

**Primary Industries Standing Committee  
Model Code of Practice for the Welfare  
of Animals  
Domestic Poultry 4th Edition  
SCARM Report 83**



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Primary Industries  
Standing Committee  
Model Code of Practice  
for the Welfare of  
Animals

# **Domestic Poultry 4th Edition**

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## PREFACE

This Australian Model Code of Practice for the Welfare of Animals has been prepared by the Animal Welfare Committee (AWC) within the Primary Industries Ministerial Council (PIMC) system.

Membership of the AWC comprises representatives from each of the State Departments with responsibility for agriculture, CSIRO, the Department of Agriculture, Fisheries and Forestry – Australia and other committees within the PIMC system. Extensive consultation has taken place with industry and welfare groups in the development of the code.

This edition of the Code is based on the third edition endorsed by the then Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ), at its 4th meeting in October 1994. Ongoing concerns have been raised with regard to hen welfare, and at the ARMCANZ meeting in August 2000 the Ministers requested development of a fourth version of the Code. The revised Code was to provide detailed minimum standards for the husbandry of layer hens in cage, barn and free-range systems. This edition was endorsed by PIMC Ministers at their first meeting in May 2002.

The Code is intended as a set of guidelines which provides detailed minimum standards for assisting people in understanding the standard of care required to meet their obligations under the laws that operate in Australia's States and Territories. National QA programs for meat chickens and layer hen industries are well advanced, and will also play an important role in supplementing the Code and assuring the health and wellbeing of poultry.

The following model codes of practice have been endorsed by PIMC (and its predecessors, ARMCANZ and the Australian Agricultural Council):

Animals at Saleyards (1991)  
Buffalo, Farmed (1995)  
Camel, The (1997)  
Cattle (1992)  
Cattle, Land Transport of (1999)  
Deer, Farming of (1991)  
Emus, Husbandry of Captive-Bred (1999)  
Feral Animals, Destruction or Capture, Handling and Marketing of (1991)  
Goat, The (1991)  
Horses, Land Transport of (1997)  
Livestock, Air Transport of (1986)  
Livestock, Rail Transport of (1983)  
Livestock, Road Transport of (1983)  
Livestock, Sea Transport of (1987)  
Livestock at Slaughtering Establishments (2001)  
Pig, The (2nd Edition) (1998)  
Pigs, Land Transport of (1997)  
Poultry, The Domestic (3rd Edition) (1995)  
Poultry, Land Transport of (1998)  
Rabbits, Intensive Husbandry of (1991)  
Sheep, The (1991)

and by agreement with the National Health and Medical Research Council, the CSIRO, Australian Research Council and Australian Vice-Chancellors' Committee:

*Australian Code of Practice for the Care and Use of Animals for Scientific Purposes (1997).*

The following Code is based on current knowledge and technology. It will be further reviewed in 2010, although an earlier review will be implemented if technologies offering significant welfare benefits are available.

## **PRIMARY INDUSTRIES MINISTERIAL COUNCIL**

In June 2001 the Australian Commonwealth and State/Territory governments created several new Ministerial Councils from the amalgamation and redirection of the work of several existing Councils.

These changes saw the winding up of the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) and the establishment of a new Council, the Primary Industries Ministerial Council (PIMC). The objective of this new Council is:

*'to develop and promote sustainable, innovative, and profitable agriculture, fisheries/aquaculture, food and forestry industries.'*

Membership of the Council consists of the Australian Federal, State/Territory and New Zealand Ministers responsible for primary industries matters.

The Council is supported by a permanent Standing Committee, the Primary Industries Standing Committee (PISC). Membership of Standing Committee comprises relevant Departmental Heads/CEOs of Commonwealth/State/Territory and New Zealand agencies.

# 1 INTRODUCTION

Animal welfare considerations are becoming increasingly important for the keeping and farming of animals, both in Australia and internationally. Practices which may have once been deemed acceptable are now being reassessed in light of new knowledge and changing attitudes.

The minimum standards outlined in this Code are intended to help people involved in the care and management of poultry to adopt standards of husbandry that are acceptable.

This Code of Practice is intended as a guide for people responsible for the welfare and husbandry of domestic poultry. It recognises that the basic requirement for welfare of poultry is a husbandry system appropriate to their physiological and behavioural needs.

The basic needs of poultry are:

- readily accessible food and water to maintain health and vigour;
- freedom to move, stand, turn around, stretch, sit and lie down;
- visual contact with other members of the species;
- accommodation which provides protection from the weather and which neither harms nor causes distress;
- prevention of disease, injury and vice, and their rapid treatment should they occur.

It is noted that there are particular behaviours such as perching, the ability to fully stretch and to lay eggs in a nest that are not currently possible in certain (caged) poultry housing systems. It is further noted that the ability to manage disease is influenced by the housing system. These issues will remain the subject of debate and review.

Special requirements for various species are shown in the attached appendices.

The Code emphasises that, whatever the form of husbandry, managers, employees and all others responsible for the day-to-day needs of domestic poultry have a responsibility to care for poultry under their control.

The importance of good stockmanship in animal welfare cannot be over-emphasised. Persons responsible for the care of poultry should be well trained, experienced and dedicated. Staff should be encouraged to undertake appropriate training in poultry management and husbandry. Knowledge of the normal appearance and behaviour of their birds is essential for them to be treated effectively and efficiently and with consideration.

Assistance with the establishment of poultry farms and advice on the management of poultry can be obtained from qualified advisers with experience in private or government employment. Veterinary advice should also be sought when poultry are in ill-health.

This Code is based on the knowledge and technology available at the time of publication. It does not replace the need for experience and commonsense in the husbandry of domestic poultry.

This Code will be reviewed as frequently as necessary, to take account of advances in technology and in the understanding of animal physiology and behaviour and in regard to the expectations of the industry and the general community. The Code of Practice will be further reviewed in 2010 although an earlier review will be implemented if technologies offering significant welfare benefits are available.

This Code does not deal with common or statute law requirements such as those relating to the establishment and operation of a particular venture, environmental protection and occupational health and safety. Those laws which have animal welfare implications must be complied with.

## 2 HOUSING

### 2.1 Definitions

#### 2.1.1 Egg Production

The three basic housing systems for egg production are defined below. It is recognised that individual marketing definitions for table eggs may require more specific descriptions for the housing systems.

##### 2.1.1.1 Cage Systems

Birds in cage systems are continuously housed in cages within a shed.

##### 2.1.1.2 Barn Systems (Non-cage Systems)

Birds in barn systems are free to roam within a shed which may have more than one level. The floor may be based on litter and/or other material such as slats or wire mesh.

##### 2.1.1.3 Free-Range Systems (Non-cage Systems)

Birds in free-range systems are housed in sheds and have access to an outdoor range.

#### 2.1.2 Chicken Meat Production

##### 2.1.2.1 Meat Chicken Shed Systems (Deep Litter System)

Meat chickens are free to move around on a litter substrate in a shed with temperature and ventilation control appropriate to the location.

##### 2.1.2.2 Free-Range Systems

Meat chickens in free-range systems have access to an outdoor range and to indoor shelter.

### 2.2 General

2.2.1 Advice on welfare aspects must be sought when new cages or equipment are being purchased, new buildings being constructed or existing buildings modified. Such advice is available from qualified advisers with experience in private or government employment.

2.2.2 Floors, other surfaces, fittings and equipment must be designed, constructed and maintained so as to minimise the risk of injury and disease, and to adequately support the birds.

2.2.3 Where chickens are brooded on wire, it is recommended that temporary supportive flooring material, such as paper or matting, is provided during the early brooding period.

2.2.4 Innovative husbandry and housing systems which enhance bird welfare should be encouraged, and applied to commercial egg production as practical.

- 2.2.5 Minimal acceptable housing standards including stocking densities are in Appendix 1 and 2.

## 2.3 Cage Systems for Laying Hens

### 2.3.1 Standards for Cage Design and Construction

*These standards were set by ARMCANZ in the 1995 Code (third edition) and are applicable to all cages.*

- 2.3.1.1 The floor must be constructed to enable support for each forward pointing toe and the slope of the floor should not exceed 8 degrees.
- 2.3.1.2 Multi-deck cages must be arranged so that birds in the lower tiers are protected from excreta from above and so that all birds are fully visible for regular inspection and individual birds can be easily removed from cages as required.
- 2.3.1.3 Not less than 10 cm feed trough per bird must be provided.
- 2.3.1.4 Not less than 10 cm water trough per bird or no fewer than two independent nipple or cup drinkers must be provided within reach of each cage. The splash cup under a nipple drinker is not an independent drinking point.

*These standards were set by ARMCANZ in the 1995 Code and are applicable to all cages installed after 1 January 1995.*

- 2.3.1.5 In cages, birds must be able to stand at normal height. Cages must be at least higher than the maximum height of the birds standing normally. The height of all cages must be at least 40 cm over 65% of the cage floor area and not less than 35 cm at any point.
- 2.3.1.6 The design and size of cage openings must be such that birds can be placed in them and removed from them without causing injury or unnecessary suffering. Cages must have doors the full height and width of the cage. Since 1995, larger cages have been introduced and their doors must open either to full width or to a width of 50 cm.

### 2.3.2 Standards for Cage Life

- 2.3.2.1 Cages meeting all 1995 standards above (i.e. 2.3.1.1 to 2.3.1.6) have a life of 20 years from date of manufacture, or until 1 January 2008 whichever is the later, when they must be decommissioned or modified to meet standards applying at the time.
- 2.3.2.2 Cages not meeting all of the 1995 standards above have a life until 1 January 2008 when they must be decommissioned or modified to meet the standards applying at the time.
- 2.3.2.3 Cages for laying hens, irrespective of their state of compliance with any design and construction standards, may be used only

if they also comply with requirements for stocking density current at the time.

2.3.2.4 As of 1 January 2001 the standards applying are 2.3.1 (above) and a stocking density as shown in Appendix 1 (post 1 January 2001 cages).

2.3.3 Standards for Stocking Density  
See Appendix 1.

## 2.4 Non-Cage Systems

2.4.1 General

2.4.1.1 Unless stated otherwise the sections below 2.4.2 to 2.4.4 apply to all types of poultry in non-cage systems. Specific standards for different types of poultry are found in the Appendices.

2.4.2 Substrate

2.4.2.1 The floor substrate in indoor floor systems may consist of litter and/or slatted flooring, or wire flooring or any combination of these. Litter is used by hens to dust, bathe and forage and the provision of some litter area is therefore encouraged.

2.4.2.2 Where litter floors are used the management of the litter is critical for the welfare of the birds. In deciding what depth of litter to use consideration must be given to the stocking density of the birds and length of time in the shed. Poor litter management may lead to litter that is caked, wet or excessively dusty, and attempts must be made to prevent these conditions and rectify them should they occur.

2.4.2.3 Where slatted floor systems are used, the design of the slats should be such that the slats adequately support the birds, while achieving a balance between manure removal and damage to the feet and legs of the birds. In this respect, the gaps between the slats should not exceed 25 mm, and the size of the slats should take into consideration the type of birds, e.g. layers or breeders.

2.4.3 Perches

2.4.3.1 This section applies to laying hens, pullets and breeder hens.

2.4.3.2 Provision of adequate perching space is encouraged and can be provided as linear perches or slatted or wire mesh floors. If perches are provided all birds should have the opportunity to roost if that is their preference.

2.4.3.3 Available linear perches should allow not less than 15 cm per hen. Perches must be without sharp edges, and must be positioned to minimise fouling of any birds below. The horizontal distance

between the perches should be at least 30 cm but not more than 1 metre, and the horizontal distance between perch and the wall should be at least 20 cm.

- 2.4.3.4 Slatted or wire mesh perching areas should provide a minimum of 450 cm<sup>2</sup> per bird.

#### 2.4.4 Nests for Laying Hens

- 2.4.4.1 Laying hens must be provided with at least 1 single bird nest per 7 hens or, for colony (multiple bird) nests, at least 1 m<sup>2</sup> of nest box area per 120 hens. Nests must provide seclusion from the flock, be designed and have a floor substrate that encourages nesting behaviour. Rearing experience plays an important role in ensuring that eggs are laid in the nests provided. A high incidence of 'floor eggs', that is eggs laid outside the nests, may indicate failure to meet the above conditions or the need for husbandry changes, in which case corrective action should be taken.

- 2.4.4.2 Nest boxes and roosting areas should be easily accessible and should not be so high above the floor level that birds may be injured when ascending or descending.

- 2.4.4.3 Nest litter, where used, should be kept clean, dry, friable and moisture absorbent. Nest liners should be kept clean and dry.

#### 2.4.5 Free-Range Management

- 2.4.5.1 The outdoor range should be sited and managed to avoid muddy or unsuitable conditions. If such conditions develop, an alternate area should be provided or remedial action undertaken to rectify the problem. The stocking density or rotational program for future flocks should be adjusted to prevent a recurrence of such situations.

- 2.4.5.2 Poultry should not be kept on land which has become contaminated with poisonous plants, chemicals or organisms which cause or carry disease to an extent which could seriously prejudice the health of poultry.

- 2.4.5.3 All birds when fully feathered must have ready access through openings to the outdoor range during daylight hours for a minimum of 8 hours per day. The only exception is under adverse weather conditions or serious outbreaks of disease when birds may be kept inside. Openings should be of a size and number and be evenly distributed to allow easy entry and exit for the birds with no impediments. As a guide openings should be a minimum 35 cm high and 40 cm wide with 2 metres per 1000 birds taking into account the climatic conditions.

- 2.4.5.4 Birds on the range must have ready access to shaded areas and shelter from rain, and windbreaks should be provided in exposed areas.

2.4.5.5 Every reasonable effort must be made to provide protection from predators at all times.

2.4.6 Pullet Rearing

Layer pullets may be reared on wire, slats or litter. For properties where litter rearing is used and enteric infections or vaccination efficacy are a problem chickens may be brooded on wire for the first 3–4 weeks, and then transferred to litter.

There are conflicting views as to whether early rearing experience has an impact on the development of certain adverse behaviours and nesting.

2.4.6.1 The maximum acceptable live weight density for pullets raised on wire is outlined in A1.7 of Appendix 1. The floor must be constructed to provide support for each forward pointing toe.

2.4.6.2 The maximum acceptable live weight densities for pullets raised in non-caged systems is outlined in A2.1.2 of Appendix 2.

2.4.6.3 The provision of perches may be beneficial for pullets reared for the barn system.

### **3 SPACE ALLOWANCES**

- 3.1 It is recommended that maximum acceptable live weight densities be reviewed and adjusted according to advances in knowledge of animal welfare and husbandry. The space allowed for each bird will vary according to the species, breed, strain and type of bird in addition to increasing age and weight.
- 3.2 The stocking density will also depend on the quality and type of housing and the capacity to achieve and maintain acceptable levels of temperature, humidity, air exchange, removal of noxious gases and lighting. Upon the occurrence of disease or evidence of behavioural changes such as cannibalism, management practices, including stocking densities should be re-evaluated immediately and adjusted accordingly.
- 3.3 Maximum stocking densities for various species of poultry are presented in the appendices. These densities apply only to birds housed under good management with optimal temperature and ventilation conditions. Maximum densities generally refer to terminal live weights but should not be exceeded at earlier growth stages, e.g. prior to thinning-out.
- 3.4 Floor space specifications in any non-cage system may include any slatted or metal mesh areas and any areas occupied by feeding and watering equipment and nest boxes.

## **4 EQUIPMENT**

- 4.1 All equipment to which poultry have access must be designed and maintained to avoid injury or pain to the birds.
- 4.2 All feeding and watering systems must be checked for efficient operation at least once each day to ensure all birds have access to feed and water.
- 4.3 All automated hatchery and environmental control equipment for controlled environment sheds must have adequate back-up systems and alarms in case of equipment failure (see Section 6.7).

## **5 LIGHTING**

- 5.1 Young birds reared away from the hen require a light intensity of about 20 lux on the food and water for the first three days after hatching in order to learn to find food and water. It may then be reduced to as low as 2 lux during rearing.
- 5.2 Sudden increases in light intensity should be avoided as it may cause flight reaction in some strains of birds.
- 5.3 During inspection of poultry the light intensity on the birds must be adequate to allow birds to be thoroughly inspected and any problems identified. During inspection of poultry the light intensity may need to be supplemented (e.g. by use of a torch or by turning up the overall lighting in the shed).
- 5.4 Where young poultry are housed in enclosed sheds using continuous light, a 'blackout' training period should be implemented to prevent panic should lighting fail. A suitable method is to commence with 15 minutes blackout and increase over a few days to one hour in each 24 hours.
- 5.5 Where poultry do not have access to daylight they should be given lighting over a total period of at least 8 hours per day. Photoperiods in excess of 20 hours per day may be detrimental to the adult laying bird.
- 5.6 All enterprises must have access to equipment to measure light intensities and must keep appropriate records.

## 6 VENTILATION

- 6.1 Ventilation is required at all times to provide fresh air and is one means of controlling shed temperature and humidity (see Section 7). The accumulation of water vapour, heat, noxious gases and dust particles may cause discomfort or distress and predispose to the development of disease. Poultry should be protected from extreme weather conditions including strong draughts in cold weather.
- 6.2 Recognising the possibility of extremes of weather conditions, ventilation facilities and equipment should aim to maintain shed relative humidity below 80% especially at temperatures above 30°C.
- 6.3 The housing facilities of free-range hens must be designed to ensure adequate airflow and temperature control at maximum stocking densities when birds cluster or perch at night or during extreme weather conditions.
- 6.4 The presence of ammonia is usually a reliable indicator of the build-up of noxious gases. A level of 10–15 ppm of ammonia in the air can be detected by smell, and once reached corrective action should be taken. If ammonia levels reach 20 ppm at bird level in enclosed buildings immediate corrective action must be taken. Ammonia levels from 25–35 ppm will cause eye and nasal irritation in humans.
- 6.5 Hydrogen sulphide levels should be kept below 5 ppm and carbon dioxide below 3000 ppm (0.3%).
- 6.6 For rearing layer pullets and breeder birds in indoor non-cage systems, the maximum acceptable live weight densities for various ventilation systems are given in Appendix 2 (A2.1.2). For meat chickens these are given in A2.1.3.
- 6.7 Mechanically ventilated sheds must have a back-up power supply or alternative equivalent ventilation system and automatic alarm systems that warn immediately of power or temperature problems. The alarm system must have battery back-up and must operate on a system independent of the shed ventilation, heating and cooling controller and temperature sensors. The alarm system must sense if the shed temperature is too high or too low and if there is a power failure in any power supply phase. Alarms must be sited so that they are easily heard and response to them must be available at all times with restoration of power or emergency ventilation within 15 minutes.

## 7 TEMPERATURE AND HUMIDITY

### 7.1 Newly Hatched Birds

- 7.1.1 Newly hatched birds have a poor ability to control body temperature and require supplementary heat to bring their environmental temperature up to the comfort range as evidenced by alert and active behaviour. Optimum temperatures vary for different species and operators must know and adhere to the specific requirements for the species under their care.
- 7.1.2 Subject to species and seasonal variations supplementary heat at gradually reducing levels may be required up to about 5 weeks of age. The behaviour of the birds is the best indicator of discomfort if insufficient or excessive heat is being provided.

### 7.2 Growing and Adult Poultry

- 7.2.1 Adequate precautions should be taken to minimise stress produced by temperatures high enough to cause prolonged panting, particularly when accompanied by high humidity. In hot weather provision of adequate cool water and ventilation is essential and birds must have access to shade. Under adverse weather conditions birds must be monitored more frequently.
- 7.2.2 Where high temperatures are causing distress, foggers, roof sprinklers, fans or other systems should be used to control heat build-up within buildings. Foggers are less effective if relative humidity reaches 80% and temperature rises above 30°C. In these conditions mechanical ventilation must be provided for meat chickens. Where air speeds are greater than 1.5 m/s on the birds, and there is an air change rate of at least three-quarters of the shed volume per minute, then the wind chill effect on reducing effective temperature may permit the use of foggers until the humidity reaches 90%.
- 7.2.3 To prevent birds from overheating in hot weather space must be available to facilitate body heat loss, such as panting, vibrating the floor of the mouth cavity ('gular flutter') standing erect with wings held away from the body and raising of the scapular feathers. For housed meat chickens temperature control systems must be in place aimed to prevent ambient temperature at bird level exceeding 33°C.
- 7.2.4 In the case of layers and where no mechanical ventilation is provided, if the conditions are such or likely that the liveability and welfare of the birds is or would be adversely affected, then the facility must be upgraded to provide mechanical ventilation and cooling. Temperature control systems in layer sheds should aim to prevent ambient temperature at bird level exceeding 33°C.

7.2.5 The construction and positioning of nest boxes should be such that they do not become heat traps.

7.2.6 Birds can adapt to a wide range of temperature (approximately 5–33°C) however certain classes of birds may experience high levels of mortality if exposed to a large and sudden increase in temperature, especially if combined with high humidity. These classes are meat chickens towards the end of the growing period and breeder birds. Procedures must be put in place to deal with these at-risk classes in case of climatic extremes.

### **7.3 Records**

7.3.1 Temperature and humidity must be measured and recorded when appropriate.

## **8 PROTECTION**

- 8.1 Every reasonable effort must be taken to provide protection from predators.
- 8.2 Poultry accommodation should be sited to be safe from the effects of fires and floods.
- 8.3 Adequate fire-fighting equipment including alarms should be available to control a fire in any part of a poultry house. Alarms should be situated outside the poultry shed to prevent bird panic. Response to alarms must be available at all times.
- 8.4 If flooding occurs in litter sheds, where practical the wet litter should be replaced with dry.
- 8.5 When planning new buildings, consideration should be given to the use of construction materials with a high fire resistance, and all electrical and fuel installations should be planned and fitted to minimise the fire risk.
- 8.6 Sufficient exits should be accessible, especially in new buildings, to facilitate the evacuation of birds from the building in an emergency.

## 9 FOOD

- 9.1 Poultry, other than newly hatched birds, must have access to food at least once in each 24-hour period. The complete withholding of food for longer periods is not acceptable except in the case of broiler breeder birds or layer pullets, where 'skip-a-day' feeding is an acceptable industry practice for maintaining bird health and productivity. Newly hatched birds must be provided with food within 60 hours of hatching.
- 9.2 Poultry must receive a diet containing adequate nutrients to meet their requirements for good health and vitality. Poultry must not be provided with food that is deleterious to their health.
- 9.3 When using mechanical systems for delivery of food alternative methods of feeding should be available. There should be enough food on hand, or ready means of obtaining food, in the event of failure of supply.
  - 9.3.1 For fowls in laying cages a trough length of not less than 10 cm per bird must be provided.
  - 9.3.2 For fowls in non-cage systems, there is a range of feeder types in use, and manufacturer's recommendations should be referred to in this respect and not exceeded. A guide to minimum feed and water space specifications is provided in Appendix 2.
- 9.4 Adequate feed must be supplied in the feeding systems of free-range sheds taking into account the level of nutrients available in the range area.
- 9.5 Moulting Inducement and Controlled Feeding
  - 9.5.1 Moulting inducement or controlled feeding practices should be carried out only on healthy birds under close management supervision and under conditions that will not cause cold stress. Substitution of a high fibre diet, for example, whole barley or oats is acceptable provided birds eat 40–60 gm/day. Diets that the birds will not eat must not be used. Adequate feeding space is necessary during such practices.
  - 9.5.2 Electric pulse wires should not be used to control feeding. Wires to deter birds from perching over feed or water containers or to prevent egg pecking must be live only for necessary training periods.
  - 9.5.3 Methods of moulting inducement and controlled feeding which totally deprive birds of food or water for more than 24 hours must not be used.

## **10 WATER**

- 10.1 Poultry must have access to sufficient potable water to meet their physiological requirements. Measures must be taken to ensure poultry, other than those newly hatched, are not deprived of water for more than 24 hours. Newly hatched birds require water within 60 hours. Lesser periods apply during hot weather.
- 10.2 Water should be cool in summer, and maintained below a temperature at which birds refuse to drink.
- 10.3 Water must be provided which is not deleterious to health.
- 10.4 A minimum of one day's calculated water requirements should be available in storage or auxiliary supply in case of breaks, repairs or failure of pumping equipment.
- 10.5 When a poultry enterprise is first established, or when a new water source is obtained, the water should be tested for salt content and microbiological contamination and advice obtained on its suitability for poultry. As the composition of water from bores, dams or water holes may change with changes in flow or evaporation, the water may require more frequent monitoring for suitability for use. Information on water testing can be obtained from the local office of the Department of Agriculture/Primary Industries.
- 10.6 Each bird must have access to at least two independent drinking points. The splash cup under a nipple drinker is not an independent drinking point. The number of drinking points/drinking space provided per bird must be such that competition does not result, leading to water deprivation of some individuals in the flock, while at the same time not being so excessive as to lead to water wastage, with consequential detrimental impacts on overall shed environment. The manufacturer's recommendation on number of birds per drinker should be used as a guide.
  - 10.6.1 For adult fowls in laying cages at least 10 cm of water trough must be provided for each bird or no less than two independent drinkers or cup drinkers must be provided within reach of each cage.
  - 10.6.2 For birds in non-cage systems there is a range of waterer types, and manufacturers' recommendations should be used as a guide. A guide to minimum feed and water space specifications is provided in Appendix 2.

## **11 INSPECTIONS**

- 11.1 Young birds in brooders should be inspected at least twice every 24 hours and action taken to correct deficiencies in husbandry should such occur.
- 11.2 The frequency and level of inspection should be appropriate to the welfare risk of the birds, but a thorough welfare inspection must be performed at least once each day. Inspections are best made separately to other management practices. Under certain circumstances more frequent inspections may be required, such as during hot weather or during outbreaks of disease or cannibalism.
- 11.3 At a welfare inspection the following areas require thorough attention – bird health, injury, behaviours indicative of a problem, feed, water, ventilation and lighting. Dead and injured birds should be removed for disposal or appropriate treatment without delay. In the case of poultry in cages the daily inspection must specifically include checking for entrapment and checking of the manure areas under cages for escaped birds. Checks should also be made of the effectiveness of any automated feeding or watering systems where these have been installed.
- 11.4 Where cages are installed in multiple tiers it must be possible to inspect birds in all tiers easily and routinely. Equipment must be available to allow inspection and handling of birds in all levels of cages.
- 11.5 Poultry should be checked regularly for evidence of parasites and effective treatment should be instituted. Poultry must also be checked regularly for signs of infectious disease and appropriate action taken promptly.

## **12 HEALTH AND DISTRESS**

- 12.1 Those responsible for the care of domestic poultry should be aware of the signs of ill-health or distress. Signs of ill-health in poultry include reduced food and water intake, reduced production, changes in the nature and level of their activity, abnormal condition of their feathers or droppings, or other physical features. Evidence of behavioural changes may indicate ill-health or distress or both.
- 12.2 If persons in charge are not able to identify the causes of ill-health or distress or to correct these, they should seek advice from those having training and experience in such matters. Such persons may be specialist poultry veterinarians or other qualified advisers in private or government employment.
- 12.3 Poultry producers should also operate an effective program to prevent infectious disease and internal and external parasitism. Vaccinations and other treatments applied to poultry should be undertaken by people skilled in the procedures.
- 12.4 To prevent or reduce behavioural or other problems, poultry producers should consider selection of the most appropriate bird strain and the method of rearing used to suit the type of housing and management practices employed.
- 12.5 Should an outbreak of feather picking or cannibalism occur, or an outbreak appear imminent, environmental factors that may aggravate it should be examined and if appropriate, adjustments made, such as reducing the stocking density, light intensity, temperature, humidity or disturbances to the pecking order, removing injured birds, removing birds observed to be instigating pecking, or eliminating shafts of bright sunlight. If these measures fail to control the problem then appropriate beak trimming of the birds should be considered in consultation with an expert in animal welfare to prevent further injury or mortality in the flock.
- 12.6 Where birds are found to be entrapped they must be freed (from entrapment) immediately and where appropriate, corrective action taken to prevent this situation recurring.
- 12.7 Where birds are found to have escaped into the manure area under cages they must be captured as soon as practicable on the day of observation and returned to cages or destroyed humanely.
- 12.8 Dead birds must be removed and disposed of promptly and hygienically. Records of morbidities, mortalities, treatment given and response to treatment must be maintained to assist disease investigations.
- 12.9 Medication must be used only in accordance with the manufacturer's instructions unless professional advice has been given to vary the directions.
- 12.10 Birds with an incurable sickness or a significant deformity should be removed from the flock and humanely destroyed as soon as possible. Neck dislocation is an acceptable method of humane destruction provided it is carried out competently.

- 12.11 It is recommended that premises and equipment should be thoroughly cleaned and disinfected before restocking to prevent the carry-over of disease-causing organisms to incoming birds.
- 12.12 Buildings should be constructed and maintained to restrict the entry of wild birds, rodents and predators that are capable of causing disease and/or distress.
- 12.13 Sick and injured birds should be humanely destroyed, unless suitable isolation and treatment facilities are available, there is a good chance of recovery without unreasonable pain, and where the health of the overall flock is not compromised.

## 13 MANAGEMENT PRACTICES

Some of the following management practices may occur only in commercial enterprises and some may only apply to fowls under free-range conditions.

- 13.1 Artificial Insemination
  - 13.1.1 Artificial insemination is a highly skilled procedure that should be carried out only by competent, trained personnel maintaining a high standard of hygiene and taking care to avoid injury or unnecessary disturbance to the birds.
- 13.2 Beak Trimming
  - 13.2.1 Every effort should be made to avoid beak trimming by selecting chickens for reduced feather pecking and cannibalism. The use of housing systems and lighting levels which reduce the tendency for these traits to arise should also be used.
  - 13.2.2 Beak trimming must be performed only by an accredited operator or under the direct supervision of an accredited trainer as part of an accreditation training program and must be performed only in accordance with agreed accreditation standards.
- 13.3 Dubbing (Fowls) or Desnooding (Turkeys)
  - 13.3.1 Dubbing and desnooding should be carried out by a competent operator soon after hatching. Dubbing must not be performed on broiler birds.
- 13.4 Toe Removal
  - 13.4.1 To avoid injury to hens during mating, the terminal segment of each inward pointing toe of male breeding birds may be removed within 3 days of hatching.
- 13.5 Toenail Trimming
  - 13.5.1 For all classes of birds, except male breeding birds, toe trimming if necessary should be limited to the nail of the toe.
  - 13.5.2 Sharp spurs on adult males may be trimmed to prevent injury to other birds.
- 13.6 Blinkers ('Spectacles')
  - 13.6.1 The use of blinkers and other vision impairing equipment should not be used without veterinary advice. Blinkers are not to be used in caged birds as they get caught on the wire and interfere with the bird eating and drinking.
  - 13.6.2 Blinkers should be applied by a competent operator and those which damage the nasal septum must not be used.
  - 13.6.3 Blinkers which may injure the bird if they become entangled must not be used.

- 13.6.4 Blinkers must not be applied to poultry unless any nest boxes provided are situated only at ground level.
- 13.6.5 Contact lenses must not be used in poultry as they cause eye irritation and infections and abnormal behaviour.
- 13.6.6 The use of biting devices in poultry should not be used as they prevent complete closure of the mandibles.
- 13.7 Castration ('Surgical Caponising')
  - 13.7.1 This is an unacceptable practice and must not be undertaken.
- 13.8 Devoicing
  - 13.8.1 This is an unacceptable practice and must not be undertaken.
- 13.9 Flight Restriction
  - 13.9.1 Pinioning (which includes de-winging, notching or tendon severing) is a procedure which permanently restricts flight in birds and must not be performed. The exception is day-old pheasants provided the operation, which involves the removal of the distal or terminal segment of the wing, is carried out on one wing only and by a trained competent operator.
  - 13.9.2 Feather clipping, where the primary flight feathers are cut, is an acceptable means of temporarily restricting flight.
- 13.10 Identification
  - 13.10.1 Wing and leg bands used for bird identification must be checked regularly and where necessary loosened or removed to avoid injury to the bird. Webbing between the toes may also be used for identification by marks made soon after hatching.

## **14 HATCHERY MANAGEMENT**

- 14.1 Culled or surplus hatchlings awaiting disposal must be treated as humanely as those intended for retention or sale. They must be destroyed humanely by a recommended method such as carbon dioxide gassing or quick maceration and thoroughly inspected to ensure that all are dead.
- 14.2 Hatchery waste, including unhatched embryos, should be destroyed quickly and effectively.
- 14.3 Hatchlings should be brooded within 48 hours of hatching. Weak, deformed and unthrifty birds should be culled and destroyed humanely.

## **15 TRANSPORT OF POULTRY**

Transporting birds is stressful for them. Care must be exercised to ensure that poultry are not subjected to unnecessary stress during catching, loading, transportation and unloading. Information on transport of day-old birds, growing and adult poultry is available in the *Model Code of Practice for the Welfare of Animals – Land Transport of Poultry*.

## **16 SALE OF POULTRY**

- 16.1 The sale of poultry through saleyards may cause stress and should be avoided. Where poultry are sold at saleyards they should be unloaded without delay from transports and placed in pens or cages with access to feed, water and shelter.
- 16.2 Stocking densities at saleyards or markets should not exceed those densities recommended in the appendices by more than 50% for more than 12 hours.
- 16.3 Poultry should not be held at saleyards for more than 24 hours.
- 16.4 Food and water must not be withheld from birds for more than 24 hours during the entire sale process including transport to and from the place of sale.
- 16.5 Birds must not be carried or held in the boot of a car. Birds must not be held inside a vehicle under conditions when the temperature may exceed 33°C.

## **17 POULTRY AT SLAUGHTERING ESTABLISHMENTS**

- 17.1 Care must be exercised to ensure that poultry are not subjected to unnecessary stress while awaiting slaughter.
- 17.2 Contingency plans for slaughter or accommodation should be available in the event of an industrial dispute or processing plant failure or closure.
- 17.3 Birds must be slaughtered in a manner that minimises handling and stress. Acceptable slaughter methods include electrical stunning followed by bleeding out, neck dislocation or decapitation.

Detailed recommendations are contained in the publication *Model Code of Practice for the Welfare of Animals, Livestock and Poultry at Slaughtering Establishments (Abattoirs, Slaughter-houses and Knackeries)*.

## APPENDIX 1

### Fowls

#### Stocking Densities for Cage Systems – Minimum Acceptable Standards

##### A1 Stocking Density

It is not possible to relate stocking density to welfare in a simple manner. Adequate welfare involves consideration of group size, the housing system, the feeding and watering system, the breed and strain of fowl, temperature, ventilation, lighting and other husbandry factors. The observance of any particular stocking density on its own cannot ensure the welfare of birds. This appendix supplements material in Section 2 – Housing and Section 3 – Space Allowances.

- A1.1 All new cage systems commissioned (i.e. point when the contract to purchase or lease the cages was signed) from 1 January 2001 (i.e. post 1 Jan 2001 cages) must provide a minimum floor space allowance of 550 cm<sup>2</sup> per layer for cages with three or more birds per cage where the birds weigh less than 2.4 kg.
- A1.2 Where a producer signed a contract to purchase or lease cages before 1 January 2001, to provide a space allowance of less than 550 cm<sup>2</sup> per bird, installation of these cages must be completed by 30 June 2001, or when legislation is operative after 1 January 2001, within six months of the legislation becoming operative. If these deadlines are not met, the cages will be designated as 'post 1 Jan 01 cages' for the purposes of stocking density.
- A1.3 Cages other than 'post 1 Jan 01' cages are designated as 'pre 1 Jan 01' cages and must provide a minimum floor space allowance of 450 cm<sup>2</sup> per layer for cages with three or more birds per cage.
- A1.4 Minimal acceptable space allowances for caged laying or breeding fowls weighing up to 4.5 kg live weight are presented in the table.

Pre January 2001 cages	Post 1 January 2001 cages
<b>minimum cage floor area/bird</b>	
3 or more fowls (<2.4 kg) per cage	
450 cm <sup>2</sup>	550 cm <sup>2</sup>
3 or more fowls (> 2.4 kg) per cage	
600 cm <sup>2</sup>	600 cm <sup>2</sup>
2 fowls per cage	
675 cm <sup>2</sup>	675 cm <sup>2</sup>
Single fowl cages	
1000 cm <sup>2</sup>	1000 cm <sup>2</sup>

\* These figures are recommended for inclusion into statute law of States and Territories as the minimum space allowance for layer hens in cages.

A1.5 Minimal acceptable space allowances for laying or breeding fowls weighing more than 4.5 kg live weight are presented in the table.

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<b>Birds per cage</b>	<b>Maximum live weight per unit of floor area from 1 January 1995</b>
3 or more fowls per cage	46 kg / m <sup>2</sup>
2 fowls per cage	40 kg / m <sup>2</sup>
Single fowl cages	26 kg / m <sup>2</sup>

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A1.6 Floor area is measured in a horizontal plane and includes the area under the egg/ waste baffle and the area under the drinking nipples and vee-trough for water.

A1.7 Maximum acceptable live weight density for rearing layer pullets or layer breeders is 40 kg live weight per m<sup>2</sup> cage floor area.

## APPENDIX 2

### Fowls

#### Minimal Acceptable Standards for Non-Cage Systems

It is not possible to relate stocking density to welfare in a simple manner. Adequate welfare involves consideration of group size, the housing system, the feeding and watering system, the breed and strain of fowl, temperature, ventilation, lighting and other husbandry factors. The observance of any particular stocking density on its own cannot ensure the welfare of birds. This appendix supplements material in Section 2 – Housing and Section 3 – Space Allowances.

#### A2.1 Stocking Density

##### A2.1.1 Indoor

Useable area may include any slatted or metal mesh area and any area occupied by feeding and watering equipment and nest boxes, on one or more levels provided that:

- each level is easily accessible to the hens;
- headroom between the levels is at least 45 cm;
- all levels are accessible to stock workers to observe and reach birds which are sick or injured;
- feeding and watering facilities are distributed to provide equal and ready access to all hens; and
- levels are sited so as not to foul birds below.

##### A2.1.2 Maximum acceptable live weight densities for rearing layer and breeder birds and adult birds

These maximum densities may be used only if there are cooling systems and ventilation fans in place to ensure temperature control during extreme conditions. Lower densities should be targeted, and will frequently be lower than the maximum stated here. When planning bird replacements growers must take into account prevailing seasonal conditions. In the case of birds kept for breeding, live weight to include the weight of cockerels.

Class of Birds		Bird density in useable area
<i>Rearing</i>	Layer pullets	30 kg/m <sup>2</sup> at 16 weeks of age
	Layer breeders	30 kg/m <sup>2</sup>
	Meat chicken breeders	30 kg/m <sup>2</sup>
<i>Adult birds</i>	Laying fowls	30 kg/m <sup>2</sup>
	Layer breeders	30 kg/m <sup>2</sup>
	Meat chicken breeders	30 kg/m <sup>2</sup>

### A2.1.3 Maximum Acceptable Live Weight Densities for Meat Chickens

In managing meat chickens to avoid the effects of heat stress, the combination of potential weather patterns, shed design, temperature and humidity control capabilities, and the grower's management record, must be considered by processors and growers when determining stocking densities and pick up dates. These must be planned to ensure that birds are not put at risk of death from the effects of heat stress. Increased mortalities that can be attributed to heat related causes are not acceptable. High stocking densities restrict the birds' abilities to move and may result in increased leg weakness. This should be monitored and stocking densities decreased if leg weakness occurs.

The following table sets maximum acceptable stocking densities for different types of shedding and must not be exceeded.

Housing type	Minimum requirements	Maximum density
Tunnel ventilated or other extractive systems	Evaporative cooling system Capable of 1 air exchange per minute	40kg/m <sup>2</sup> year-round
Other mechanically ventilated	Stirring fans Water-based cooling system	40kg/m <sup>2</sup> in winter <sup>a</sup> 36kg/m <sup>2</sup> in summer <sup>b</sup>
Non-mechanically ventilated		28kg/m <sup>2</sup> year-round

<sup>a</sup>Winter is pick up occurring between 1 April and 30 September

<sup>b</sup>Summer is pick up occurring between 1 October and 31 March

### A2.1.4 Maximum Acceptable Live Weight Densities for Free-Range Birds

**Indoors** As for A2.1 Indoor

**Outdoors** For layer hens a maximum of 1500 birds per hectare.

When meat chickens use only some weeks of the 10 week cycle on pasture (e.g. 4 weeks) a proportionately higher stocking density than for layers may be used.

NB: Any higher bird density is acceptable only where regular rotation of birds onto fresh range areas occurs and close management is undertaken which provides some continuing fodder cover.

## A.2.2 Feed and Water Space Allowances

Sufficient feed and facilities should be available so all birds receive adequate nutrition for even growth and lack of obvious competition. In providing adequate feed and water space requirements for fowls, it is recognised there is a range of feeder and waterer types in use. Manufacturers' recommendations should be referred to and not exceeded in this respect. In some cases more space per bird should be allowed. For example, when meat breeder birds are on heavy feed restriction, significantly more feeder space should be provided.

### A2.2.1 Guidelines for acceptable feed and water space for fowls in non-cage housing systems are provided below.

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#### **Meat & Layer Breeders**

##### *Feeder Space*

max 80 birds/pan feeder

or

min 10 cm/bird of flat chain feeder\* (meat breeders)

min 4 cm/bird of flat chain feeder (layer breeders)

##### *Waterer Space*

max 110 birds/bell drinker

or

max 15 birds/nipple

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#### **Meat Chickens**

##### *Feeder Space*

max 85 birds/pan feeder

##### *Waterer Space*

max 120 birds/bell drinker

or

max 50 birds/nipple during brooding

max 25 birds/nipple during grow-out

or

max 40 birds/swish cup

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#### **Pullet Rearing and Adult Layers**

##### *Feeder Space*

max 100 birds/pan feeder

or

min 2 cm/bird of flat chain feeder

##### *Waterer Space*

max 120 birds/bell drinker

or

max 40 birds/nipple during brooding

max 20 birds/nipple

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\* In determining the length of a flat chain feeder, both sides of the trough are available for birds to feed (i.e. 1 metre length of flat chain feeder provides 2 metres of bird feeding space).

## APPENDIX 3

**This appendix is to be read in conjunction with the main body of the Code.**

### Turkeys

#### A3.1 Housing

##### A3.1.1 Floors and other surfaces

Part of the floor area for adult birds should be solid and, in the case of adult breeding stock, the whole of the floor area should be solid. The floor surface should be covered with a litter material that is absorbent and protects the birds from damage.

##### A3.1.2 Nests

A nesting area of at least 1900 cm<sup>2</sup> should be provided for each five breeding females.

##### A3.1.3 Temperature

During brooding at day old, a temperature of 37°C measured 8 cm above the floor just under the rim of the brooder is required with a general shed temperature of at least 21°C. With space-heated brooding systems, an environmental temperature of 33°C at day old should be provided. Brooding temperature may be reduced by 3°C/week until a shed temperature of 21°C is reached.

#### A3.2 Space Allowances

Maximum recommended stocking densities according to housing type under good management conditions.

#### Age

0–6 weeks:	Brooding	110 birds/m <sup>2</sup> within surrounds decreasing to 8–10 birds/m <sup>2</sup> of total area at 6 weeks
6–12 weeks:	Growing	
<i>Intensive</i>		46 kg/m <sup>2</sup>
<i>Extensive</i>		1.5 kg/m <sup>2</sup>
12 weeks to market:		
<i>Intensive</i>		46 kg/m <sup>2</sup>
<i>Extensive</i>		2.5 kg/m <sup>2</sup>
Breeding Stock:		
<i>Intensive</i>		30 kg/m <sup>2</sup>
<i>Extensive</i>		2.5 kg/m <sup>2</sup>

If a shed area is provided, a maximum density of 46 kg/m<sup>2</sup> of shed area is recommended.

#### Note:

- Intensive sheds to be equipped with fans and foggers.
- Density of open-sided sheds should be less than the above intensive densities.
- Range or runs in extensive systems to be spelled for every second cycle.
- Sheds or shelter to be provided with extensive systems.

A3.3 Management Practices

A3.3.1 Beak Trimming

Every effort should be made to avoid beak trimming by the appropriate selection of birds and the provision of conditions which reduce the tendency for adverse traits, such as cannibalism, to occur.

Beak trimming should be performed only by an experienced operator or under the direct supervision of an experienced operator. The development of an accreditation training program for the industry is strongly encouraged.

Not more than one-third of the top beak measured from the tip towards the entrance of the nostrils may be removed.

A3.3.2 Toenail trimming

To prevent damage to other birds all broiler and breeder turkeys should have their toenails trimmed.

A3.3.3 Saddling of hens

Before hens are mated naturally they should be fitted with strong saddles (made from canvas, for example) to prevent injury to the backs and sides by the males.

## APPENDIX 4

**This appendix is to be read in conjunction with the main body of the Code.**

### Ducks

#### A4.1 Introduction

Maximum recommended stocking densities for ducks according to housing type under good management conditions.

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*In confinement*

Ducklings – to 10 days	50 birds/m <sup>2</sup>
Ducklings – at 8 weeks	8 birds/m <sup>2</sup>
Breeders	5 birds/m <sup>2</sup>

*In runs*

Ducklings – at 8 weeks	5000 birds/ha
Breeders	4000 birds/ha

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Note: Lighter stocking densities necessary for heavier breeds such as muscovies

#### A4.2 Management Practices

##### A4.2.1 Bill trimming

Every effort should be made to avoid bill trimming by the appropriate selection of birds and the provision of conditions which reduce the tendency for adverse traits, such as cannibalism, to occur.

It should be carried out only when it is essential to reduce damage and suffering in the flock. It must be carried out only by a skilled operator and only the rim at the front of the upper bill should be removed. The procedure should be carried out before the birds leave the brooder or rearing accommodation.

The development of an accreditation training program for the industry is strongly encouraged.

##### A4.2.2 Handling of birds

Care must be taken in catching ducks to avoid creating panic and subsequent injury or smothering of the birds.

The proper handling of ducks requires special skill, and it should be undertaken only by competent persons who have been appropriately trained. It should be carried out quietly and confidently, exercising care to avoid unnecessary struggling which could bruise or otherwise injure the ducks. In hot weather handling or movement of ducks should be carried out during the coolest part of the day. Day-old and young ducklings should be picked up bodily in the palm of the hand or if handling groups by the neck. Older ducks should be lifted by the neck or wings and they should be supported either by taking the weight of the bird by a hand placed under its body, or by holding the bird with a hand on either side of its body with the wings in the closed position. Once sufficiently developed, lifting by the wings is the best method, providing support is given under their body. Ducks must not be lifted by a single wing. Ducks must never be held or lifted by the legs.

## APPENDIX 5

**This appendix is to be read in conjunction with the main body of the Code.**

### Geese

#### A5.1 Space Allowances

Shelters should provide 1m<sup>2</sup> /bird floor space.

#### A5.2 Feed

A5.2.1 Geese are excellent grazers of grass but require food supplementation for growth and reproduction.

A5.2.2 Geese must not be force fed for any reason including pâté production.

#### A5.3 Management Practices

##### A5.3.1 Catching and Holding

At all times geese should be handled by competent experienced handlers so that they are not disturbed unduly.

Geese should always be caught by the neck and must never be caught by the legs.

##### A5.3.2 Moulting Inducement

The usual method is by manual plucking of breast feathers by a competent person.

## **APPENDIX 6**

**This appendix is to be read in conjunction with the main body of the Code.**

### **Pheasants**

#### **A6.1 Space Allowance**

As for meat chickens (see appendix 2) except that after 8 weeks stocking density should not exceed 2.6 bird/m<sup>2</sup>. Cannibalism is likely to occur at higher densities.

#### **A6.2 Beak Trimming**

Every effort should be made to avoid beak trimming by the appropriate selection of birds and the provision of conditions which reduce the tendency for adverse traits, such as cannibalism, to occur.

Beak trimming should be performed only by an experienced operator or under the direct supervision of an experienced operator. The development of an accreditation training program for the industry is strongly encouraged.

A maximum of one-third of the upper beak may be removed at 4 and 8 weeks of age.

## APPENDIX 7

**This appendix is to be read in conjunction with the main body of the Code.**

### Guinea fowl

#### A7.1 Housing

##### A7.1.1 Stocking densities — maximum

Growing stock:	0–4 weeks	20 birds/m <sup>2</sup>
	5–10 weeks	14 birds/m <sup>2</sup>
	11–14 weeks	10 birds/m <sup>2</sup>
Adult birds		4 birds/m <sup>2</sup>
Adult birds – cages		10 birds/m <sup>2</sup>
Range area		1000 birds/ha

A7.1.2 Pens and houses should be free of sharp obstructions. Small gauge wire mesh is recommended.

#### A7.2 Temperature

The optimum temperature for adult guinea fowl is 22°C. Guinea fowl keets are more prone to chilling than chickens, therefore a higher brooder temperature is required. A brooding temperature of 37°C for the first three weeks followed by a 1°C reduction for each of the next two weeks is recommended.

## **APPENDIX 8**

**This appendix is to be read in conjunction with the main body of the Code.**

### **Partridge**

#### **A8.1 Space Allowances**

##### **A8.1.1 Intensive**

Cages with floors – these should provide a minimum of 0.3m<sup>2</sup> /bird.

##### **A8.1.1.2 Semi-intensive**

Grassed aviaries should provide 2.5m<sup>2</sup>/bird and should enable rotational use of aviaries to provide ground cover for the birds to hide.

#### **A8.2 Beak Trimming**

Every effort should be made to avoid beak trimming by the appropriate selection of birds and the provision of conditions which reduce the tendency for adverse traits, such as cannibalism, to occur.

Beak trimming should be performed only by an experienced operator or under the direct supervision of an experienced operator. The development of an accreditation training program for the industry is strongly encouraged.

To prevent cannibalism up to one-third of the upper beak may be removed within 72 hours of hatching.

## APPENDIX 9

This appendix is to be read in conjunction with the main body of the Code.

### Quail

#### A9.1 Housing

In wire-floor systems, a 7 mm square mesh is necessary to provide secure footing and prevent leg injuries, particularly during the first 10 days of life. This may be assisted at this early age by using corrugated cardboard or coarse paper over the floor surface.

In the cage systems, a 7 mm square mesh is necessary to prevent chicks escaping through side walls.

#### A9.2 Space Allowances

Maximum recommended stocking densities for quail according to housing type under good management conditions

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#### Age

0–2 weeks:	180 birds/m <sup>2</sup> deep litter
	200 birds/m <sup>2</sup> wire floored brooder
2–6 weeks:	120 birds/m <sup>2</sup> deep litter
	130 birds/m <sup>2</sup> wire floored grower cage
Breeders	70 birds/m <sup>2</sup> deep litter
	80 birds/m <sup>2</sup> wire floored cage

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## APPENDIX 10

**This appendix is to be read in conjunction with the main body of the Code.**

### **Pigeons**

#### **A10.1 Housing**

- A10.1.1 Flight pens for housing pigeons should be roofed to maintain dry nesting areas.
- A10.1.2 If wire floors are used, mesh should be of not less than 18 gauge and 25 mm x 50 mm or its equivalent.
- A10.1.3 Perches should be provided at several levels.
- A10.1.4 Nest boxes should be divided into 2 sections for alternate use by the hens and a single perch provided for the hen to seek refuge from the cock.
- A10.1.5 Nest bowls should be lined with a non-slip material or nesting material supplied.
- A10.1.6 Floor nesting should be discouraged as squabs on the floor are prone to cannibalism.

#### **A10.2 Space Allowances**

Each breeding pair of pigeons requires a minimum of 0.6m<sup>2</sup> of floor space including 0.4m<sup>2</sup> nesting area.

#### **A10.3 Weaning**

- A10.3.1 Squabs should not be weaned before they are capable of feeding and drinking independently of their parents.

#### **A10.4 Beak Trimming**

Every effort should be made to avoid beak trimming by the appropriate selection of birds and the provision of conditions which reduce the tendency for adverse traits, such as cannibalism, to occur.

Beak trimming should be performed only by an experienced operator or under the direct supervision of an experienced operator. The development of an accreditation training program for the industry is strongly encouraged.

The tip of the cock bird's beak may need to be trimmed to prevent injury to a timid hen.

#### **A10.5 Transport**

- A10.5.1 Transport crates for squabs should be of a maximum height of 15 cm and should provide a minimum floor space of 200 cm<sup>2</sup>/bird.
- A10.5.2 Adult pigeons require a minimum of 450cm<sup>2</sup>/bird floor space during transit.