken should be kept.

2.2.2 Note: Regularly test electrical, safety and other facility systems to ensure their operation. Records of repairs/defects and actions taken should be kept.

**2.3 All areas are cleaned and sanitised in accordance with protocols.**

2.3.1 Appropriate measures are in place to verify the effectiveness of the cleaning/sanitation protocols. For instance, regular microbiological testing should be carried out according to a developed procedure or program.

## **Standard 3. Chick handling competency and training**

### **Guidelines**

**3.1 Persons responsible for the management or handling of chicks/eggs, or both, are competent in their required tasks, such as (but not restricted to) any of the following:**

- handling of chicks/eggs
- inspection of chicks and hatchery facilities
- identifying deviations from production targets
- identifying any ill or injured chicks
- humane destruction of chicks
- following written instructions
- responding to alarms.

3.1.1 Note: Competency may be achieved by on-the-job experience, on-the-job training, demonstrated ability to meet the requirements of these standards or formal training. Otherwise supervision by a competent person is required. Supervision should include the presence of the manager for specific tasks that are critical to chick welfare (for example, humane destruction) until staff are competent, however may include regular monitoring of staff for more general daily activities (for example, handling/inspection).

3.1.2 Note: There should be a system in place to ensure staff absences are covered (eg. Staff are available to supervise the hatchery as required).

**3.2 There is an induction/or training procedure for new staff.**

3.2.1 Note: There should be an induction program and training register to record when staff are trained and/or supervisory provisions for specific tasks.



## Standard 4. Egg management

### Guidelines

- 4.1 The system for egg collection ensures that eggs are collected at least 3 times daily or according to the owner's standard operating procedures.**
- 4.2 Equipment is clean and dry for automatic systems.**
- 4.3 Floor eggs are collected separately and dirty eggs separated promptly.**
  - 4.3.1 Note: There is an egg disinfection procedure in place as required. Eggs to be disinfected as required on the breeder farm prior to transport to the hatchery. If there is a problem with egg hygiene, the owner should review the procedures and may need to investigate egg disinfection/sanitation protocols.
- 4.4 Egg cooling, storage and temperature/humidity controls are in place according to owner's recommendations.**
- 4.5 Transport arrangements are scheduled/managed to maintain temperature and humidity standards according to owner specifications.**
- 4.6 Temperature and humidity targets are regularly checked and maintained within targets as closely as possible in the hatchers and setters. Where deviations occur, actions are taken to rectify the problem.**
  - 4.6.1 Note: Company targets for temperature will vary by strain/breed and age of bird and may require variation to ensure appropriate temperatures for various egg ages. Company targets should be monitored and corrective actions taken when deviations occur. As a guide only, temperature for setters may be between  $37.1-38.6^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$ , with optimal humidity 60-65%, temperature for hatchers may be between  $37-38^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$ , with optimal humidity 70-80% and the cool room temperature may be between  $12-20^{\circ}\text{C}$ , with optimal humidity 70-75%.
- 4.7 There is a procedure in place for routine egg residue diagnosis.**
  - 4.7.1 Note: Targets should be established for egg residue diagnosis and corrective actions taken to determine the cause of embryo death if this exceeds company range (range may vary in accordance with breed/strain/environment).
- 4.8 Eggs are kept in the cool room no longer than the specified company target (varies by genetic stock - see above), egg quality is checked and recorded, egg trays are labelled and dirty eggs are set separately.**
  - 4.8.1 Note: Company targets for keeping eggs in cool rooms vary widely for different strains/breeds and associated quality parameters. As a guide only (as variation will occur widely depending on genetic stock) it is advisable to only keep eggs in the cool room for approximately 7 days or so.
- 4.9 There is a system to inspect egg tilting operation daily.**
- 4.10 Records for anticipated hatching dates are kept.**



## Standard 5. Chick management at the hatchery

### Guidelines

**5.1 Hatchability and culling rates are monitored and significant deviations are identified and the appropriate corrective actions taken.**

5.1.1 Note: Hatchability varies by breed/strain and environmental conditions, thus company targets will differ. Where deviation occurs to specified company targets, corrective action should be taken to investigate the cause. As a guide, (although there is wide variation by breed, strain, donor flock) hatchability targets may be approximately 77% at 24 weeks (of the age of donor flock) and greater than 90% at 27- 50+ weeks and culling rate may be approximately 0.5%.

**5.2 Incubation times are managed, with chicks removed in a timely manner according to owner targets.**

**5.3 Unhatched, unthrifty and surplus chicks are promptly culled in an approved and humane manner.**

**5.4 Chicks are regularly inspected and appear, behave and sound normal after hatching.**

**5.5 There is a chick health program and vaccination(s) are conducted at the hatchery according to vaccination protocols and owner requirements.**

**5.6 Beak trimming, de-clawing and de-spurring if carried out, are conducted at the hatchery and according to company recommendations.**

5.6.1 Note: If deemed necessary, must be by a competent person.

5.6.2 Note: Beak trimming should not be routine (ie kept to a minimum no. of birds) and the trim be kept as small as possible (ie tip) depending on breed/strain in order to prevent aggression and mortality. Where required, beak trimming should be conducted at the hatchery for breeding stock and females are not trimmed unless the strain of bird is likely to be aggressive.

5.6.3 Note: De-spurring, if necessary, limited to male breeders.

5.6.4 Note: Claw trimming, if deemed necessary to avoid injury to birds, should be limited to the nail of the toe in all classes of bird except breeding males in which the terminal segment of each inward pointing toe may be removed.

## Standard 6. Humane destruction

### Guidelines

- 6.1 Humane destruction is carried out using the appropriate equipment and/or method for the class and condition of the chick/bird.**
- 6.2 Carbon dioxide or high speed maceration is used to cull hatched chicks.**
  - 6.1.1 Note: Procedures and/or appropriate equipment is utilised to ensure that birds were effectively and humanely destroyed by CO<sub>2</sub>, and not simply suffocated by smothering.
- 6.3 Unhatched, live chicks are culled as soon as possible.**
- 6.4 Chicks are observed after culling to ensure they are dead.**

## Standard 7. Transport of chicks

### Guidelines - Preparation for transport

- 7.1 Birds selected for transport prior to placement in containers should be healthy and vigorous.**
- 7.2 Space allowances in boxes/containers are appropriate.**
  - 7.2.1 Note: The recommended floor space is 400-475 chicks per m<sup>2</sup> with a minimum height of containers of 12cm.
- 7.3 Containers to be clean and dry and comprised of appropriate material.**
- 7.4 Temperature, humidity and ventilation within the chick holding area are according to targets and chicks were regularly inspected.**
  - 7.4.1 Note: The holding area is to provide a temperature that will maintain chick body temperature accordingly. Company targets will vary depending on equipment, bird strain and location, however as a guide, temperatures should maintain chicks between 30-32°C and 70% relative humidity, depending on breed specifications.
- 7.5 Vehicles to be clean, sanitised prior to loading and warmed to 24-28°C prior to loading chicks.**
- 7.6 Transport vehicles with mechanical ventilation and/or temperature controls should be regularly checked to ensure their operation.**

## **Guidelines - Transport**

### **7.7 Containers should be suitably ventilated particularly when stacked.**

7.7.1 Note: Containers should be positioned and placed with care, positioned on the vehicle in an upright position and secured prior to departure.

7.7.2 Note: Containers and boxes should be stacked in a way that will enable sufficient ventilation/air exchange during transport.

### **7.8 Transport to be scheduled to reach the farm within 60 hours following take off (all birds hatching), allowing 12 hours for all to have hatched prior to removal from the hatchery.**

7.8.1 Note: It is recommended to place birds within 24 hours of take off, but most birds should be placed within 4-8 hours of commencing transport.

7.8.2 Note: water deprivation time should not exceed 60 hours following take off, (72 hours is the maximum, allowing for 12 hours hatching time to ensure all chicks are hatched) and if hydrating material is provided in containers, 72 hours is the recommended maximum time.

### **7.9 All relevant parties involved in chick transport should have the relevant consignment details, including:**

- the numbers of chicks in each container;
- the date and time of dispatch;
- the contact details for the person(s) at the destination.

### **7.10 Temperature during transport to be monitored/checked and kept within targets and action should be taken to schedule and manage birds during extreme weather that would pre-dispose chicks to heat or cold stress.**

7.10.1 Chicks should be maintained at temperatures as close as possible to identified targets (see 7.4).

7.10.2 There should be a contingency arrangement in place to safeguard the welfare of chicks should automated equipment breakdown in the vehicle.

### **7.11 There should be a cleaning program for vehicles and truck wheels should be clean and/or sanitised between farms.**

## 6. SAMPLE RECORDING SHEETS

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As explained in section 3, there may be a variety of ways in which the Standards and guidelines may be achieved in practice.

Therefore, the information outlined in this document does not preclude growers from utilising practices that differ from those described, provided the animal welfare outcomes illustrated in this document are demonstrated to be met. The guidelines provide a basis for on-farm standard operating procedures and the example recording sheets describe the required information.

### **The following section provides:**

1. Daily Batch Recording Sheet
2. HACCP example, for inclusion in existing quality assurance manuals, as required).
3. Process Control Sheet, for daily and weekly monitoring/record keeping, as required.
4. Checklist Questions, for use in implementing the standards and checking performance, as required.

*Note: The 'National Animal Welfare Standards for the Chicken Meat Industry' contains the full set of standards and associated background information and is available from the Australian Poultry Cooperative Research Centre, or the Australian Chicken Meat Federation.*

*Note: Where existing batch records or other quality assurance practices cover the information required to implement these Standards and guidelines are already available, the example recording sheets and information presented do not have to be completed.*

## 7. DAILY BATCH RECORDING SHEET EXAMPLE

Note: If these items are covered by existing batch card information there is no need to duplicate records.

Hatcher No:.....

Week No:.....

Day	Time	Hatch	Temperature °C		Room Temp °C		Alarm check	Alarm call	Sign
			Wet	Dry	Min	Max			
Sat									
Sat									
Sat									
Sat									
Sun									
Sun									
Sun									
Sun									
Mon									
Mon									
Mon									
Mon									
Tues									
Tues									
Tues									
Tues									
Wed									
Wed									
Wed									
Wed									
Thurs									
Thurs									
Thurs									
Thurs									
Fri									
Fri									
Fri									
Fri									

Comments:

Date:.....

Date:.....

Date:.....

Date:.....

Date:.....

Date:.....

## 8. HACCP PLAN - AN EXAMPLE OF SOME CONTROL POINTS THAT MIGHT BE INCLUDED AS PART OF THE HACCP PROGRAM (IF REQUIRED).

Variable	Hazard	Preventive Measure	Critical Limit	Monitoring	Immediate Action/ Longer Term Action	Records
Temperature and humidity	Heat or cold stress prior to hatching	Monitoring temperature, humidity and ventilation targets	Insert company targets	What: Visual inspection and checking of temperature controls How:	Immediate: Adjust controls daily as required	Production records
Egg diagnosis	Chick losses	Observation	Insert company targets	What: Inspection	Identify causes and adjust management as required or seek advice	Production records
Hatchability and culling rates	Mortality, morbidity and culls	Monitoring mortalities to targets. Monitor morbidity and culls.	Insert company targets	What: Observation and record mortality, morbidity and culls. Monitor records and targets.	Action: Determine management actions if targets exceeded	Production records





## 10. CHECKLIST EXAMPLE

Checklist	YES	NO	N/A	COMMENTS
Are contingency plans in place for failure of power and is the back-up system regularly tested?				
Is a system in place to inspect and test alarms and repair and maintain heating and cooling systems, humidity control and ventilation systems?				
Are staff available to respond to alarms at all times?				
Is there a biosecurity procedure?				
Are there procedures in place for cleaning and sanitation of facilities, vehicles and are hand washing facilities operational?				
Are all areas cleaned and sanitised according to protocol?				
Is there a verification procedure in place to assess cleaning regimes? (ie microbiological monitoring)?				
Are eggs sanitized (if required practice) on the breeder farm prior to transport to the hatchery?				
Is there an induction/or training procedure for any new staff prior to their commencing work?				
Are personnel handling eggs and chicks competent in their tasks?				
Are egg cooling, storage and temperature/humidity controls in place according to owner/company recommendations?				
Are transport arrangements scheduled and managed to maintain temperature and humidity standards?				
Are temperature and humidity targets regularly checked and maintained within target in the hatchers, setters, and cool rooms?				
Is there a procedure for routine egg residue diagnosis?				
Are eggs kept in the cool room in accordance with company targets and egg quality checked and recorded?				
Are egg trays labelled and dirty eggs set separately?				
Is there a system in place for egg tilting operation daily?				
Are records for anticipated hatching dates kept?				
Are hatchability and culling rates monitored and significant deviations identified and the appropriate corrective actions taken?				
Are incubation times managed, with chicks removed in a timely manner according to targets?				
Are unhatched, unthrifty and surplus chicks culled promptly in an approved and humane manner?				
Is there a chick health program in place and if relevant, a vaccination schedule that was followed?				

	YES	NO	N/A	COMMENTS
Are routine husbandry procedures including de-clawing, de-spurring and beak trimming, if applied, carried out according to recommended targets?				
Is beak trimming (if conducted) done by a competent operator?				
Are chicks regularly inspected and appear, behave and sound normal after hatching?				
Is humane destruction carried out using the appropriate equipment/method – is CO2 or high speed macerators used to cull hatched chicks?				
Are chicks culled as soon as possible and observed after culling to ensure death?				
Are chicks selected for transport healthy and vigorous?				
Are space allowances appropriate?				
Are containers dry and clean and comprised of appropriate materials?				
Is temperature and humidity monitored in the chick holding area?				
Are vehicles clean, sanitised and warmed prior to loading chicks?				
Is transport scheduled to ensure chick arrival within 60 hours (maximum 72 hours allowing for 12 hours for all chicks to hatch) of removal from the hatchery?				
Is temperature monitored during transport and containers stacked to enable ventilation?				