

Code of Recommendations and Minimum Standards for the Welfare of Layer Hens

**Code of Animal Welfare No. 18
(Revised as a deemed code)**

**ISBN 0-478-07427-1
ISSN 1171-090X**

**Animal Welfare Advisory Committee
C/- Ministry of Agriculture and Forestry
P 0 Box 2526
Wellington
New Zealand**

November 1999

Contents

Status of this code under the Animal Welfare Act 1999 4

Preface 5

1. Introduction6

2. Housing7

 2.1 General7

 2.2 Laying Hen Cage Systems7

 2.3 Non-Cage Systems7

3. Space Allowances 8

4. Equipment 8

5. Lighting8

6. Ventilation9

7. Temperature9

 7.1 Newly Hatched Chicks9

 7.2 Growing and Adult Layer Hens 10

8. Protection 10

9. Food 11

10. Water 11

11. Health12

12. Inspections12

13. Management Practices13

 13.1 Beak Trimming13

 13.2 Dubbing, Blinkers, Devoicing and Flight Restriction13

 13.3 Toe Trimming 13

 13.4 Moulting Inducement and Controlled Feeding 13

 13.5 Identification 14

14. Transport of Day-old Chicks, Growing and Adult Hens 14

 14.1 General Requirements14

 14.2 Loading Hens15

 14.3 Transport Provisions18

 14.4 Unloading 19

15.	Sale of Hens	20
16.	Layer Hens at Slaughtering Establishments	20
17.	Humane Destruction	20
18.	Minimum Standards	21
	18.1 Accommodation and Environment	21
	18.2 Feeding	22
	18.3 Health and Welfare	22
	18.4 Transport	22
	18.5 Humane Destruction	24
APPENDIX 1		25
	Maximum Stocking Densities	25
	A1 General	25
APPENDIX 2		26
	Additional Considerations for Range Poultry	26
	A2.1 Management	26
	A2.3 Other systems	27
APPENDIX 3		28
	Beak Trimming	28
	A3.1 Background	28
	A3.2 Preparing for Beak Trimming	28
	A3.3 Trimming chick's beaks (i.e 0-10 days of age) normally 3 days	29
	A3.4 Trimming beaks on older birds	31
	A3.5 Checking feeders, drinkers and birds after beak trimming	32
	A3.6 Recording	32

Status of this code under the Animal Welfare Act 1999

The Animal Welfare Act provides for the issue of codes of welfare by the Minister on the recommendation of the National Animal Welfare Advisory Committee and after a public consultation process. It is not an offence under the Animal Welfare Act to breach a code of welfare, but it is a defence to a prosecution for a breach of that Act if the defendant can show that he/she has equalled or exceeded a minimum standard in a code of welfare. The Animal Welfare Act does provide that in exceptional circumstances, codes of welfare may be issued which contain minimum standards and recommendations for best practice which do not fully meet the obligations of the Act.

On the commencement of the Animal Welfare Act 1999, this code will be deemed to be a code of welfare issued under that Act and will continue in force for three years from the date of commencement of the Animal Welfare Act, unless it is sooner replaced with a new code of welfare. The reason for saving this code (together with five other existing codes) is that the management practices in relation to the animals covered by this code may not comply with the obligation in the Animal Welfare Act to meet the physical, health and behavioural needs of the animals and to alleviate pain or distress. The industry might therefore be subject to prosecution for breach of the Animal Welfare Act in the absence of a code of welfare which sanctions current management practices.

Because this code was prepared under a different legislative regime, and had no legal status under the Animals Protection Act 1960, it may contain provisions which are not consistent with the Animal Welfare Act. In such a case these provisions have no effect under the Animal Welfare Act. The wording of the minimum standards may not be as precise as is desirable in view of its new status under the Animal Welfare Act. It may also contain information that is not fully up to date. This code has been revised as an interim measure mainly to address two aspects:

- (i) to try to ensure that it does not contain any prohibition of activities which should not be in the code. This is to avoid misleading the users of this code.
- (ii) to change the format to make a clearer distinction between minimum standards and recommendations.

The revision does not address any other inconsistencies or deficiencies.

It should also be noted that the Animal Welfare Act will provide that any provision in a deemed code, which is outside the scope of a code of welfare made under the Act, will have no effect.

Preface

The codes of recommendations and minimum standards for the welfare of animals have been prepared by the Animal Welfare Advisory Committee (AWAC), which was established in 1989 by the then Minister of Agriculture to advise him on matters concerning animal welfare.

AWAC consists of members from the following backgrounds: the farming community, animal welfare groups, the veterinary profession, animal behaviour and physiology, . conservation and vertebrate pest control, consumer interests, animal welfare law and the Ministry of Agriculture. It also includes the chairman of the National Animal Ethics Advisory Committee and an independent chairman.

Extensive consultation takes place with industry and other interested groups in the development of codes.

This *Code of Recommendations and Minimum Standards for the Welfare of Layer Hens* was endorsed as a national code at the committee meeting held on 17 August 1996.

This code has been amended to ensure that the minimum standards have been clearly identified.

This revised version was endorsed as a deemed code for the purposes of the Animal Welfare Act 1999 at the committee meeting held on 17 November 1999.

The codes of welfare may be revised to take into account changes in practices of animal management and knowledge of animal welfare.

All statements in bold italics in this code are also minimum standards.

1. Introduction

Welfare considerations are becoming increasingly important for the keeping and fanning of animals, both in New Zealand and internationally. Practices which may once have been deemed acceptable are now being reassessed and modified according to new knowledge and changing attitudes. High standards in animal welfare are not only important legally, but also may have direct economic benefits by enhancing productivity and facilitating the marketing of animal products.

Good stockpersonship is essential for good welfare; without this, modern breeding, feeding, housing and management systems, whatever they may be, will not necessarily lead to either an improvement in the quality of life for the hen or an improvement in the quality of the product. This code is intended to encourage all responsible for its implementation, and especially the inexperienced, to adopt the highest standards of husbandry.

The code takes account of five basic requirements:

- freedom from thirst, hunger and malnutrition
- the provision of appropriate comfort and shelter
- the prevention, or rapid diagnosis and treatment, of injury, disease or infection
- freedom from distress
- the ability to display normal patterns of behavior.

In New Zealand, hens are kept under conditions ranging from large commercial enterprises where the birds are totally reliant on humans for all their daily requirements to free-ranging hens which have access to outdoor runs or pasture. Provided those concerned with the day-to-day care of the hens treat them with skill and consideration, their welfare can be safeguarded under a variety of management systems.

This code is based on the knowledge and technology available at the time of publication and may need to be changed in the light of future knowledge. The Animal Welfare Advisory Committee is particularly concerned about the inability of layer hens to display normal patterns of behavior when closely confined in cages for much of their productive lives. Accordingly, alternative practical and economic husbandry systems and cage designs which enhance hen welfare should be encouraged and applied to commercial egg production at the earliest opportunity. They do not replace the need for experience and commonsense in the husbandry of animals.

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. The Egg Producers Federation of New Zealand (Incorporated) can assist with information or contacts.
- 2.1.2 Floors and other surfaces must be designed, constructed and maintained so as to minimise the risk of injury and disease, and to support the hens adequately.

2.2 Laying Hen Cage Systems

- 2.2.1 The floor should be constructed to enable support for each forward pointing toe and the slope of the floor in all new cages installed after 1 January 1997 must not exceed 8 degrees.
- 2.2.2 In cages, hens should be able to stand erect without cage features restricting upright posture. The height of all new cages installed after 1 January 1997 must 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 and doors must be such that hens can be placed in them and removed from them without causing injury or unnecessary suffering. All new cages for laying hens installed after 1 January 1997 and which have front opening doors must have the doors effectively opening the full height and width of the cage front.
- 2.2.4 Multi-deck cages must be arranged so that hens in the lower tiers are protected from excreta from above.
- 2.2.5 Stocking densities are shown in Appendix 1.

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 made accessible in such a manner that hens do not suffer injuries when moving to and from these facilities.
- 2.3.3 Nest litter, where used, should be changed regularly so as to be clean, dry,

friable and moisture absorbent.

2.3.4 Stocking densities are shown in Appendix 1.

2.3.5 Additional recommendations for non-cage systems are given in Appendix 2.

3. Space Allowances

3.1.1 It is recommended that stocking density be reviewed regularly and adjusted if necessary to maintain the welfare of the hens. The appropriate level of stocking depends on the quality and type of confinement system. In housing systems appropriate densities are governed by the capacity to achieve and maintain acceptable levels of temperature, humidity, air exchange, removal of noxious odours and lighting.

3.1.2 Maximum stocking densities apply only to hens housed under good management with optimal temperature and ventilation conditions, otherwise lower densities apply.

3.1.3 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

4.1.1 All equipment to which layer hens have access should be designed, maintained and sited to avoid injury or pain to the hens.

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

4.1.3 All automated and environmental control equipment for controlled environment sheds must have adequate back-up systems and alarms in case of equipment failure.

5. Lighting

5.1.1 Young chicks reared away from the hen require a sufficient light intensity (10-20 lux) on the food and water for the first three days after hatching while they learn to find food and water. The light intensity may then be reduced to as low as two lux during rearing.

- 5.1.2 To ensure clear visibility during inspection of layer hens a light intensity of at least 10 lux at hen level is required.
- 5.1.3 Where pullets are housed in windowless 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 several days to one hour in each 24 hours.
- 5.1.4 Where layer hens do not have access to daylight they should be given lighting over a period of at least eight hours per day. Photoperiods in excess of 18 hours per day may be detrimental to the layer hen.

6. Ventilation

- 6.1.1 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.
- 6.1.2 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 hen 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 humans).
- 6.1.3 Force ventilation may be required to meet the conditions in 6.1.2.
- 6.1.4 Force-ventilated sheds must have automatic alarm systems to warn of power failure. A back-up alarm system to warn of temperature increases 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 must be available.

7. Temperature

7.1 Newly Hatched Chicks

- 7.1.1 Newly-hatched chicks 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. Temperatures should be at least 30°C for 24 hours, reducing 2-3°C per week until 21°C is reached. Relative humidity must be maintained at between 30 and 50%.

- 7.1.2 Subject to 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. Such behaviours are huddling in cold conditions and panting, wings raised and vibrating the floor of the mouth cavity ("gular flutter"), in hot conditions.

7.2 Growing and Adult Layer Hens

- 7.2.1 Poultry should be protected from draughts during cold weather and be protected from thermal stress during hot weather.
- 7.2.2 Adequate precautions should be taken to minimise stress produced by temperatures high enough to cause prolonged panting. 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.
- 7.2.3 It is essential that no stocking density or other constraining practice be allowed to prevent birds adopting behaviours to facilitate body heat loss in hot weather. Such behaviours include 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.

8. Protection

- 8.1.1 Hens should be protected from predators. Other birds may present a welfare risk by predation, aggression, food competition or disease transmission. Vermin control measures must be taken.
- 8.1.2 Suitable fire-fighting equipment must be readily available.
- 8.1.3 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.
- 8.1.4 Sufficient exits should be available to enable emergency procedures to be followed when required.

9. Food

- 9.1.1 Layer hens in normal production (other than newly hatched chicks), must have access to food at least once in each 24 hour period. Alternative practices may be applied during forced moulting (see Section 13.7) and with breeding stock. The period for newly hatched chicks may be extended to not more than 72 hours.
- 9.1.2 Hens must receive a diet containing adequate nutrients to meet their requirements for good health and vitality. Layers should not be provided with food that is deleterious to their health.
- 9.1.3 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 hens per feeder should not be exceeded. For hens in laying cages a trough length of not less than 10 cm per hen must be provided.
- 9.1.4 In other systems, placement of feeders and sufficient space needs to be provided to allow adequate access and to prevent smothering.

10. Water

- 10.1.1 Hens must be offered a continuously available supply of potable water to meet their physiological requirements. Water which is contaminated or deleterious to health should not be provided.
- 10.1.2 Hens, other than those newly hatched, should not be deprived of water for more than 24 hours. Lesser periods apply during hot weather. Newly hatched chicks require water within 72 hours.
- 10.1.3 All 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 District Council or AgriQuality New Zealand office.
- 10.1.4 The manufacturer's recommendation on number of birds per drinker must not be exceeded. Where troughs are provided each adult hen should be provided with at least 10 cm of water trough.
- 10.1.5 Suitable drinking space must be provided to allow adequate access, and to prevent overcrowding and smothering.

11. Health

- 11.1.1 Those responsible for the care of layer hens should be aware of the signs of ill-health or distress. Signs of ill-health in layer hens 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.
- 11.1.2 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 veterinarians or other qualified advisers.
- 11.1.3 Those responsible for the care of layer hens should also operate an effective programme to prevent infectious disease and internal and external parasitism. Vaccinations and other treatments applied to layer hens should be undertaken by people skilled in the procedures. Primary breeders can supply information on vaccinations.
- 11.1.4 Dead hens should be removed and disposed of promptly. Records of mortalities, treatment given and response to treatment should be maintained to assist disease investigations. Disposal of dead hens must comply with the requirements of the Resource Management Act.
- 11.1.5 Medication should be used only in accordance with the manufacturer's instructions unless professional advice has been given to vary the directions.
- 11.1.6 Where required, premises and equipment should be thoroughly cleaned and disinfected before restocking to prevent the carry-over of disease-causing organisms to incoming hens.
- 11.1.7 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

- 12.1.1 The frequency and level of inspection should be related to the likelihood of risk to the welfare of the hens, but should be at least once each day. Inspections are best made separately from other management practices. Where visual inspection is difficult, automatic surveillance systems should be installed to monitor changes in feed and water intake for each bank of cages.

13. Management Practices

13.1 Beak Trimming

13.1.1 Beak trimming is carried out to reduce the risk of damage amongst birds from feather pecking or cannibalism, especially in systems where precise control over lighting levels is not possible. The procedure should be carried out within 10 days of hatching and there should be precise control over the amount of the beak that is removed. The operator should not remove more than one-third of the upper or lower beaks. This means:

For day-old chicks, not more than 2mm, of the beak. For 10 day-old chickens, not more than 3mm. of the beak.

13.1.2 Beak trimming should only be carried out by trained operators (see Appendix 3).

13.1.3 Further trimming of the beaks of growing hens should not be undertaken except where necessary to prevent cannibalism during the laying period.

13.2 Dubbing, Blinkers, Devoicing and Flight Restriction

The above 4 practices are considered cruel and should not be carried out under normal circumstances. For Flight Restriction this comment applies to de-winging, pinioning, notching or tendon severing to restrict flight in hens. If flight restriction is required, the flight feathers of one wing may be trimmed - such a practice is acceptable.

13.3 Toe Trimming

Trimming may be necessary in some free-range situations and if performed should be limited to the nail of the toe only.

13.4 Moulting Inducement and Controlled Feeding

13.4.1 Moulting inducement or controlled feeding practices should only be carried out on healthy hens 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 moulting inducement. Adequate feeding space should be provided during such practices.

13.4.2 Methods of moulting inducement and controlled feeding which totally deprive hens of food or water for more than 48 hours must not be used.

13.5 Identification

13.5.1 Wing and leg bands used for hen identification should be checked regularly and where necessary loosened or removed to avoid injury to the hen.

14. Transport of Day-old Chicks, Growing and Adult Hens

14.1 General Requirements

14.1.1 Water and food requirements

With the exception of day-old chicks, hens should not be held in containers for longer than 12 hours, unless they are assured of access to water. When a delay is anticipated and the holding time is likely to exceed 12 hours, either the hens should be released into a shed where they have access to food and water, or immediate slaughter arranged in another slaughterhouse.

Hens must receive food during the 24 hours prior to travel.' but it is advisable not to feed hens for 3-6 hours before loading. Hens must not be deprived of water prior to loading.

The time spent in containers should be calculated from the time the hens are first placed in them, not from when the journey begins.

14.1.2 Shelter

Hens should be given appropriate protection from any adverse affects of direct sunlight, radiant and reflected heat, wind, rain and hail.

14.1.3 Cleanliness

Cages must be clean before poultry are loaded into them.

14.1.4 Transport container design

Hens may only be carried in properly designed cages or crates. They must not be transported with their legs tied.

Cages should be designed and maintained to allow hens to be put in and taken out without causing injury. Cage doors should not be less than 20cm wide and 25cm high.

There must be no protrusions or sharp edges on the framework. Hinges and latches must not project into the cage.

Container or cage floors should be designed to prevent toe and foot damage when, they are dragged or stacked, and should be strong enough to prevent

collapse when other containers are loaded on top.

Containers should be ventilated and have sufficient headroom to allow hens to move about during transport.

Containers should be fitted with locking systems that prevent escape during transportation.

14.2 Loading Hens

14.2.1 *Catching and loading*

Planning the catching and loading procedure well in advance will allow adequate time for hens to be handled quietly in a way that does not cause them injury.

All members of catching and transporting crews should be correctly instructed and knowledgeable about basic aspects of animal welfare and the handling of hens.

Ideally, containers of live hens should be moved so that birds remain in an upright position. If a conveyor is used for loading crates of live hens, the conveyor angle should prevent the tilting of containers causing hens to pile up. Containers should not be thrown or dropped. They should be moved smoothly during loading, transport and unloading.

14.2.2 *Loading density of hens*

The number of hens per container depends on available floor space, the body size of the hens and prevailing environmental conditions at the time of transport. All hens should be able to rest on the floor at the same time and remain evenly distributed.

For growing and adult hens the recommended minimum height and minimum floor space allowances for containers in cold weather are as follows:

Transport container height requirements	
Category	Minimum height (cm)
Day-old chicks	10
Hens of approximately 1 kg	23
Hens of 1-4 kg	25
Hens of more than 4 kg	34

Transport container space requirements	
Category	Minimum floor space
Day-old chicks	21-25 cm ² per chick
Hens of less than 1.6 kg	175 cm ² per kg
Hens of 1.6 – 3 kg	150 cm ² per kg
Hens of 3 – 5 kg	110 cm ² per kg
Hens of more than 5 kg	105 cm ² per kg

The loading densities are guidelines only. A visual assessment should be made in judging the loading densities of any particular consignment. Weather conditions should be considered when determining loading densities for growing and adult hens. The minimum space allowance should be increased during summer, especially if the weather is hot or humid.

14.2.3 *Facilities for handling caged poultry*

End of lay hens are susceptible to bone breakage, especially when they have to be removed from cages, handed on and placed in transport containers. Therefore, transport containers should be placed as close as possible to the cages.

Before collecting the hens, any hindrances from fixtures and fittings, especially sharp edges or protrusions, must be removed from the cages or transport containers.

There must be easy access to each cage for the catcher. Hens should be removed from the cage one-at-a-time, and during removal the breast should be supported.

If hens are carried by hand with the head hanging downwards, they should be held by both legs and care taken to prevent flapping wings hitting solid objects. The number of hens carried will depend on the size of the hen and the ability of the catcher, but no more than three birds should be carried in one hand.

Birds should not be lifted or carried by the head, neck, wing or tail.

14.2.4 *Facilities for handling loose-housed hens*

The same standards of care in handling should apply to hens housed in non-cage systems. Where possible, food troughs, drinkers and movable perches should be removed from the catching area before catching starts. When there is not suitable access to free-range units, alternative transport to the road vehicle must be provided. In addition, it is recognised that more

labour may be required for catching hens housed under free-range systems and adequate labour should be supplied in order not to prolong loading time.

Careless catching is a common cause of injury to hens which then become particularly susceptible to transportation stress.

Procedures to facilitate catching loose-housed hens and to prevent the piling of hens in corners can include:

- reducing the light intensity in the pen
- using blue bulbs to provide adequate illumination for humans but not for hens
- corralling hens with a net or screen at the loading door.

Range hens can be loaded more easily by moving them in small groups.

There should be sufficient lighting to permit inspection of the hens during loading, carriage and unloading.

Containers must be kept in an upright position and lifted and placed in position with the greatest of care. They must not be dropped or thrown.

Containers must be securely attached to the transport vehicles to prevent injury to the hens.

14.2.5 *Transporting day-old chickens*

Day-old chickens to be transported should be healthy and vigorous. They should be placed in suitably ventilated boxes without overcrowding.

Particular care is required to ensure adequate ventilation when boxes are stacked.

The stocking density for day-old chickens for transportation should not exceed 25 cm² per bird (standard containers are 60 cm x 45 cm for 100 chickens). Chickens should be protected from direct sunlight and cold draughts.

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

Each consignment should be clearly identified with the date and time of dispatch, and written instructions provided regarding holding conditions and a contact person, marked clearly for the attention of those responsible for transportation.

The consignment should leave as soon as possible after hatching and must reach the destination within 72 hours after hatching. Every attempt must be made to avoid chilling or overheating especially by minimising delays in transport.

Chickens should be placed in a brooding environment immediately after delivery.

14.3 Transport Provisions

14.3.1 Shelter

Hens being transported may be affected by wind if they become wet. Hens at the front of the vehicle are often covered or shielded while hens at the back may be uncovered.

Temperatures between the top and bottom and front and back can differ significantly. Covers should be used to protect hens in containers from wind and rain and from excessively hot or cold conditions. Shade is necessary in hot weather.

14.3.2 Ventilation

The air circulation in transport units should:

- provide enough air for the hens,
- remove smells and gases,
- control temperature and humidity.

The supply of fresh air should be checked regularly and adjusted as necessary.

Containers must be stacked in a way which guarantees good ventilation. Insufficient spacing can prevent heat loss and interfere with the circulation of air between containers.

Hens must not be placed in excessive draughts.

The air temperature in a load of live hens should be maintained between 10°C and 30°C. During hot weather the number of hens per container may need to be reduced to keep load temperatures within the acceptable range.

When the temperature of the load reaches 30°C, the vehicle must not be left stationary. To counter excessive heat build-up, the vehicle should be driven at about 30 km/hr for several minutes. When this is not possible, the truck should be kept in shade and an alternative method of air circulation provided.

14.3.3 *In-transit inspections*

Regular inspections of hens should be conducted by either the driver or attendant within 30 minutes of starting a journey and after that at regular intervals, depending on the road and weather conditions. In cool weather, inspection every 2 hours is recommended, while in hot weather the hens should be examined every hour.

Birds found injured, distressed or with a limb protruding should be given immediate assistance.

14.3.4 *Duration of travel and rest periods*

Rest stops are usually undesirable when transporting hens. Travel should be completed within 24 hours.

14.4 Unloading

14.4.1 *General requirements*

Similar requirements to those listed in 14.2 apply to unloading, but hens will be tired and more stressed after a journey:

Hens not intended for slaughter should be given access to water when unloaded.

Where hens are sold at saleyards they should be unloaded without delay and placed in pens or cages with access to food and water.

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

Injured hens unloaded from containers should be destroyed immediately.

Containers must be unloaded horizontally and with care. Hens should be removed from them individually. Any that escape should be caught immediately.

Hens for slaughter should be slaughtered as soon as possible.

Hens must not be left at their point of destination unless an authorised person takes charge of them.

14.4.2 *Euthanasia of injured/sick hens*

Hens should be killed by neck dislocation or be stunned humanely followed immediately by neck incision to allow bleeding. These procedures must be carried out (whether manually or mechanically) in such a manner that minimises distress, bruising and injury.

15. Sale of Hens

15.1.1 Where layer hens are sold they should be unloaded without delay from transporters and placed in pens or cages with access to feed, water and shelter.

15.1.2 Stocking densities of layer hens should not exceed those densities recommended by more than 50% for more than 12 hours.

15.1.3 Layer hens should not be held at saleyards for more than 24 hours.

16. Layer Hens at Slaughtering Establishments

16.1.1 Care should be exercised to ensure that poultry are not subjected to unnecessary stress or exposure to weather extremes while awaiting slaughter.

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

16.1.3 Hens should be stunned humanely, followed immediately by neck incision to allow bleeding or killed by neck dislocation with minimal handling and in such a manner, either manually or mechanically, that minimises distress and bruising/injury.

17. Humane Destruction

17.1.1 Hens with an incurable disease or a significant deformity should be removed from the flock and humanely destroyed as soon as possible. Handling stress prior to destruction needs to be minimised. Neck dislocation or gassing using carbon dioxide or other suitable gases are acceptable methods provided these are carried out competently. These methods are also suitable for the destruction of end of lay hens. A source of 100% carbon dioxide may be used as a disposal agent.

- 17.1.2 Surplus day-old chicks awaiting disposal should be treated as humanely as those being retained.
- 17.1.3 Unwanted chicks must be killed humanely. Suitable methods are neck dislocation, decapitation or exposure to a high concentration of carbon dioxide administered by a skilled operator. A source of 100% carbon dioxide may be used as a disposal agent
- 17.1.4 Day-old chicks and hatchery livestock waste can be disposed of by instantaneous fragmentation. They must be treated humanely until this is done.

18. Minimum Standards

18.1 Accommodation and Environment

- *Floors and other surfaces must be designed, constructed and maintained to minimise the risk of injury and disease, and to adequately support the hens.*
- *The slope of the cage floor must not exceed 8 degrees for new cages installed after 1 January 1997.*
- *The height of all new cages installed after 1 January 1997 must be at least 40cm over 65% of the cage floor area and not less than 35 cm at any point.*
- *The design and size of cage openings must be such that hens can be placed in them and removed from them without causing injury or unnecessary suffering. All new cages for laying hens installed after 1 January 1997 and which have front opening doors, must have doors effectively opening the full height and width of the cage front.*
- *Multi-deck cages must be arranged so that hens in the lower tiers are protected from excreta from above.*
- *Ventilation is required at all times to provide fresh air.*
- *All automated and environmental control equipment for controlled environment sheds must have adequate back-up systems and alarms in case of equipment failure. Force-ventilated sheds must have automatic alarm systems to warn of power failure. In force-ventilated sheds emergency ventilation provisions must be available.*
- *For newly hatched chicks relative humidity must be maintained at 30-50%.*

- *It is essential that no stocking density or other constraining practice be allowed to prevent birds adopting behaviours to facilitate body heat loss in hot weather. Such behaviours include 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.*
- *Vermin control measures must be taken.*
- *Suitable fire-fighting equipment must be readily available.*
- *In range poultry systems, shelter from sun and rain must always be available.*

18.2 Feeding

- *Layer hens other than newly hatched chicks or where forced moulting is practiced (see section 13.7) must have access to food at least once in each 24 hour period.*
- *Hens must receive a diet containing adequate nutrients to meet their requirements for good health and vitality.*
- *For hens in laying cages a feed trough length of not less than 10 cm per hen must be provided.*
- *Hens must be provided with a continuously available supply of portable water.*
- *Suitable drinking space must be provided to allow adequate access, and to prevent smothering.*

18.3 Health and Welfare

- *Disposal of dead hens must comply with the requirements of the Resource Management Act.*
- *Methods of moult inducement and controlled feeding which totally deprive hens of food or water for more than 48 hours must not be used.*

18.4 Transport

- *Cages must be thoroughly cleaned before poultry are loaded into them.*
- *Hens must receive food during the 24 hours prior to travel but it is advisable not to feed hens 3-6 hours before loading. Hens must not be deprived of water prior to loading.*

- *Hens must be carried in properly designed cages or crates. There must be no protrusions or sharp edges on the frame work. Hinges and latches must not project into the cage.*
- *They must not be transported with their legs tied.*
- *Before collecting hens, any hindrances from fixtures and fittings, especially sharp edges or protrusions, must be removed from the cages or transport containers.*
- *There must be easy access to each cage for the catcher.*
- *When there is no suitable access to free-range systems, alternative transport to the road vehicle must be provided.*
- *Containers must be kept in an upright position and lifted and placed in position with the greatest of care. They must not be dropped or thrown.*
- *Containers must be securely attached to the transport vehicles to prevent injury to the hens.*
- *Consignments of day-old chicks must reach the farm of destination within 72 hours after hatching. Every attempt must be made to avoid chilling or overheating especially by minimising delays in transport.*
- *The supply of fresh air must be checked regularly and adjusted as necessary.*
- *Containers must be stacked in a way which guarantees good ventilation.*
- *Hens must not be placed in excessive draughts.*
- *When the temperature of the load exceeds 30°C, the vehicle must not be left stationary.*
- *Containers must be unloaded horizontally and with reasonable care.*
- *Hens must not be left at their point of destination unless an authorised person takes charge of them.*

18.5 *Humane Destruction*

- *Unwanted chicks must be killed humanely, Suitable methods include neck dislocation, decapitation or exposure to a high concentration of carbon dioxide gas administered by a skilled operator. (Note: where day-old chicks are to be disposed of by instantaneous fragmentation they must be treated in a humane manner until this is done)*
- *For older birds, and end of lay hens, neck dislocation or gassing using carbon dioxide in high concentration are suitable methods provided they are carried out competently.*

APPENDIX 1

Maximum Stocking Densities

A1 General

- A1.1 The surface area used for calculating the stocking densities is as follows:
- a. **in cages**, is the area of the cage, including any space underneath any egg baffle;
 - b. **in houses**, is the floor area and any other above-floor area accessible to the birds such as in aviary and perchery systems;
 - c. **in free-range systems**, the land area available.

A1.2 The table below specifies the minimum recommended stocking densities in terms of area/bird for birds of various ages in different management systems. The densities are for birds aged 7 – 18 weeks and 19 – 80 weeks. Where a range of values is given the highest densities recommended may be used only in operations where there is a high level of management and control of the housing environment (e.g forced air ventilation) such that welfare is not compromised.

While it is not possible to specify meaningful stocking densities accurately for chickens aged 0 – 6 weeks (because of the rapid growth and associated changes in management procedures with these birds) the welfare guidelines presented in the remainder of the Code must be adhered to when raising these birds.

Stocking Densities*				
	7 – 18 Weeks		19+ Weeks	
	Birds / m²	Sq cm / bird	Birds / m²	Sq cm / bird
Deep Litter	10-14	1000-714	7-10	1429-1000
Litter and slatted floor	14-18	714-555	10-14	1000-714
Free Range	11 m ² per bird		11 m ² per bird	
Houses for Free Range				
Deep Litter	10-14	1000-714	7-10	1429-1000
Slatted Floor	14-18	714-555	10-14	1000-714
Cages	27	370	22	450

* All figures based on minimum liveweights of 0.59 kg for 7 – 18 week old birds and 1.61 kg for 19 – 80 week old birds and maximum liveweights of 1.55 kg for birds aged 7 – 18 weeks and 2.50 kg for birds aged 19 – 80 weeks.

APPENDIX 2

Additional Considerations for Range Poultry

Range poultry includes backyard poultry which have access to an outdoor environment.

All minimum standards in Appendix 2 are identified in bold italics.

A2.1 Management

- A2.1.1 ***Poultry must not be kept on land devoid of vegetation or which has become contaminated with poisonous plants, chemicals or organisms which cause or carry disease to an extent which could seriously prejudice the health 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.
- A2.1.2 ***Permanent sheds must be sited and managed to prevent the development of continuously muddy or contaminated conditions.*** This may involve protecting the ground near permanent housing by providing slatted platforms, covered verandahs, areas of gravel or other suitable methods.
- A2.1.3 ***Houses must be sited on well drained land and, if portable, should facilitate regular movement to avoid continuously muddy or dusty conditions which may lead to disease or the discomfort of hens.*** Alternatively, management practices should be implemented to avoid such conditions developing. A rotational grazing system should be adopted so that the ground is mainly covered with vegetation at all times. Rotation rates should be such that this vegetation is maintained.
- A2.1.4 ***Shelter from sun and rain must always be available. Windbreaks must be provided in exposed areas.***
- A2.1.5 ***Appropriately formulated feed must be available at all times.***
- A2.1.6 ***Appropriate practices must be adopted to check for and control disease, parasitic infestation, cannibalism and other welfare problems. These must include regular sampling or inspection to monitor for the presence of disease, parasites or injury.***

A2.2 Housing

A2.2.1 *Hens must have access to:*

- a waterproof housing of suitable capacity;*
- b portable water at all times;*
- c daily access to sufficient food to keep them healthy and vital;*
- d clean nest boxes (suitably protected from the weather);*
- e shade and shelter from excessive heat and wind.*

A2.2.2 Precautions should be taken to protect hens from predators.

A2.2.3 *Sufficient access doors (or pop-holes) must be provided so that hens are not prevented from entering or leaving the housing.*

A2.3 Other systems

A variety of other systems are sometimes used to house poultry. Specialist advice should be sought on appropriate housing and management in these systems.

APPENDIX 3

Beak Trimming

A3.1 Background

A3.1.1 Removal of excessive amounts of beak during trimming causes unnecessary pain and deformities which affects the hen's ability to eat. Training of operators to defined standards has been shown to improve trimming procedures and bird welfare. Therefore, beak trimming should be carried out by competent operators trained to the following standards.

A3.2 Preparing for Beak Trimming

In hot weather beak trimming should be carried out during the cooler parts of the day.

A3.2.1 *Preparing the equipment*

Choose a clean, well lit area in which to work.

Check the beak trimming equipment and make sure that:

- it is of the correct type for the age and size of the birds involved
- the power cable and plug are both in good condition and are of the correct type for connection to the main electricity supply
- it will be used through a transformer or residual current isolator
- the beak trimming mechanism is clean and not misshapen or damaged in any way
- the machine is on a firm base, preferably a table, and cannot fall over
- all "On"/"Off" switches work correctly
- keep the power cable as short as possible and hang it up out of the way so that birds cannot reach it and it will not trip anyone or become damaged.

- a comfortable seat for the operator is available
- a thermometer is available.

A3.2.2 Preparing the birds

Pen or contain the chicks so that:

- they are not overcrowded and likely to smother
- they are easy to catch
- birds which have had their beaks trimmed do not become mixed with birds waiting to be handled.

Avoid handling birds which are obviously affected by disease or disorder.

A3.2.3 *Switching on the beak trimmer*

Switch on the heat control and let the blade heat up. Check that when hot, it is the colour which indicates the correct working temperature (normally cherry red) before proceeding. Switch on any other controls applicable to the type of machine (e.g a motor).

Always follow the beak trimmer manufacturer's instructions.

A3.3 Trimming chicks' beaks (i.e 0-10 days of age) normally 3 days

A3.3.1 *Placing a chick against the beak trimmer*

Pick up each chick carefully in the palm of your hand, taking care not to squeeze it. Check beak trimmers are fitted with a gauge in which there are a number of holes of different sizes. Select the hole which is most appropriate for the size of the chick's beak, e.g

- small hole for day-old chicks
- centre hole for chicks of 3-7b days
- large hole for chicks of 7-10 days.

If a chick is larger or smaller than the average of its age group, use a larger or smaller hole in the gauge, as applicable.

Refer to the beak trimmer manufacturer's instructions, if necessary.

When the chick is in position against the trimmer, hold it there under gentle forward and downward pressure so that:

- it cannot move back from the blade
- its head is leaning back slightly, to ensure that the lower mandible is correctly trimmed.

A3.3.2 *Operating the trimming mechanism*

Lower the beak trimmer blade.

Make sure that the chick's head is held perfectly still while the blade moves down and up again. If the beak is allowed to move, it will not be trimmed correctly and the chick might be injured.

If the trimmer operates automatically, the chick's beak is placed in the selected hole on the gauge, as described above, but when the blade is in its uppermost position.

A3.3.3 *Checking the beak and releasing the chick*

When the blade has returned to the upper position, remove the chick from the machine and check that:

- no more than one-third of the beak's length has been removed
- both mandibles are of the same length
- there is no bleeding
- the chick is uninjured.

If a bird is bleeding or injured, check that you are using the most suitable hole in the gauge and holding the chicks against the machine by the recommended method.

Check also that the blade temperature is correct.

Make sure, when releasing each chick, that it is separated from those waiting to be handled.

A3.3.4 *Keeping the beak trimmer clean*

Regularly remove the debris from behind the blade and from inside the holes in the gauge. Do not let it build up. Take care not to touch the hot blade with your hands.

A3.4 Trimming beaks on older birds

Trimming the beaks of older birds should not be undertaken except where necessary to prevent cannibalism during the laying period.

A3.4.1 *Restraining the birds*

Handle each bird carefully to prevent unnecessary stress or injury. Hold the bird's legs with one hand. Place the index finger of the other hand in the bird's mouth to push its tongue back out of the way and use the thumb and remaining fingers of the same hand to steady the bird's head.

Make sure that the bird is well restrained and will not be able to move suddenly while its beak is being trimmed. If it does move, the beak will not be trimmed correctly and you and/or the bird might be burned.

A3.4.2 *Trimming the mandibles*

Trimming should involve no more than the blunting of upper and lower mandible tips. Cutting should be avoided and blunting should be accomplished by rubbing, for a second or two, the mandible against the cauterising blade.

Make sure when releasing each bird that it is separated from those waiting to be handled.

A3.5 Checking feeders, drinkers and birds after beak trimming

A3.5.1 Make sure that each drinker contains an adequate depth of water (i.e at least 8mm) when it stops filling.

Make sure that no bleeding is occurring among the birds. If it is, report the situation to your supervisor/manager/veterinary surgeon as appropriate.

A3.6 Recording

A3.6.1 Record:

- date of beak trimming
- details of birds handled
- details of any excessive bleeding
- any other information required by management or the veterinary surgeon.

A3.6.2 Record all information in such a way that somebody else will be able to find and understand it.