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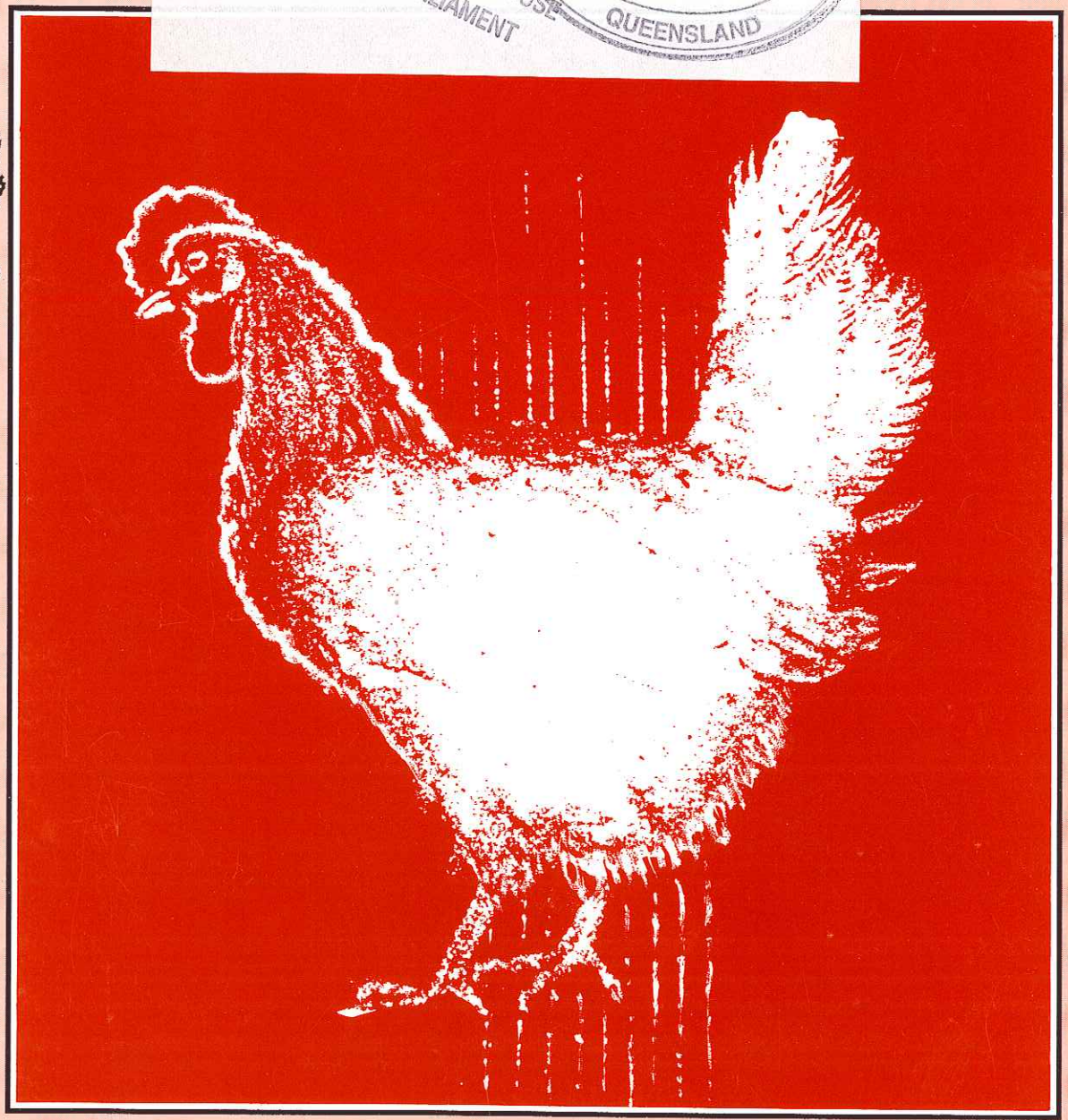
Standing Committee
on Agriculture and Resource
Management
Animal Health Committee

Domestic Poultry

Model Code of Practice for
the Welfare of Animals

3rd Edition



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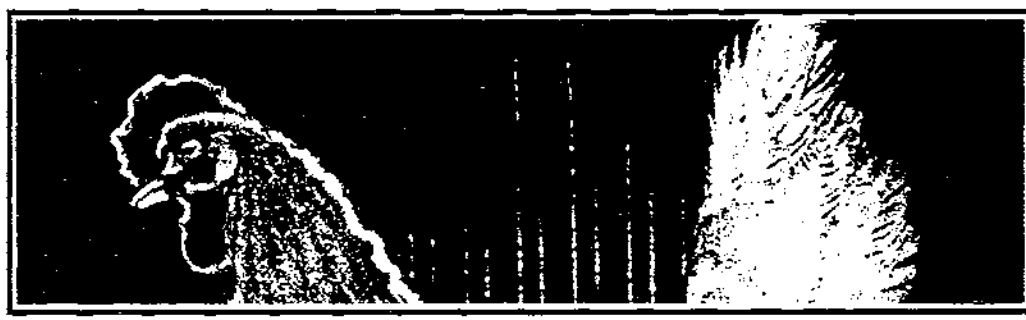

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CONTENTS

PREFACE

This Australian Model Code of Practice for the Welfare of Animals has been prepared by the Sub-Committee on Animal Welfare (SCAW) of the Animal Health Committee within the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) system.

Membership of SCAW comprises representatives from each of the State Departments with responsibility for agriculture and/or animal welfare, CSIRO, Bureau of Resource Sciences (previously the Bureau of Rural Resources) and other committees within the ARMCANZ. 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 version endorsed by the Agricultural Council of Australia and New Zealand as a national code at its 137th meeting in February 1992 and contains amendments made to the second edition as a result of resolutions agreed to by its successor, the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ), at its 4th meeting in October 1994. These resolutions relate to conditions on space allowances placed in the Code in February 1992. The present version has not been revised according to the three-stage process endorsed at the July 1993 meeting of the Standing Committee on Agriculture and Resource Management.

The Code is intended as a set of guidelines 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. It is supplemented by a system of audited self-regulation based on Animal Care Statements to promote a positive response to the welfare of layer hens.

The other model codes of practice that have been endorsed by AAC/ARMCANZ are:

The Pig
Road Transport of Livestock
Rail Transport of Livestock
Air Transport of Livestock
Livestock & Poultry at Slaughtering Establishments
Intensive Husbandry of Rabbits
Sea Transport of Livestock
Animals at Saleyards
The Sheep
The Goat
Farming of Deer
Destruction or Capture, Handling & Marketing of Feral Livestock Animals
Cattle
Captive-Bred Emus
Farmed Buffalo

The Model Codes may be revised to take account of advances in the understanding of animal physiology and behaviour, changes in animal husbandry, and their relationships to the welfare of animals.

OTHER PUBLICATIONS IN THIS SERIES:

Model Code of Practice for the Welfare of Animals — the Sheep 1990
Model Code of Practice for the Welfare of Animals — Saleyards 1990
Model Code of Practice for the Welfare of Animals — the Destruction or Capture, Handling and Marketing of Feral Livestock Animals 1990
Model Code of Practice for the Welfare of Animals — the Goat 1990
Model Code of Practice for the Welfare of Animals — Intensive Husbandry of Rabbits 1990
Model Code of Practice for the Welfare of Animals — the Farming of Deer 1990
Model Code of Practice for the Welfare of Animals — Cattle 1991
Model Code of Practice for the Welfare of Animals — Farmed Buffalo 1995

Further copies of this code are available from State or Commonwealth Departments with responsibility for Agriculture, poultry industry groups or from the Australian Government Publishing Service, GPO Box 84, Canberra, ACT, 2601.

AGRICULTURE AND RESOURCE MANAGEMENT COUNCIL OF AUSTRALIA AND NEW ZEALAND

The Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) consists of the Australian Federal, State/Territory and New Zealand Minisisters responsible for agriculture, soil, water (both rural and urban) and rural adjustment policy issues.

The objective of the Council is to develop integrated and sustainable agricultural and land and water management policies, strategies and practices for the benefit of the community.

The Council is supported by a permanent Standing Committee, the Standing Committee on Agriculture and Resource Mangement (SCARM). Membership of Standing Committee comprises relevant Departmental Heads/CEOs of Commonwealth/State/Territory and New Zealand agencies as well as representatives of the CSIRO and the Bureau of Meteorology.

1. INTRODUCTION

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 behaviourial 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.

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

The Code emphasises that, whatever the form of husbandry, managers and others responsible for the day-to-day needs of domestic poultry have a responsibility to care for animals 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. A knowledge of the normal appearance and behaviour of their birds is essential for them to be treated 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. Reviews to be undertaken within a maximum of 10 years

2. HOUSING

2.1 General

2.1.1 Advice on welfare aspects should 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.

2.1.2 Floors and other surfaces should be designed, constructed and maintained so as to minimise the risk of injury and disease, and to adequately support the birds.

2.1.3 Alternative husbandry systems and innovative cage designs which enhance bird welfare should be encouraged and applied to commercial egg production as practical and economical systems become available.

2.2 Cage Systems

2.2.1 The floor should be constructed to enable support for each forward pointing toe and the slope of the floor should not exceed 8 degrees.

2.2.2 In cages, birds should be able to stand at normal height. Cages should be at least higher than the maximum height of the birds standing normally. The height of all cages installed for layer hens after 1 January 1995 should be at least 40 cm over 65% of the cage floor area and not less than 35 cm at any point.

2.2.3 The design and size of cage openings should be such that birds can be placed in them and removed from them without causing injury or unnecessary suffering. All cages for laying fowls installed after 1 January 1995 should have doors the full height and width of the cage front.

2.2.4 Multi-deck cages should 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 Non-Cage Systems

2.3.1 Deep litter floors should be checked frequently for dryness and friability. If litter becomes caked, wet or excessively dusty the problem should be rectified.

2.3.2 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.

2.3.3 Nest litter, where used, should be changed regularly so as to be clean, dry, friable and moisture absorbent.

3. Space Allowances

3.1.1 It is recommended that baseline stocking densities be reviewed and adjusted according to advances in knowledge. 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.

3.1.2 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 odours and lighting. Upon the occurrence of disease or evidence of behaviourial changes, such as cannibalism, stocking densities should be re-evaluated immediately and adjusted accordingly. Other factors may be involved in disease or behaviourial changes.

3.1.3 Maximum stocking densities apply only to birds housed under good management with optimal temperature and ventilation conditions, otherwise lower densities apply. Maximum densities generally refer to terminal liveweights but should not be exceeded at earlier growth stages, e.g. prior to thinning-out.

3.1.4 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.

3.1.5 Maximum stocking densities for various species of poultry are presented in the appendices.

4. EQUIPMENT

4.1 All equipment to which poultry have access should be designed and maintained to avoid injury or pain to the birds.

4.2 All feeders and waterers should be checked for efficient operation at least once each day.

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.

5. LIGHTING

5.1 Young birds reared away from the hen require a light intensity of about 40 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 During inspection of poultry a light intensity of at least 10 lux at bird level is required.

5.3 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.

5.4 Where poultry do not have access to daylight they should be given lighting over a period of at least 8 hours per day. Photoperiods in excess of 20 hours per day may be detrimental to the laying bird.

6. VENTILATION

6.1 Ventilation is required at all times to provide fresh air. The accumulation of water vapour, heat, noxious gases and dust particles may cause discomfort or distress and predispose to the development of disease. Consideration should be given to the feasibility of dust filters where air is mechanically recirculated in poultry houses.

6.2 Recognising the possibility of extremes of weather conditions, ventilation facilities and equipment should aim to maintain shed relative humidity below 80% at all times especially at temperatures above 30°C.

6.3 The presence of ammonia is usually a reliable indicator of the build-up of noxious gases; it should not be allowed to exceed 20 parts per million (ppm) of air measured at bird level in enclosed buildings without immediate corrective action being taken. (A level of 10–15 ppm of ammonia in the air can be detected by smell. An ammonia level of from 25– 35 ppm will cause eye and nasal irritation in man).

6.4 Hydrogen sulphide levels should be keep below 5 ppm and carbon dioxide below 0.3%.

6.5 If stocking density of fowls on deep litter exceeds 28 kg/m^2 (equivalent to approx. 710 cm^2 per 2.0 kg bird) in summer months or 32 kg/m^2 (620 cm^2 per 2.0 kg bird) in winter months mechanical air movement is essential. In force-ventilated sheds, assisted ventilation should be capable of exhausting up to 4.6m^3 air/hour/kg liveweight during summer months with an optimum velocity of air movement past the bird of 0.25–1.0 m/second.

6.6 Force-ventilated sheds must have automatic alarm systems to warn of power failure. A back-up alarm system to warn of temperature increase in such sheds is also essential and should operate through an alternative circuit to the power failure alarm system. In force-ventilated sheds emergency ventilation provisions including automatic backup power supply must be available.

7. TEMPERATURE

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 should know of 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 Poultry should be protected from draughts during cold weather and have access to shade during hot weather.

7.2.2 Adequate precautions should be taken to minimise stress produced by temperatures high enough to cause prolonged panting, particularly when high temperatures are accompanied by high humidity. In hot weather provision of adequate cool water and ventilation is essential. Where high temperatures are causing distress, foggers, roof sprinklers, fans or other systems should be used to control heat build-up within buildings. Foggers should not be used if relative humidity reaches 80% at temperatures above 30°C.

7.2.3 It is essential that no stocking density or other constraining practice be allowed to prevent birds adopting behaviour to facilitate body heat loss in hot weather, 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.

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

7.2.5 Recognising the possibility of extremes of environmental conditions, housing and facilities for heating and cooling should aim to maintain shed temperatures between 19°C and 33°C at all times.

8. PROTECTION

8.1 Birds should be protected from predators. Other birds may present a welfare risk by predation, aggression, food competition or disease transmission. Vermin control measures should be taken if necessary.

8.2 Poultry accommodation should be sited to be safe from the effects of fires and floods.

8.3 Adequate fire-fighting equipment should be available to control a fire in any part of a poultry house.

8.4 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.

8.5 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, should have access to food at least once in each 24–hour period. The complete withholding of food for longer periods is not acceptable. The period for newly-hatched birds may be extended to not more than 72 hours.

9.2 Poultry should receive a diet containing adequate nutrients to meet their requirements for good health and vitality. Poultry should 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. The manufacturer's recommendations on number of birds per feeder should not be exceeded. For fowls in laying cages a trough length of not less than 10 cm per bird is recommended.

10. WATER

10.1 Poultry should be provided with sufficient drinkable water to meet their physiological requirements. Water should be cool in summer.

10.2 Under no circumstances should poultry, other than those newly-hatched, be deprived of water for more than 24 hours. Newly-hatched birds require water within 72 hours. Lesser periods apply during hot weather.

10.3 Water which is contaminated or deleterious to health should not be provided.

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 should have access to at least two drinking points (drinkers, nipples or cups). The manufacturer's recommendation on number of birds per drinker should not be exceeded. For adult fowls in laying cages at least 10cm of water trough should be provided for each bird or no less than two nipple or cup drinkers should be provided within reach of each cage.

11. Health and Distress

11.1 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 behaviourial changes may indicate ill-health or distress or both.

11.2 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.

11.3 Poultry producers should also operate an effective programme 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.

11.4 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.

11.5 Dead birds should be removed and disposed of promptly and hygienically. Records of mortalities, treatment given and response to treatment should be maintained to assist disease investigations.

11.6 Medication should only be used in accordance with the manufacturer's instructions unless professional advice has been given to vary the directions.

11.7 Birds with an incurable sickness or a significant deformity should be removed from the flock and humanely destroyed as soon as possible. Neck dislocation and gassing using carbon dioxide or other suitable gases are acceptable methods provided these are carried out competently.

11.8 Where required, premises and equipment should be thoroughly cleaned and disinfected before restocking to prevent the carry-over of disease-causing organisms to incoming birds.

11.9 Buildings should be effectively constructed and maintained to restrict the entry of wild birds, rodents and predators that are capable of causing disease and/or distress.

12. INSPECTIONS

12.1 The frequency and level of inspection should be related to the likelihood of risk to the welfare of the birds, but should be 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. Dead and injured birds should be removed for disposal or appropriate treatment without delay. Checks should also be made of the effectiveness of any automated feeding or watering systems where these have been installed.

12.2 Where cages are installed in multiple tiers it should be possible to inspect birds in all tiers easily and routinely.

12.3 Poultry should be checked regularly for evidence of parasites and effective treatment should be instituted according to the manufacturer's directions.

13. Management Practices

Some of the following management practices may only occur in commercial enterprises and some may only apply to fowls under 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 When performed as a preventive measure beak trimming should be carried out by a competent operator soon after hatching and preferably within 3 weeks. For chickens, the operator may remove not more than half of the upper beak and one-third of the lower beak. *This means*:
For day old chickens, not more than 3mm of the upper and 2.5mm of the lower beak.
For 10-day old chickens, not more than 4.5mm of the upper and 4mm of the lower beak.

13.2.2 Further trimming of the beaks of growing birds may be necessary to prevent cannibalism during the laying period but not as a means of restricting or retarding body weight.

13.3. Dubbing (Fowls) or Desnooding (Turkeys)

13.3.1 If dubbing or desnooding is necessary it should be carried out by a competent operator soon after hatching, preferably within 72 hours.

13.4. Toe Trimming

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 soon after hatching, preferably within 72 hours.

13.4.2 For all other classes of birds, trimming, if necessary, should be limited to the nail of the toe only.

12.4.3 Sharp spurs on adult males should be trimmed to prevent injury to other birds and handlers.

13.5. Blinkers ('Spectacles')

13.5.1 The use of blinkers and other vision impairing equipment is not recommended except where other measures to control cannibalism have failed.

13.5.2 Blinkers should be applied by a competent operator and those which cause mutilation of the nasal septum should not be used.

13.5.3 Blinkers which may injure the bird if they become entangled should not be used.

13.5.4 Blinkers should not be applied to poultry unless nest boxes are situated at ground level.

13.6. Castration ('Surgical Caponising')

13.6.1 This is an unacceptable practice and should not be undertaken.

13.7. Devoicing

13.7.1 This is an unacceptable practice and should not be undertaken.

13.8. Flight Restriction

13.8.1 De-winging, pinioning, notching or tendon severing to restrict flight in poultry are unwarranted practices and should not be performed. An exception is day-old pheasants provided that the operation involving the removal of the distal or terminal segment of each wing is carried out by a competent operator.

13.8.2 If flight restriction is required, the flight feathers of one wing may be trimmed.

13.9. Moult Inducement and Controlled Feeding

13.9.1 Moult inducement or controlled feeding practices should only be carried out 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, in place of normal rations is a preferred method of moult inducement. Adequate feeding space is necessary during such practices.

13.9.2 The use of electric pulse wires to control feeding or to compensate for deficient cage designs is not recommended. Wires to deter birds from perching over feed or water containers should only be live for necessary training periods.

13.9.3 Methods of moult inducement and controlled feeding which totally deprive birds of food or water for more than 24 hours should not be used.

13.10. Identification

13.10.1 Wing and leg bands used for bird identification should 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 within 72 hours of hatching.

14. Hatchery Management

14.1 Culled or surplus hatchlings awaiting disposal should be treated as humanely as those intended for retention or sale. They should be removed and humanely destroyed by a recommended method such as carbon dioxide gassing 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 72 hours of hatching. Weak, deformed and unthrifty birds should be culled and destroyed humanely.

14.4 Young birds in brooders should be inspected at least twice every 24 hours and action taken to correct deficiencies in husbandry should such occur.

15. Transport of Day-Old Birds

15.1 Day-old birds should be healthy and vigorous. They should be placed in suitably ventilated boxes without overcrowding. Care should be taken to ensure adequate ventilation of the boxes, particularly when they are stacked. The birds should be protected from direct sunlight and cold draughts.

15.2 Packing materials used inside boxes should be new, clean, dry and non-toxic.

15.3 The stocking density for day-old chickens for transportation should not exceed 25 cm^2 per bird (standard containers are 60 cm by 45 cm for 100 chickens). More space should be allowed for turkey poults and goslings and significantly less space for quail chicks.

15.4 Internal dividers in boxes for freighting day-old birds should be secured to the floor of the boxes or the floors sufficiently rigid to prevent entrapment of part of the bird on movement of the boxes.

15.5 Boxes used for long distance freighting should be clearly marked with the date and time of despatch and written instructions should be provided on required holding conditions for the attention of those responsible for transportation.

15.6 Hatchlings should be brooded as soon as possible after delivery.

16. Transport of Growing and Adult Poultry

16.1 Birds should be herded for pick-up only under the supervision of a competent person to avoid suffocation and bruising. They should be handled and crated gently to avoid injury. At all times care should take precedence over speed and labour cost.

16.2 Sick or injured birds should not be crated and should be treated or humanely destroyed.

16.3 Crates or cages used for the transport of poultry should be of a design that when properly maintained and managed prevents escape from, or the protrusion of any part of a bird through, the crate such that it could be entrapped or damaged during handling or transport. Cage floors should be rigid or supported to prevent collapse onto structures or cages below.

16.4 Crates, or cages, should be loaded on transports in a manner that provides for adequate ventilation for the birds particularly when vehicles are stationary. Crates, or cages, should be securely attached to the transport vehicles to prevent injury to the birds.

16.5 Crates should be ventilated and of sufficient height to allow birds to stand, move and seek comfort but to prevent bruising during transport. Crates should be designed and maintained to allow birds to be put in and taken out without injury.

16.6 Covers should be provided to protect birds in crates from wind and rain and from excessively hot or cold conditions. Special care is necessary in hot weather to ensure that the provision of covers does not restrict air movement or elevate temperatures within the crates.

16.7 Birds should not be held in crates or containers for longer than 24 hours unless they are assured of access to food and water. It is recommended, when a delay is anticipated and holding time is likely to significantly exceed 24 hours, that suitable arrangements be made e.g. the birds be released into a shed where they have access to feed and water or immediate slaughter arranged at another slaughterhouse, as may be appropriate.

16.8 Contingency plans should be in place to minimise any delay that could be stressful to birds as a result of transport breakdowns and to minimise any distress to the birds.

16.9 The responsibility for birds during transportation rests with the transport driver or railway official.

17. Sale of Poultry

17.1 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.

17.2 Stocking densities at saleyards should not exceed those densities recommended in the appendices by more than 50% for more than 12 hours.

17.3 Poultry should not be held at saleyards for more than 24 hours.

18. Poultry at Slaughtering Establishments

18.1 Care should be exercised to ensure that poultry are not subjected to unnecessary stress while awaiting slaughter.

18.2 Contingency plans should be available in the event of an industrial dispute or processing plant closure.

18.3 Birds should be stunned and bled, neck dislocated or decapitated, with minimal handling and in such a manner, either manually or mechanically, that minimises distress and bruising/injury.

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

ADDITIONAL RECOMMENDATIONS FOR RANGE POULTRY

Range poultry include backyard poultry and any other housing or management practice where poultry are not confined to cages.

A.1.1 Management

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. The time taken for land to become so contaminated depends upon the type of land and the stocking density. Flocks should be moved before this stage is reached.

Houses should be sited on well drained land and should be portable to facilitate regular movement to avoid continuously muddy conditions which may lead to the discomfort of the birds. Alternatively management practices should be implemented to avoid such conditions developing.

Permanent sheds should be sited and managed to prevent the development of continuously muddy or contaminated conditions.

Shelter from sun and rain should always be available. Windbreaks should be provided in exposed areas.

A1.2 Housing

The maximum recommended densities for the various species for housing on range systems are presented in Appendices 2–9.

When poultry are transferred to range houses, precautions should be taken to avoid crowding and suffocation, particularly during the first few nights. Birds should not be confined for too long during hours of daylight or subjected to direct sunlight during confinement.

A1.3 Health & Protection

A.1.3.1 Predators

Precautions should be taken to protect poultry against foxes, cats, dogs and other predators.

A1.3.2 Diseases

Regular monitoring for parasitic and infectious disease should be undertaken and treatment applied to control or eradicate these before outbreaks cause ill-health or losses.

Cannibalism is likely if localised high stocking densities occur.

A1.3.3 Food

Supplementary feed should be provided to range poultry.

APPENDIX 2

FOWLS
MAXIMUM RECOMMENDED STOCKING DENSITIES

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 Cage Systems

ARMCANZ has agreed that minimum space allowances for the domestic fowl held in cage systems for egg production be installed in the statute law of States and Territories and come into force from 1.1.96. The standard will provide a minimum space allowance of 450 sq cm per layer hen under 2.4 kg with heavier birds receiving 600 sq cm, calculated to include the area under any egg baffle/manure deflector.

A2.1.1 *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

A2.1.2 *Rearing fowls for laying or breeding*

40kg liveweight per m^2 cage floor area.

A2.1.3 *Laying or breeding fowls weighing up to 4.5 kg liveweight*

Type of Cage	Until 31.12.1995 Maximum liveweight per unit of floor area	After 1.1.1996 Minimum cage floor area per bird
3 or more fowls (< 2.4 kg) per cage	52 kg / m^2	450 cm^{2*}
3 or more fowls (> 2.4 kg) per cage	52 kg / m^2	600 cm^{2*}
2 fowls per cage	40 kg / m^2	675 cm^2
Single fowl cages	26 kg / m^2	1000 cm^2

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

A2.1.4 *Laying or breeding fowls weighing more than 4.5 kg liveweight*

Type of Cage	Maximum liveweight per unit of floor area until 31.12.1994	Maximum liveweight per unit of floor area from 1.1.1995
3 or more fowls per cage	52 kg / m^2	46 kg / m^2
2 fowls per cage	40 kg / m^2	40kg / m^2
Single fowl cages	26 kg / m^2	26 kg / m^2

A2.2 Deep Litter (where greater than 50% of the floor is litter)

Floor area may include any slatted or metal mesh area and any area occupied by feeding and watering equipment and nest boxes.

In the case of birds kept for breeding, liveweight to include the weight of cockerels.

Rearing of laying fowls Rearing of layer and meat chicken breeders	30 kg/m^2
Laying and breeding birds	
Meat chickens	40 kg/m^2

A2.3 Range

Indoors	As for deep litter.
Outdoors	No more than 1500 hens per hectare (600 hens per acre)

A2.4 Transportation

Recommended maximum liveweight densities for growing and adult fowls:

Hot and/or humid conditions	55 kg/m^2
Other times	60 kg/m^2

APPENDIX 3

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 60 cm square 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^2 within surrounds decreasing to 8-10 birds/m^2 of total area at 6 weeks.
6-12 weeks:	Growing	
Intensive		26kg/m^2 (equivalent to 6 x 4kg birds/m^2 at 12 wks)
Extensive		1.5kg/m^2 (equivalent to 2500 birds/Ha at 12 wks)
12 weeks to market		
Intensive		36kg/m^2 (equivalent to 3 x 12kg birds/m^2 at 20 wks)
Extensive		2.5kg/m^2 (equivalent to 2000 birds/Ha at 20 wks)
Breeding Stock -		
Intensive		30kg/m^2 (= 2.5 x 12kg hens or 1.5 x 20kg toms)
Extensive		2.5kg/m^2 (equivalent to 1500 breeders/Ha)

If a shed area is provided, a maximum density of 36kg/m^2 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

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 Saddling of hens

Before hens are mated 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

DUCKS

A4.1 Introduction

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

In confinement	
Ducklings - to 10 days	50 birds /m^2
Ducklings - at 8 weeks	8 birds /m^2
Breeders	5 birds /m^2
In runs	
Ducklings - at 8 weeks	5000 birds /hectare
Breeders	4000 birds /hectare

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

A4.2 Management Practices

A4.2.1 Bill trimming

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

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. Day-old and young ducklings should be picked up bodily in the palm of the hand. It may be necessary to catch older ducks by the neck 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. Ducks should never be carried by the legs.

A4.2.3 Water supply

Where nipple or cup drinkers are used, ducks must have access to water at least 2 cm deep, to allow essential grooming activity.

APPENDIX 5

GEESE

A5.1 Space Allowances

Shelters should provide $1m^2$/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 Force feeding for any purpose including pate production is unacceptable.

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, never by the legs.

A5.3.2 Moult Inducement

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

APPENDIX 6

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^2. Cannibalism is prone to occur at higher densities.

A6.2 Beak Trimming

One third of upper beak at 4 and 8 weeks of age.

APPENDIX 7

GUINEA FOWL

A7.1 Housing

A7.1.1 Stocking densities — maximum

Growing stock:	0 - 4 weeks -	20 birds/m^2
	5 - 10 weeks -	14 birds/m^2
	11 - 14 weeks -	10 birds/m^2
Adult birds	-	4 birds/m^2
Adult birds - cages	-	10 birds/m^2
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

PARTRIDGE

A8.1 Space Allowances

A8.1.1 Intensive

Cages with floors — these should be longer cages & provide a minimum of 0.3m^2/bird.

A81.1.2 Semi-intensive

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

A8.2 Beak Trimming

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

APPENDIX 9

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

Age	
0-2 weeks:	180 birds/m^2 deep litter 200 birds/m^2 wire floored brooder
2-6 weeks:	120 birds/m^2 deep litter 130 birds/m^2 wire floored grower cage
Breeders	70 birds/m^2 deep litter 80 birds/m^2 wire floored cage

APPENDIX 10

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 nonslip 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 $0.6m^2$ of floor space including $0.4m^2$ 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

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^2/bird.

A10.5.2 Adult pigeons require a minimum of 450cm^2/bird floor space during transit.

Summary of Recommendations for Cages for Laying Fowls

1. *Floor Space*

(i) Laying or breeding fowls weighing up to 4.5 kg liveweight

Type of Cage	Until 31.12.1995 Maximum liveweight per unit of floor area	After 1.1.1996 Minimum cage floor area per bird
3 or more fowls (< 2.4 kg) per cage	52 kg / m^2	450 cm^2*
3 or more fowls (> 2.4 kg) per cage	52 kg / m^2	600 cm^2*
2 fowls per cage	40 kg / m^2	675 cm^2
Single fowl cages	26 kg / m^2	1000 cm^2

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

(ii) Laying or breeding fowls weighing more than 4.5 kg liveweight

Type of Cage	Maximum liveweight per unit of floor area until 31.12.1994	Maximum liveweight per unit of floor area from 1.1.1995
3 or more fowls per cage	52 kg / m^2	46 kg / m^2
2 fowls per cage	40 kg / m^2	40kg / m^2
Single fowl cages	26 kg / m^2	26 kg / m^2

2. *Floor Slope* The floor should be constructed to provide support for each forward pointing toe and the slope of the floor should not exceed 8 degrees.

3. *Cage Height* Cages should be at least higher than the maximum height of the birds standing normally. The height of all cages installed after 1 January 1995 should be at least 40 cm over 65% of the cage floor area and not less than 35 cm at any point.

4. *Cage front* Cage openings should allow placement and removal of birds without causing them injury or unnecessary suffering.

All cages for laying fowls installed after 1 January 1995 should have doors the full height and width of the cage front.

5. *Feed Space* Not less than 10 cm feed trough per bird.

6. *Drinkers* Not less than 10 cm water trough per bird OR no less than two nipple or cup drinkers provided within reach of each cage.

National Guidelines for RSPCA Inspectors for the Inspection of Layer Hen Cages[1]

The first task of an RSPCA Inspector on answering a complaint regarding overcrowding of caged layer hens is to inspect the hens and their housing to identify if a problem exists.

If the conclusion is that a minor problem exists this should be resolved in discussion with farm management.

If the problem has been assessed as serious then the following procedures should be used to formally establish this fact.

Procedures for counting and weighing to determine space allowances for Caged Layer Hens

- Minimum average floor space where three or more birds are held in a cage is:

a) bird of 2.4 kg or less	:	450 sq cm/bird
b) bird of more than 2.4 kg	:	600 sq cm/bird

- Minimum average floor space where two birds are held in a cage is 675 sq cm/bird regardless of weight.
- Minimum average floor space where one bird is held in a cage is 1000 sq cm/bird regardless of weight.

Procedures for counting and weighing where the average weight of birds is said to be 2.4 kg or less and there are three or more birds in a cage.

1. To determine the number of birds permitted in the cage
   a) measure the cage floor area in sq cm. (Refer to the body of the Poultry Code for how to assess cage floor area)
   b) divide by 450 and round down to the nearest bird,
   eg cage size is 50 X 50 cm = 2500 sq cm. Number of birds permitted in cage is 2500 ÷ 450 = 5.55 rounded down to 5.
2. If permitted number of birds is exceeded, corrective action should be taken as appropriate (refer to relevant section below).
3. Determine the total weight of birds permitted in a cage (which will be the number of birds permitted in a cage of those dimensions multiplied by 2.4 kg)
4. Weigh the birds from 30 cages. These cages must be systematically selected and must contain the maximum number of birds permitted in that cage. For example if a flock is housed in 3000 cages, the birds from every hundredth cage should be weighed. If a cage selected for weighing contains fewer than the maximum number of birds permitted in that cage, use the next cage containing the maximum permitted number.

[1] Agreement has been reached by the Australian Egg Industry Association and the RSPCA on the following procedures for the counting and weighing of caged layer hens in relation to space allowances. These procedures have been developed from those published in the report of the National Layer Hen Housing Review in 1994 — *A Review of the Welfare Aspects of Layer Hen Housing in Australia.*

5. If more than half of the sampled cages exceed the weight permitted per cage take corrective action as appropriate (refer to relevant section below). If some, but less than 50%, of cages are over weight, the inspector should discuss the situation with management to ensure that a serious problem does not develop.

Procedure for counting where the average weight of birds is said to be 2.4 kg or more and there are three or more birds in a cage.

1. To determine the number of birds permitted in the cage

   a) measure the cage area in sq cm

   b) divide by 600 and round down to the nearest bird eg cage size is 50 X 50 cm = 2500 sq cm. Number of birds permitted in a cage is 2500 ÷ 600 = 4.16, rounded down to 4.

2. If permitted number of birds is exceeded corrective action should be taken as appropriate (refer to relevant section below).

Procedure for assessment where two birds are held in a cage.

1. a) measure cage area in sq cm.

   b) if cage size is less than 1350 sq cm corrective action should be taken as appropriate (refer to relevant section below).

   c) weight is not an issue.

Procedure for assessment where one bird is held in a cage

1. a) measure cage area in sq cm

   b) if cage size is less than 1000 sq cm corrective action should be take as appropriate (refer to relevant section below).

   c) weight is not an issue.

Corrective Action

Where it is found that the number of birds permitted in a cage is exceeded or where the total weight of birds permitted in cages is exceeded corrective action should be taken.

The level of action taken will depend largely on:

- the magnitude of the problem, and
- the willingness of farm management to remedy the problem.

Problems of a less serious nature should be addressed with farm management to ensure that the situation is rectified.

The problem should be regarded as serious:

- in cages of three or more birds where cages have more than the permitted number of birds.
- in cages of three or more birds where more than 50% of those cages have more than the permitted aggregate weight of birds.
- in cages of two birds where the floor space is less than 1350 sq cm.
- in cages of one bird where the floor space is less than 1000 sq cms.
- where management has failed to rectify any overstocking in a reasonable time.