

Animal Welfare (Layer Hens) Code of Welfare 2005

A code of welfare issued under the Animal Welfare Act 1999

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National Animal Welfare Advisory Committee
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Preface

The Animal Welfare Act 1999 came into force on 1 January 2000. It establishes the fundamental obligations relating to the care of animals. These obligations are written in general terms however. The detail is found in codes of welfare. Codes set out minimum standards and recommendations relating to all aspects of the care of animals. They are developed following an extensive process of public consultation and reviewed every 10 years, or sooner if necessary.

I recommend that all those who care for animals become familiar with the relevant codes. This is important because failure to meet a minimum standard in a code could lead to legal action being taken.

I issue codes on the recommendation of the National Animal Welfare Advisory Committee. The members of this committee collectively possess knowledge and experience in veterinary science; agricultural science; animal science; the commercial use of animals; the care, breeding, and management of companion animals; ethical standards and conduct in respect of animals; animal welfare advocacy; the public interest in respect of animals; and environmental and conservation management.

The Animal Welfare (Layer Hens) Code of Welfare 2005 is issued by me, by a notice published in the Gazette on 24 December 2004, under section 75 of the Animal Welfare Act 1999. This code comes into force on 1 January 2005.

This code is deemed to be a regulation for the purposes of the Regulations (Disallowance) Act 1989 and is subject to the scrutiny of Parliament's Regulations Review Committee



Hon Jim Sutton
Minister of Agriculture

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1. Introduction, Purpose and Interpretation of Code

1.1 History

The original Code of Recommendations and Minimum Standards for the Welfare of Layer Hens was prepared by the Animal Welfare Advisory Committee (AWAC), which was established in 1989 by the Minister of Agriculture to advise him on matters concerning animal welfare. The codes were of a voluntary nature and had no legal standing under the Animals Protection Act 1960.

The Animal Welfare Act 1999 (the Act) established the National Animal Welfare Advisory Committee (NAWAC), which replaced AWAC, and provided for the issue of codes of welfare with legal effect. One of the responsibilities of NAWAC is to advise the Minister on the content of codes of welfare following a process of public consultation.

1.2 Legal Status of Codes of Welfare

Codes of welfare are deemed to be regulations for the purposes of the Regulations (Disallowance) Act 1989. This means that they are subject to the scrutiny of the Regulations Review Committee of Parliament.

Codes of welfare contain minimum standards and may also contain recommended best practices. Only minimum standards have legal effect, and in two possible ways -

- evidence of a failure to meet a minimum standard may be used to support a prosecution for an offence under the Act (see Appendix I).
- a person who is charged with an offence against the Act can defend himself/herself by showing that he/she has equalled or exceeded the minimum standards (see Appendix I).

Recommendations for best practice under New Zealand conditions set out standards of care and conduct over and above the minimum required to meet the obligations in the Act. They are included for educational and information purposes.

Any person or organisation aggrieved at the operation of a code of welfare has a right to make a complaint to the Regulations Review Committee, Parliament Buildings, Wellington.

This is a parliamentary select committee charged with examining regulations against a set of criteria and drawing to the attention of the House of Representatives any regulation that does not meet the criteria. Grounds for reporting to the House include -

- the regulation trespasses unduly on personal rights and freedoms
- the regulation is not made in accordance with the general objects and intentions of the statutes under which it is made, or
- it was not made in compliance with the particular notice and consultation procedures prescribed by statute.

Any person or organisation wishing to make a complaint should refer to the publication *Making a Complaint to the Regulations Review Committee*, which can be obtained, from the website:

<http://www.clerk.parliament.govt.nz/Publications/Other/>

or by writing to: Clerk of the Committee
Regulations Review Committee
Parliament Buildings
Wellington.

1.3 Process for Code Development

A draft code may be developed by anyone including NAWAC or the Minister. It is then submitted to NAWAC. Provided the draft meets criteria in the Act for clarity, compliance with the purposes of the Act, and prior consultation, NAWAC publicly notifies the code and calls for submissions. NAWAC is then responsible for recommending the form and content of the code to the Minister after having regard to the submissions received, good practice and scientific knowledge, available technology and any other relevant matters.

NAWAC may recommend draft standards that do not fully meet the obligations in the Act if certain criteria specified in the Act are met.

The Minister issues the code by notice in the Gazette.

1.4 Scope

This code applies to all persons responsible for the welfare of layer hens kept for the purpose of producing eggs for sale. For those flocks from which eggs are not sold, the Act applies. NAWAC nevertheless, encourages all owners or persons in charge of layer hens to comply with the relevant sections of this code. It is not the purpose of this code to define marketing standards for egg production systems.

The pre-hatched chick that is in the last half of development is also covered by this code. This has particular application to the sale of embryonated eggs.

In many layer hen production systems the chicks, chickens, pullets and layer hens are reliant to a greater or lesser extent on human management for their daily requirements.

The rearing of chicks, chickens, pullets and layer hens, if it is to be done well, requires both experience and observance of high standards. Unless that work is done well, the welfare of the birds cannot be adequately protected. This

code is intended to encourage all those responsible for its implementation to adopt the highest standard of husbandry, care and handling, to equal or exceed the minimum standards.

Under the Act the “owner” of an animal or the “person in charge” is responsible for meeting the legal obligations to animal welfare. In the case of chicks, chickens, pullets and layer hens the owner of the animal(s) may place these birds in the care of others for the purpose of rearing, transport and slaughter.

Responsibility for meeting minimum standards relating to the provision, design and maintenance of the facilities and equipment, the allocation of operational responsibilities and the competence and supervision of performance of employees will lie with the owner of the layer hens, and may also lie with the person in charge of the layer hens, depending on the role of that person.

Advice is given throughout the code and is designed to encourage owners/operators to strive for a high level of welfare. Explanatory material is provided where appropriate.

Responsibility for meeting minimum standards during the operation of particular tasks will lie with the person responsible for carrying out that particular task. That person is “in charge” of the animals at that particular point in time. Generally, a stockhandler is the person in charge of the animals in that stockhandler’s care. In practice, the identification of the person in charge will depend on the minimum standard in question.

This code provides for the general principles of the care and use of layer hens. The incorporation of the code in quality assurance programmes will help to ensure its success (see Section 6.1 - Quality Assurance Systems).

Other codes that are relevant, and that are either being produced for the first time, or are in the process of being reviewed, include codes concerned with the transport of animals, slaughter at licensed and approved premises, emergency slaughter, and the use of animals for scientific purposes. Where relevant these other codes should be consulted (see Appendix III).

This draft was written by a working group established by the Egg Producers Federation of New Zealand (Inc) and has been reviewed by representatives of the industries, veterinarians, advisers, animal scientists, welfarists and members of the general public. As required by the Act, NAWAC publicly notified the draft code of welfare on 16 July 2002.

1.5 Contents of this Code

Section 69 of the Act provides that a code of welfare may relate to one or more of the following -

- a species of animal
- animals used for purposes specified in the code

- animal establishments of a kind specified in the code
- types of entertainment specified in the code (being types of entertainment in which animals are used)
- the transport of animals
- the procedures and equipment used in the management, care, or killing of animals or in the carrying out of surgical procedures on animals.

In deciding to issue a code of welfare, the Minister must be satisfied as to the following matters set out in section 73(1) of the Act -

- that the proposed standards are the minimum necessary to ensure that the purposes of the Act will be met, and
- that the recommendations for the best practice (if any) are appropriate.

Despite the provisions of section 73(1), section 73(3) of the Act allows NAWAC, in exceptional circumstances, to recommend minimum standards and recommendations for best practice that do not fully meet the obligations of –

- sections 10 and 11 - obligations in relation to physical, health and behavioural needs of animals
- section 12(c) - killing an animal
- sections 21(1)(b) - restriction on performance of surgical procedures
- section 22(2) - providing comfortable and secure accommodation for the transport of animals
- sections 23(1) and 23(2) - transport of animals
- section 29(a) - ill-treating an animal.

In making a recommendation under section 73(3), section 73(4) requires NAWAC to have regard to -

- the feasibility and practicality of effecting a transition from current practices to new practices and any adverse effects that may result from such a transition
- the requirements of religious practices or cultural practices or both
- the economic effects of any transition from current practices to new practices.

This code provides for the physical, health, and behavioural needs of animals. These needs include -

- proper and sufficient food and water
- adequate shelter
- opportunity to display normal patterns of behaviour

- physical handling in a manner which minimises the likelihood of unreasonable or unnecessary pain or distress
- protection from, and rapid diagnosis of, any significant injury or disease -

being a need, which, in each case, is appropriate to the species, environment, and circumstances of the animal - section 4 of the Act.

This code also takes account of -

- good practice
- scientific knowledge
- available technology.

1.6 Preparation and Revision of the Code

This code is based on the knowledge and technology available at the time of publication, and may be varied in the light of future advances and knowledge. Consequently, NAWAC will review this code when deemed necessary. In any event this code will be reviewed no later than 24 December 2014 (being 10 years from the date on which this code was issued by the Minister).

Comments on this code are always welcome and should be addressed to -

The Secretary
National Animal Welfare Advisory Committee
PO Box 2526
Wellington.

Further information can be obtained from the MAF website –

<http://www.biosecurity.govt.nz/animal-welfare>

1.7 Deemed Codes of Welfare and Codes of Recommendations and Minimum Standards

Deemed codes of welfare, and codes of recommendations and minimum standards and guidelines that were endorsed by AWAC prior to the commencement of the Act, are listed in Appendix II of this code. The deemed codes of welfare are valid until 31 December 2004 unless revoked prior to that date.

On 19 December 2002 the Animal Welfare Amendment Act 2002 amended the Animal Welfare Act 1999 to deem the regulations and circular listed in Appendix II to be a code of welfare known as the Animal Welfare (Commercial Slaughter) Code of Welfare 2002.

The Code of Recommendations and Minimum Standards for the Welfare of Layer Hens expired on 31 December 2004.

1.8 Interpretation and Definitions

1.8.1 Interpretation

Minimum standards are identified in the text by a heading and use the word “must” or similar words. They are highlighted in boxes within the text.

Recommended Best Practice

The Act provides that codes of welfare may contain recommendations for best practice.

Recommended best practice is taken to mean -

The best practice agreed at a particular time, following consideration of scientific information, accumulated experience and public submissions on the code. It is usually a higher standard of practice than the minimum standard, except where the minimum standard is best practice. It is a practice that can be varied as new information comes to light.

Recommendations for best practice will be particularly appropriate where it is desirable to promote or encourage better care for animals than is provided as a minimum standard.

Recommended best practices are identified by a heading and, generally, use the term “should”.

Good Practice

The Act does not define “good practice”. NAWAC takes “good practice” to mean a standard of care that has a general level of acceptance among knowledgeable practitioners and experts in the field; is based on good sense and sound judgement; is practical and thorough; has robust experiential or scientific foundations; and prevents unreasonable or unnecessary harm to, or promotes the interests of, the animals to which it is applied. Good practice also takes account of the evolution of attitudes about animals and their care.

Scientific Knowledge

The Act does not define “scientific knowledge”. NAWAC takes “scientific knowledge”, relevant to its areas of responsibility, to mean knowledge within animal-based scientific disciplines, especially those that deal with nutritional, environmental, health, behavioural and cognitive/neural functions, which are relevant to understanding the physical, health and behavioural needs of animals. Such knowledge is not haphazard or anecdotal; it is generated by rigorous and systematic application of the scientific method, and the results are objectively and critically reviewed before acceptance.

Available Technology

The Act does not define “available technology”. NAWAC takes “available technology” to represent, for example, existing chemicals, drugs, instruments, devices and facilities which are used practically to care for and manage animals.

1.8.2 Definitions

Act

“Act” means the Animal Welfare Act 1999.

Animal

This code applies to animals as defined in section 2 of the Act:

“Animal” -

- (a) Means any live member of the animal kingdom that is –
 - (i) A mammal; or
 - (ii) A bird; or
 - (iii) A reptile; or
 - (iv) An amphibian; or
 - (v) A fish (bony or cartilaginous); or
 - (vi) Any octopus, squid, crab, lobster, or crayfish (including freshwater crayfish); or
 - (vii) Any other member of the animal kingdom which is declared from time to time by the Governor-General, by Order in Council, to be an animal for the purposes of this Act; and
- (b) Includes any mammalian foetus, or any avian or reptilian pre-hatched young, that is in the last half of its period of gestation or development; and
- (c) Includes any marsupial pouch young; but
- (d) Does not include—
 - (i) A human being; or
 - (ii) Except as provided in paragraph (b) or paragraph (c) of this definition, any animal in the pre-natal, pre-hatched, larval, or other such developmental stage. - Section 2

Chicks, chickens, pullets and layer hens being birds, are animals for the purposes of the Act.

“Food and Feed” –

The words “food” and “feed” are used interchangeably.

1.9 Glossary

Advisory livestock personnel	Experienced or trained personnel e.g. commercial companies, layer hen advisors, technical advisors, hatchery managers. Also independent avian specialists and advisory personnel from hatcheries and poultry livestock breeding companies.
Alternative systems	Production systems which are not current cage systems (as defined below). They may include free-range, aviary or barn systems.
Aviary	A building housing layer hens without cages, similar to a barn but providing two or more floor levels giving free access for all birds to all floors.
Barn	A building housing layer hens without cages, on a single level, and without access to an outdoor area.
Beak trimming/tipping	The removal of the upper and lower tips of the beak (see Appendix III).
Birds	Chicks, chickens, pullets or layer hens.
Brooding	The management of chickens from day-old to four weeks of age.
Caking	Undesirable compaction of the surface of litter.
Caged layer	Layer hens confined within a cage system.
Current cage system/current cages	Cages or cage systems which provide up to 550 sq.cm per bird.
Chicken	Layer breed of chicken from day-old to eight weeks of age.
Chicks	Newly hatched layer chickens.
Controlled environment	An enclosed insulated building containing pullets or layer hens which provides total control of lighting, ventilation and temperature under automated control with feed, water and egg collection automated and usually computer monitored.

Day-old chicks	Chicks up to 72 hours of age (surviving on their internal yolk sack).
Egg baffle	A metallic strip attached to the back of the feed trough in a laying cage, designed to stop the caged bird pecking and breaking any eggs resting on the egg belt.
Electrified egg saver wire	An electrified wire situated under the feed trough to prevent birds from pecking eggs.
Embryonated egg	A fertilised egg which contains a developing pre-hatched chick.
End of lay	When laying is terminated either naturally or as a management practice. It may be followed by moulting and a further laying period.
Enriched cage	Cages that typically provide more space for birds, (i.e. more than 550 sq.cm per bird) and typically provide perches, a nest box and a dust bathing area.
Euthanasia	Humane killing.
Free-range	A system providing birds with access to an extensive outdoor area and which typically includes housing (either fixed or moveable) similar to a barn, aviary, or perchery without cages.
Growing	Management of the chickens from day-old to point of lay (approximately 18 weeks of age).
Hatcher	A controlled environment cabinet in which eggs are allowed to hatch.
Hatchery	A facility in which controlled environment cabinets are housed.
Induced (or forced) moulting	The deliberate practice of inducing birds to cease egg production simultaneously, lose and replace feathers and restore bone integrity. It usually involves restriction of nutrients and reduced day-length.
Instantaneous fragmentation	Mechanical method of humane destruction of eggs/day-old chicks (also known as maceration).

Layer hen (hens)	A sexually mature egg-producing bird from 18 weeks to end of lay.
Lux	An international measure of light intensity (not to be confused with watts).
Moulting	A natural shedding of the feathers of layer hens between laying cycles.
Perch	An elevated structure allowing birds to roost off the ground.
Perchery	A barn or aviary containing perches.
Placement	Placing of day-old chicks in the rearing facilities or pullets in the laying facility.
Point of lay	The commencement of laying by a sexually mature hen.
Predator	An animal that preys on another.
Pullet	Young hen from eight weeks of age to point of lay.
Range	An outdoor area, usually grass, used by birds in free-range systems.
Spent hen	An end of lay hen destined for slaughter.
Vermin	Animals of a noxious or objectionable kind, including wild birds, rodents and mustelids (weasels, stoats and ferrets).

2. Legal Obligations of Owners and People in Charge of Animals

The owner or person in charge of the layer hens has overall responsibility for the welfare of the birds held in the facility. The legal obligations set out below are not an exhaustive list of the obligations in the Act.

- (1) The owner or person in charge of layer hens must:
 - (a) Ensure that the physical, health, and behavioural needs of the layer hens are met in a manner that is in accordance with both good practice and scientific knowledge
 - (b) Where practicable, ensure that a layer hen that is ill or injured receives treatment that will alleviate any unreasonable or unnecessary pain or distress being suffered by the layer hen, or that it is killed humanely.
- (2) The owner or person in charge of a layer hen must not without reasonable excuse:
 - (a) Keep a layer hen alive when it is in such a condition that it is suffering unreasonable or unnecessary pain or distress
 - (b) Sell, attempt to sell, or offer for sale, otherwise than for the express purpose of it being killed, a layer hen, when the layer hen is suffering unreasonable or unnecessary pain or distress
 - (c) Desert a layer hen in circumstances in which no provision is made to meet its physical, health and behavioural needs.
- (3) No person may:
 - (a) Ill-treat a bird
 - (b) Release a layer hen that has been kept in captivity, in circumstances in which the hen is likely to suffer unreasonable or unnecessary pain or distress
 - (c) Perform any significant surgical procedure on a layer hen unless that person is a veterinarian
 - (d) Perform on a layer hen a surgical procedure that is not significant in such a manner that the hen suffers unreasonable or unnecessary pain or distress.

Defences are set out in Appendix I. The Act contains specific procedural requirements before these defences can be relied on, and these requirements are described in Appendix I.

3. Management of Layer Hens

3.1 Hatchery Management

Introduction

The key issues in hatchery management which affect the welfare of newly hatched chicks include cleaning and hygiene procedures, promptness of removing chicks after hatching, grading of day-old chicks, destruction of cull chicks and unhatched eggs, and holding room conditions.

The methods used for handling the chicks must be humane. Hatching trays with live chicks should be moved smoothly and levelly and precautions taken to prevent chicks falling onto the floor. When chicks are being sexed or handled individually their bodies should be supported, as distinct from lifting the chicks by head or wing alone.

Instantaneous fragmentation units should be routinely maintained and serviced for adequate and efficient functioning. Where used, care should be taken not to overload gas units. In the case of equipment failure, emergency euthanasia of individual chicks can be performed by neck dislocation.

Minimum Standard No.1 – Hatchery Management

- (a) Holding room conditions for newly hatched chicks must provide for control of temperature and airflow so as to protect the welfare of the chicks.
- (b) All hatcheries must follow a documented cleaning, sanitising and hygiene programme.
- (c) Euthanasia protocols must be documented.
- (d) All staff carrying out euthanasia must be trained in the proper use of the relevant protocols.
- (e) All unhatched eggs at the time of day-old chick removal must be destroyed by instantaneous fragmentation.
- (f) Cull and/or surplus chicks must be euthanased by instantaneous fragmentation or gassing with gasses such as CO₂ or a mixture of 70% CO₂ and 30% argon, to achieve a rapid and irreversible unconsciousness.
- (g) With gas euthanasia methods, smothering before the loss of consciousness must not be allowed to occur.
- (h) If CO₂ is used it must be delivered as a gas rather than a liquid into the chamber that is used for euthanasing the chicks.

Minimum standard No.1 continued:

- (i) Where a gas system is used for euthanasing the chicks, the chicks must not be removed from the gas unit until they are either dead or irreversibly unconscious.
- (j) Instantaneous fragmentation equipment must be designed, operated and maintained to ensure instantaneous destruction of eggs or chicks.
- (k) Instantaneous fragmentation units and gas units must not be overloaded so as to avoid incomplete fragmentation or gassing.
- (l) All equipment used for euthanasia must be monitored when it is being used to euthanase the chicks and any problems rectified immediately.

Recommended Best Practice

The time interval from first chicks hatching to removal of chicks from the hatcher should be managed to ensure that the period between hatching and first drink or feed is as short as possible.

When chicks are moved on conveyor belts, the maximum height between consecutive conveyor belts should not exceed 40 cm.

Gas units should contain at least 70% CO₂ before chicks are introduced. They should also be designed to allow continual replenishment of CO₂, to maintain the correct gas levels. CO₂ should also be heated to room temperature before it enters the gas unit.

3.2 Layer Hen Brooding, Growing and Laying

3.2.1 Food and Water

Introduction

Birds should receive a daily diet in adequate quantities and containing adequate nutrients to meet their requirements for good health and welfare.

When considering the amount of food and nutrients birds require, a number of factors need to be taken into account:

- physiological state (growth, laying, moulting)
- extensive or intensive management systems (where appropriate)
- nutritional composition of feed
- age
- size
- state of health

- quality of diet
- growth rate
- previous feeding levels
- feeding frequency
- genetic effects of strain or breed
- level of activity and exercise
- maximum periods of food deprivation (e.g. during transportation)
- introduction of new feeds or ingredients
- climatic factors e.g. inclement weather, droughts (in extensive systems).

Due to the above factors and the considerable variation that occurs between individual birds, food and nutrient requirements vary from one individual to another. Therefore it is not appropriate to include a complete range of the amounts of food and nutrients required as minimum standards.

Food and water supplied to the birds is an important part of maintaining good standards of welfare. Nutrient composition, frequency and quantity of feed, contaminants within the feed, and access to the feeders and drinkers are all important parameters. Requirements for the quality and composition of the feed supplied to the layers are mandated under the Agricultural Compounds and Veterinary Medicines Act 1997 through the MAF Director-General's approved New Zealand Code of Good Manufacturing Practice for Compound Feeds, Premixes and Dietary Supplements.

All water supplied to the birds should be tested for mineral content and microbiological contamination, and advice should be obtained on suitability for poultry, as the composition of water from bores, dams or water holes may alter with changes in flow and rainfall or evaporation. Where necessary the water may require more frequent monitoring for its suitability.

Monitoring of food and water consumption will provide an early warning system of sudden changes in the performance, health and condition of the layers.

The adequacy of the ration to meet the requirements of the flock can be assessed by monitoring the body weight of the chickens and hens measured against a recognised body weight standard for a particular breed and production system.

Advice on body weight profile standards for various production systems can be obtained from the relevant breeding companies in New Zealand.

Minimum Standard No. 2 – Food and Water

- (a) Food must be provided daily to all birds, including day old chicks from the time of placement.
- (b) Food must be provided in such a way as to prevent undue competition and injury.
- (c) Layer hens must receive adequate quantities of food and nutrients to enable each bird to:
 - (i) maintain good health;
 - (ii) meet its physiological demands; and
 - (iii) avoid metabolic and nutritional disorders.
- (d) Feeders must be checked daily for mouldy and contaminated feed and appropriate action taken to remove it.
- (e) All birds must have continuous access to water that is palatable and not harmful to health.
- (f) Representative samples of the rearing and laying flocks must have their weights measured weekly. (Note: For rearing, 100 birds or six cages of approximately 15-17 birds/cage. For in-lay birds (in cages), six cages, with a minimum sample size of 30 and a maximum of 50. For free-range and barn hens – for rearing, 100 birds and for in-lay birds, 50).
- (g) If the average weight of the birds weighed each week does not meet the breeder's guidelines, remedial action must be taken as outlined in the Breeder's Handbook issued for the appropriate breed of bird or as recommended by a veterinary advisor, breeder's field representative, or poultry feed nutrition specialist.

Note:

In addition to weighing, NAWAC would also like to see the inclusion of body condition scoring to determine bird condition. Body condition scoring methods have been developed for a number of species and are used for assessing the condition and health status of individual animals, evaluating the adequacy of feed supply and determining future feeding requirements. NAWAC is committed in general to individual body monitoring systems where practical methods exist. While NAWAC accepts that in commercial production systems, birds are more likely to be of a uniform size, there still is a range of liveweights. Body weight may therefore not necessarily be a reliable indicator of body condition, since it does not take into account individual variations in body size and conformation.

A system of body condition scoring has been trialed which is relatively quick and easy, providing a reliable method for determining emaciation. However NAWAC notes at this time that further research should be carried out with regard to both body weight and body condition score and their correlation with muscle and fat weights. Such research should also consider whether the system developed needs to be refined further to also take into account any breed and strain differences, and the practicality of application.

NAWAC therefore recommends that independent research be carried out on the range of body condition scores in standard breeds of layer hens, in standard flocks at different stages of the laying period, with particular emphasis on the detection of emaciation, i.e. a body condition where there is virtually no palpable flesh apart from skin on either side of the breast bone. NAWAC recommends that this research be carried out during the first two years after this code comes into force, so that it can make a decision on the use of body condition scoring as a possible minimum standard in 2007.

Recommended Best Practice

Free ranging birds and birds with access to whole grain feed should have access to a source of grit to maintain good gizzard function.

3.3 Housing and Related Facilities**3.3.1 Housing*****Introduction***

Provision of appropriate housing and other facilities is essential to the health and welfare of layer hens.

Qualified advice on welfare aspects should be sought when new buildings are planned, existing buildings modified or equipment purchased.

Production systems should take into account insulation, ventilation, heating, lighting, sanitation and hygiene requirements, and must allow for easy inspection.

Housing requirements will apply to enclosed systems (such as barns) and also to the indoor area of free-range systems.

Minimum Standard No. 3 – Housing

- (a) Reasonable precautions must be taken to secure the site and buildings against unauthorised entry of people, to protect the health and welfare of the birds.
- (b) Housing must be sited to facilitate drainage of storm water away from buildings and minimise risks of natural and environmental hazards.
- (c) Housing systems must have suitable fire fighting equipment and a documented emergency plan to be followed in the case of fire.
- (d) For systems with access to outdoors, protection must be provided at all entrance and exit points, to minimise adverse effects of wind and rain on birds and litter.
- (e) For systems with access to outdoors, sufficient shelter (including housing) must be available to protect all birds from inclement weather.
- (f) Controlled environment housing must have automatic alarm systems to warn of power failure including phase failure and temperature variance. Alarm systems must be able to operate through alternative power sources (e.g. batteries).
- (g) Controlled environment housing must have alternative power systems available that are sufficient to maintain all essential electrical systems in the event of a failure in the primary power supply.
- (h) Floors, perches and other surfaces must be designed, constructed and maintained to support the bird and to minimise the risk of injury and disease, and to prevent foot damage and discomfort.
- (i) Enclosed houses must be secured to prevent the escape of birds and prevent the entry of predators.

Information on suitable fire fighting equipment can be obtained from Standards New Zealand, Private Bag 2439, Wellington.

Recommended Best Practice

In free-range systems, every attempt should be made to minimise predation.

Sufficient exits should be accessible to facilitate the evacuation of birds from the building in an emergency.

All equipment should be constructed, placed, operated, and maintained in such a way as to cause the least possible noise. Sound levels should be kept to a minimum, and constant or sudden noise avoided.

Totally enclosed houses should be vermin-proof and other systems should have adequate vermin management programmes.

3.3.2 Equipment

Introduction

All equipment used for keeping layer hens, including electrical systems, nest boxes, perches, cages, drinkers and feeders can have adverse effects on welfare if used, maintained or designed inadequately.

When purchasing new equipment the animal welfare aspects of the equipment need to be taken into consideration. The specifications of the equipment should comply with the appropriate sections of this code.

Minimum Standard No. 4 – Equipment

- (a) All equipment used for raising layer hens must be maintained, sited and operated to avoid injury or other harm to layer hens.
- (b) Controlled environment houses must have backup generators (and backup gas supply where appropriate) and alarms must be checked and tested at least monthly and problems immediately rectified.
- (c) All equipment used for keeping laying hens must be regularly inspected by a suitably qualified person, and repaired immediately if found to be faulty.

3.3.3 Cages

Introduction

Cages are the most common egg production system in use today, and currently their use accounts for the production of approximately 92% of the eggs consumed in New Zealand.

Cage systems have the advantage of protecting bird health and welfare, through the separation of the animal from its faeces, and through precise environmental control. In terms of problems such as feather pecking and cannibalism, the small group size found in a cage allows management interventions to be targeted more accurately than in non-cage systems, and reduces the total number of birds directly affected by such events.

The major disadvantage of cages is that they prevent the birds from displaying many of their normal behaviours such as flying, running, or walking continuously. Cages also provide a barren environment where birds are

denied the ability to forage or dust bathe and nest. Birds may have weaker bones due to lack of exercise.

NAWAC believes that current cages do not fully comply with section 10 of the Act.

In contrast to current cages, enriched cages are showing increased potential for allowing birds to display more of their normal behaviours.

Alternative systems generally provide more enriched environments and an ability to display normal behaviours; nevertheless there are potential welfare issues such as feather pecking, cannibalism, greater incidence of disease, and higher mortalities.

NAWAC is unable to recommend replacement of current cage systems until such time as it can be shown that, in comparison to current cage systems, enriched cages or alternative systems, in the context of supplying New Zealand's ongoing egg consumption needs, would consistently provide better welfare outcomes for birds and be economically viable.

It is recognised that international research and development, and commercial trials are currently being conducted with cages containing perches, nest boxes, litter, and abrasive strips, and that these cage features may offer potential for the New Zealand layer industry. NAWAC therefore wishes to see further research comparing cage and alternative systems. NAWAC will not make any final decision on whether current cages should continue, be modified or be phased out, until 2009, when it will review that scientific research (both national and international).

All production systems are subject to continual review and development. Future research may therefore lead to major changes in the way layer hens are managed.

Minimum Standard No. 5 – Cage Systems

- (a) The floor must be constructed to enable support for each forward pointing toe.
- (b) Layer hens must be able to stand erect without cage features restricting their upright posture.
- (c) The design and size of cage openings and doors must be such that layer hens can be placed in or removed from the cage without causing injury or undue distress.
- (d) Multi-deck cages must be arranged so that layer hens in the lower tiers are protected from excreta from above.
- (e) Cages must provide a feeding trough length of not less than 10 cm per layer hen.
- (f) Water supply to cages must provide each layer hen with access to a drinking point or a 10 cm length of water trough.
- (g) Manure must not be allowed to build up under the cage, so that it touches the cage floor.
- (h) Appropriate earthing must be in place for all cage facilities to prevent cages from becoming electrically live. (This does not preclude the correct use of an electrified egg saver wire, which must be insulated to prevent short circuits to the cage.)
- (i) As from 1 January 2008 all cages for layer hens must have:
 - (i) a floor slope of not more than 8 degrees
 - (ii) a cage height of at least 40 cm over 65% of the cage floor area and not less than 35 cm at any point
 - (iii) door openings which cover the full height and width of the cage front except for the area covered by the feed trough and any hinge or other system operating the door, such that hens can be placed in or removed from the cage without causing injury or undue distress, and
 - (iv) each layer hen must have access to two drinking points.
- (j) All new cages for layer hens installed after the date this code comes into force, must meet Minimum Standard 5(i).

Note:

Section 73(3) of the Act provides that NAWAC may, in exceptional circumstances, recommend minimum standards that do not fully meet the obligations to ensure that the physical, health and behavioural needs of the animal are met. In making this recommendation NAWAC must

have regard to, among other things, the feasibility and practicality of effecting a transition from current practices and any adverse effects that may result from such a transition, and the economic effects of any transition from current practices to new practices.

NAWAC considers that the use of cages for layer hens that do not meet Minimum Standard 5(i) do not fully meet the obligations of the Act. Minimum Standard 5(i) allows for the continued use of such cages until 1 January 2008 at which time all cages must comply with Minimum Standard 5(i).

Recommended Best Practice

Feeding troughs should have a depth that minimises the risk of neck injury.

New cages should not have inward opening doors that open to the full depth of the cage, and therefore may compromise bird welfare when placing, weighing or removing birds at end of lay.

All manure belts should be cleaned at least once a week, to prevent the build up of manure residues.

To facilitate inspection, installation and de-population of hens, there should be a minimum aisle width of at least 100cm between tiers of cages.

3.3.4 Non-Cage Systems

Introduction

Since the early 1990s, demand for eggs produced in non-cage systems has developed. Such systems include barns and free-range which vary greatly in the facilities they provide. Facilities can include, but are not limited to litter, nest boxes, perches, and access to an outdoor area.

In general, birds kept in non-cage systems are free to roam within the confines of the system, and have the opportunity to display a wider range of natural behaviours than those in cages. Birds can make limited flights, walk continuously and run short distances. They live in a more enriched environment, and can forage, dust bathe and nest.

However, the very freedom of birds in non-cage systems makes problems such as feather pecking and cannibalism more difficult to manage, partly because perpetrators are hard to identify, and partly because more birds in total are affected.

In addition, several other problems are common to non-cage systems, including litter management and maintenance of outdoor free-range areas and bird health. However, the problems encountered in these systems may be addressed by good management and the adoption of the highest standards of stockmanship.

All production systems are subject to continual review and development. Future research may therefore lead to major changes in the way layer hens are farmed.

Minimum Standard No. 6 – Non-Cage Systems

- (a) Birds must have continuous access to either 10cm of linear drinking trough per bird, or 5cm of circular drinking trough per bird. Where nipple drinkers or cups are used, there must be at least one drinking point for every 10 birds.
- (b) Nest boxes or nesting areas of an adequate size and number must be provided to meet the laying needs of all hens, and to prevent overcrowding.
- (c) Nest boxes and roosting areas must be designed so as to minimise injuries when hens move to and from these facilities.
- (d) Nest litter, where used, must be managed to keep it in a clean, dry, and friable state.
- (e) All birds must be able to be accommodated on perches without sharp edges providing a minimum of 15 cm per hen or on a raised slatted floor, or both.
- (f) Birds must not be kept on surfaces that have become contaminated to such an extent that they are harmful to the birds' health.
- (g) Birds must not be kept on land that becomes muddy or has become contaminated with poisonous plants, chemicals or organisms that cause or carry disease to an extent that could be harmful to the birds' health.
- (h) Free-range houses must be sited on well-drained soil or be managed to prevent the development, around the housing, of muddy, dusty or contaminated conditions to an extent that could be harmful to the birds' health.
- (i) In free-range systems all birds must be able to readily access the outside areas, through openings which must be of sufficient width to enable birds to freely move to and from the range without the risk of smothering or injury.
- (j) Perches must be designed to minimise foot and leg disorders and leg fractures.

Recommended Best Practice

With permanent houses in free-range systems it is recommended that protection of the ground near the permanent housing should be undertaken with either slatted platforms, covered verandas or areas of gravel or other suitable methods to avoid the ground becoming contaminated and muddy.

To prevent paddocks becoming muddy to an extent that could be harmful to the birds' health, a number of management techniques should be used which may include the rotation of flocks in separately fenced paddocks.

Replacement pullets for free-range and barn production systems should be reared under the system under which they will eventually lay. If producers choose to introduce pullets to a range area from 7 weeks of age, then the outdoor area provided should meet the specifications in Minimum Standards 6 and 7.

Each opening providing access to the outside areas should be of sufficient size to allow the passage of more than one bird at any one time. A suitable dimension is 450 mm high and 1 metre wide.

Perches or roosting areas should not be so high above floor level that birds have difficulty in using them or risk injury.

Perches should be arranged to prevent birds from fouling each other or the food source.

Where the number of 'floor' eggs exceeds 2%, then consideration should be given to the nest accommodation e.g. positioning, numbers, lighting, ventilation and nest litter.

At least one nest for every seven hens should be provided. Where group nests are used, there should be at least 1m² of nest space for a maximum of 120 hens.

General Information

In free-range systems, the time taken for land to become contaminated depends upon the type of land, stocking density and weather patterns.

Large flock sizes may lead to increased aggression. Where aggression does occur, consideration should be given to reducing flock or group sizes.

3.3.5 Shelter and Shade

Introduction

Research has shown that provision of shade/shelter structures, e.g. trees and shrubs, is important if birds are to fully utilise the outside area provided by free-range systems.

In cases where shade/shelter structures have not been provided, there is evidence that birds make most use of the outside area at dawn and dusk, i.e. when the perceived risk of aerial predation is low.

Recommended Best Practice

Shade and shelter structures in systems providing outside access should be provided for protection and refuge from predators and adverse climatic effects.

Shade/shelter structures should be situated so that birds do not have to traverse long distances of open space to reach them.

3.4 Husbandry Practices

These practices include all aspects in the care, handling and livestock management, from the time day-old chicks are received, until the layer hens are removed from the site.

3.4.1 Stocking Densities

Introduction

In all systems of production, stocking densities are an important component of animal welfare. The stocking densities under Minimum Standard No. 7 are the maximum densities and the minimum areas permitted under each production system. Stocking densities are defined as the maximum number of birds per unit area or the minimum area per bird.

In selecting appropriate stocking densities animal welfare obligations should be viewed in a holistic way, taking into consideration disease status and control measures, management skills and attitude, handling, nutrition, housing, facilities and environment. With changes to prevailing conditions, the obligations of the code may necessitate some adjustment to stocking densities. In all production systems a high standard of management skills and husbandry practices is essential.

The surface area used for calculating the house stocking densities is as follows:

- **in cage systems**, the area of the cage, including any space underneath any egg baffle.
- **in all non-cage systems**, the surface area is the area on which birds can stand under the covered roof area. This excludes raised surfaces such as mezzanine floors and platforms under which birds can gain access.

Minimum Standard No.7 specifies the minimum space and maximum stocking densities for birds of various ages in different management systems. The densities are for birds aged 7 – 18 weeks and 19 or more weeks.

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), however the welfare guidelines presented in the code should be adhered to when raising these birds.

NAWAC has not specified the minimum amount of space that should be provided for outside areas for free-range systems. There are significant differences between managing birds indoors e.g. more uniform environment, no climatic extremes, more confinement etc, and outdoors e.g. topography, soil type, climate etc. This means that there will be a number of different ways to manage outdoor areas e.g. rotation, portable housing, vegetation, shelter, use of gravel, or sawdust. It is therefore not possible to stipulate a minimum stocking density that would address all situations. NAWAC intends that producers should manage birds outdoors in ways appropriate to the particular location to ensure they comply with the outcome-based minimum standards.

While stocking densities will vary according to a number of variables, a commonly used stocking density has been 11 sq m per bird.

Rearing

Introduction

In both of the following systems, it is normal management practice to ensure that the birds are able to huddle together to conserve heat or to have sufficient room so that each bird can rest without contact with other birds so as to ensure adequate air circulation.

If producers choose to introduce pullets to the range from 7 weeks of age then the management of the outdoor area provided should meet specifications in Minimum Standard No. 6.

Floor Rearing on Litter

The birds are usually confined to the area immediately adjacent to the heating source for the first two weeks of life, and thereafter are allowed to range at increasing distances from the heat source, until they can range over the entire area provided by the shed in which they are housed. This system is almost identical to the conditions under which broiler or meat chickens are reared.

Cage Rearing

The entire building is usually heated to the required temperature of 34-36°C. For the first 0-6 week period the birds are housed in groups at densities between 160 and 220 sq cm per bird depending on the facilities available and the flock size.

Minimum Standard No. 7 – Stocking Densities for Birds in Cage, Free-range and Barn systems

	7 – 18 Weeks		19 or more Weeks	
	Birds / sq m (maximum)	Sq cm / bird (minimum)	Birds / sq m (maximum)	Sq cm / bird (minimum)
(a) Houses for Barn systems:	14	724	7	1428
(b) Houses for Free-range:	14	724	10	1000
(c) The outdoor area in free-range systems must be sufficiently large and also be managed to ensure that the ground does not become pugged, muddy, dusty or contaminated so as to harm the health and welfare of the birds.				
(d) Cage systems	(i) Cages existing prior to the commencement of this code	(ii) New cages built after the commencement of this code	(iii) All cages existing prior to commencement of this code from 1/1/2008	(iv) All cages from 1/1/2014
	Sq cm / bird (minimum)	450	550	500
(e) Cages for birds aged 7 – 18 weeks must provide a minimum floor space of at least 370 sq cm per bird and for a maximum of 27 birds per sq m.				

Note:

Section 73(3) of the Act provides that NAWAC may, in exceptional circumstances, recommend minimum standards that do not fully meet the obligations to ensure that the physical, health and behavioural needs of the animal are met. In making this recommendation NAWAC must have regard to, among other things, the feasibility and practicality of effecting a transition from current practices and any adverse effects that may result from such a transition, and the economic effects of any transition from current practices to new practices.

Based on current knowledge, NAWAC would ideally like current cages to be eventually phased out but is unable to recommend replacement of current cages with alternative systems including enriched cages, until such time as it can be shown that, in comparison to current cage systems, in the context of supplying New Zealand's ongoing egg consumption needs, they would consistently provide better welfare outcomes for birds and be economically viable.

NAWAC considers that cages that provide a minimum floor space of less than 550 sq cm per bird, do not fully comply with section 10 of the Act. Minimum Standard 7(d) allows for a transition period for the phasing out of cages that provide less than 550 sq cm.

NAWAC notes, however, that any decision to provide greater minimum space and/or behavioural enrichment or to phase out such cages altogether, will be left to such time as this code is reviewed in 2009. NAWAC will, at that time, consider: current New Zealand and international research on alternative systems including enriched cages; current good practice; available technology; public submissions; international practices and trends; and the feasibility, practicality and economic effects of any change.

Recommended Best Practice

Parameters that relate to stocking densities of houses and other aspects of animal welfare should be available for auditing purposes, which include mortality and culls, total number of birds and floor area.

3.4.2 Feather Pecking and Cannibalism

Feather pecking can be a serious problem in all egg production systems, but is exacerbated in non-cage systems where many birds can mix. The exact causes of feather pecking are not known, but may include redirection of foraging behaviour, genetic predisposition, plumage colour variation in target animals, light intensity, food access and composition, and stocking density. Once feather pecking begins, it is very difficult to stop, and can quickly escalate into cannibalism that may result in death. From both a welfare and production point of view, cannibalism is a major problem, and every effort should be made to avoid it.

A number of management options for preventing or handling outbreaks of feather pecking and cannibalism are given below:

- Selection for docile strains
- Use of birds of uniform colour
- Avoidance of sudden changes in food composition
- Minimisation of aggression at key resources (feeders, drinkers, nest boxes, etc.)
- Selection of 'low aggression' feeds (Tryptophan rich)
- Scatter feeding
- Removal/culling of aggressors
- Removal of pecked birds
- Application of deterrents (tars)
- Provision of escape areas
- Reduction of stocking density

- Change lighting intensity
- Beak trimming of adult birds (as a last resort).

3.4.3 Lighting

Introduction

During the rearing and growing period following brooding, when lights are on, lighting may be reduced to around 5 lux. This level of light may reduce the possibility of feather pecking and cannibalism.

Lighting will need to be increased during inspection to stimulate an appropriate level of activity and thereby more easily reveal any welfare problems. This will also provide sufficient lighting for the inspection of the birds and equipment. Immediately following inspection light levels should be reduced to the previous level.

If exterior lighting creates problems such as overcrowding where the light falls, e.g. sunlight through fan openings, appropriate light filtering mechanisms should be installed.

Minimum Standard No. 8 – Lighting

- (a) Young chicks reared away from the hen must be provided for the first three days after hatching with a minimum of 20 lux in order to locate the food and water.
- (b) After this time, if the light intensity is reduced it must not fall below a minimum of 5 lux at ground level.
- (c) To ensure clear visibility during inspection of birds, a light intensity of a minimum of 10 lux at ground level must be provided.
- (d) In the first week of rearing where pullets are housed on the floor in windowless houses using continuous light, a "blackout" training period must be implemented to prevent panic should lighting fail.
- (e) Where layer hens do not have access to daylight they must be given continuous lighting over a period of at least eight hours per day and a maximum of 16 hours per day in each 24 hours.

Recommended Best Practice

In non-cage systems, where hens do not have access to natural lighting, light intensity should be raised and lowered gradually over a 15 minute period to give them sufficient time to roost without causing injury.

3.4.4 Beak Trimming

Introduction

Reduced light levels help to reduce the risk of cannibalism and feather pecking in all types of production systems. Light levels can be controlled most easily where the birds are kept 24 hours per day in enclosed houses, and under these conditions many producers find it is no longer necessary to beak trim.

In non-cage systems, there is an increased risk of cannibalism and feather pecking due, in part, to the larger flock sizes. Where light levels cannot be easily controlled, beak trimming or other management strategies may be required to reduce the risk of cannibalism. Ultimately, genetic selection for less aggressive strains of birds may reduce the need for beak trimming (or other management procedures) under all systems.

Beak trimming is a potentially painful process and should only be carried out by trained and competent operators. It should be carried out when birds are at a young age, i.e. within the first ten days after hatching. Beak trimming later than the first ten days after hatching increases the risk of beak deformity, chronic pain, and persistent neuroma formation.

A recommended guideline for beak trimming operators is contained in Appendix III.

Minimum Standard No. 9 – Beak Trimming

- (a) Where beak trimming is undertaken it must be carried out within 10 days of hatching except in the circumstances set out in (b) and there must be precise control over the amount of the beak that is removed.
- (b) Notwithstanding (a) trimming of beaks of birds after 10 days of age may be undertaken in an emergency to help control outbreaks of cannibalism during the laying period.
- (c) The operator must not remove more than one-quarter of the upper or lower beaks. This means:
 - (i) for day-old chicks, not more than 2mm of the beak;
 - (ii) for 10 day-old chickens, not more than 3mm of the beak; and
 - (iii) for adult birds-no more than the blunting of upper and lower mandible tips.
- (d) Beak trimming must only be carried out by trained operators.

3.4.5 Moulting Inducement

Introduction

Forced moulting causes birds to stop laying, shed their feathers, and then resume laying. It allows producers to extend egg production into a second laying period, and in many cases it helps to improve egg quality and in particular, shell quality. It also saves on bird replacement costs. The main method used for inducing a moult is to withhold feed and water temporarily. Forced moulting causes a severe physiological stress, which can result in the death of some birds. The number of deaths underestimates the overall significance of the physiological stress and does not take into account those birds which approach death but do not succumb. Forced moulting should therefore never be used as a routine procedure and should only be carried out as a last resort when alternative strategies cannot be applied.

Minimum Standard No. 10 – Moulting Inducement

- (a) Forced moulting may only be used when replacement birds are not available.
- (b) Moulting inducement must only be carried out:
 - (i) on healthy layer hens;
 - (ii) under conditions that will avoid cold stress; and
 - (iii) under close management supervision.
- (c) Minimum Standard 2(g) applies during forced moulting.
- (d) Methods of moulting inducement that totally deprive layer hens of food or water for greater than a 24-hour period must not be used.
- (e) In hot weather where there is a risk of heat stress methods of moulting inducement that totally deprive hens of water must not be used.
- (f) Moulting inducement must not occur on birds of more than 74 weeks of age.

Recommended Best Practice

Forced moulting should not be carried out.

If forced moulting is carried out, substitution of a high fibre diet, (e.g. whole barley), in place of normal rations is a preferred method of moulting inducement. Adequate feeding space should be provided during such practices.

3.4.6 Identification

Minimum Standard No. 11 – Identification

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

3.5 Ventilation/Temperature

3.5.1 Ventilation

Introduction

Temperature requirements for layer hens vary considerably from day-old to end of lay and all production systems need to be able to handle the changing requirement of the layer hen over time.

Ventilation is required at all times to provide fresh air, and to assist in the control of temperature, house moisture and litter quality. The accumulation of water vapour, heat, noxious gases and dust particles may cause discomfort or distress to the layer hens and predispose them to the development of disease, respiratory conditions and skin disorders.

Potential ammonia problems are more likely to be found in the winter and early morning periods. The presence of ammonia is usually a reliable indicator of a build up of gases. As a guide to the level of ammonia within the house, 15ppm of ammonia in the air can be detected by smell and an ammonia level over 25ppm will cause eye and nasal irritation to humans.

Air humidity can be determined by both external factors and internal factors within the house. Examples of internal factors within the house are stocking density, liveweight of the birds, ventilation rate, indoor temperature, malfunction of technical equipment, disease and litter quality.

Dust is a potentially harmful air contaminant, mainly in combination with ammonia and other gases, and may directly affect the respiratory tracts of the birds, as well as act in the transmission of bacterial and viral infections.

Forced ventilation may be required from time to time to meet the conditions of the Minimum Standard.

Minimum Standard No. 12 – Ventilation

- (a) All ventilation systems must have the ability to prevent the build-up of harmful gases, e.g. ammonia and CO₂.
- (b) Where levels of 25 ppm or more of ammonia within the house are detected at bird level, immediate and appropriate action must be taken to increase ventilation, or reduce litter moisture, or both, to ensure a return to levels below 25 ppm.

Recommended Best Practice

Ammonia levels should not consistently exceed levels that can be detected by smell (i.e. 10-15 ppm).

Dust levels within the house should be kept to a minimum by maintaining appropriate ventilation and humidity levels and appropriate litter management. Dust filters should be used wherever air is mechanically re-circulated through layer hen housing.

3.5.2 Temperature – Newly Hatched Chicks

Introduction

Newly hatched chicks have a reduced capacity to maintain adequate body temperature and thus additional heat input is required. After the first few days of age, temperatures within the house should be reduced gradually until an appropriate temperature between 17°C and 23°C is reached.

Minimum Standard No. 13 – Temperature – Incubator Hatched Chicks

- (a) Temperature control systems must have the ability to add heat in order to maintain the desired temperatures compatible with layer hen health and welfare.
- (b) Facilities must be preheated before placement of day-old chicks to ensure that chick welfare is not compromised.
- (c) Temperature readings must be taken at sufficient intervals to note any adverse or potentially stressful temperature fluctuations, and any such fluctuations must be addressed and rectified promptly.

3.5.3 Temperature – Growing and Adult Layer Hens

Introduction

Layer hens should be protected from draughts and thermal stress.

If a high proportion of layer hens in a flock show persistent panting behaviour during flock inspection then prompt action should be taken to reduce environmental temperature.

Where adverse temperatures are causing distress, a number of systems can be used to control excessively hot or cold conditions within buildings. Remedial actions for overheating may include the use of roof sprinklers, fans, cooling pads, foggers and air vents, and for cold conditions draught excluders, brooders or other heaters.

Minimum Standard No. 14 – Temperature – Growing and Adult Layer Hens

- (a) In controlled environment houses temperature control systems must have the ability to both add and remove heat for growing chickens and the ability to remove heat for pullets and laying hens in order to minimise stress produced by fluctuations in temperature and humidity.
- (b) In controlled environment houses temperature readings must be taken at sufficient intervals to note any adverse or potentially stressful temperature fluctuations and any such fluctuations must be addressed and rectified promptly.
- (c) Provision must be made to minimise stress produced by temperatures high enough to cause prolonged panting.
- (d) In extreme cold weather provision must be made to minimise stress produced by draughts or cold.

3.6 Litter Management

Introduction

The physical properties of the litter are important in maintaining good health and welfare. Key features of litter management are control of quality, moisture, dust, ammonia production, caking, litter depth, fungal proliferation, and frequency of use. The optimum minimum depth of litter material depends on the choice of litter material.

Minimum Standard No. 15 – Litter Management

- (a) Litter material must not result in levels of dustiness or dampness that would cause respiratory or other health problems.
- (b) Litter material must not contain toxins (toxicising agents and fungi) or other contaminants, at sufficient levels to cause respiratory and other health problems.
- (c) Indoor solid floors must be completely covered with litter material.
- (d) Attention must be given to water ingress and leaking drinkers to avoid excessive caking and ammonia production and any such problems must be remedied promptly.
- (e) All litter must be inspected daily and maintained to achieve the above standards.

Recommended Best Practice

A minimum depth of litter material should be appropriate to the choice of litter material. At house placement time wood shavings litter should be 50-75 mm deep and shredded paper should be sufficient to provide a minimum depth of 20 mm when packed down by the birds.

Litter that has caked should be removed or turned and the underlying cause should be remedied promptly.

Litter should be used for one growing or laying cycle only.

General Information

There are occasions during the year when it is difficult to obtain litter at the required time. In some production systems, there may be difficulties in cleaning out sheds containing mixed age flocks. Some farmers do not operate an 'all in – all out' system, where the entire laying flock is replaced at one time. A mixed age flock occurs when only a proportion of the flock is replaced at any one time.

3.7 Disease and Injury Control

Introduction

Disease control is essential to ensure that chick, chicken, pullet and layer hen welfare is maintained at optimal levels. Appropriate programmes to control disease include:

- vaccination
- preventative medication
- biosecurity and
- hygiene.

Specialist veterinary advice should be sought in the formulation of any disease control programme, and should be readily available at all other times.

All persons responsible for the care and management of chickens and layer hens need to be aware of the signs of disease. They should be trained beforehand or supervised if they are not competent in recognising the signs of disease. Signs may include a reduction in feed and water intake, reduced rate of body weight gain in rearing, changes in faeces and litter quality, odour of the litter, changes in appearance, activity or behaviour or increase in mortality.

At all inspections general house and flock conditions should be observed. The production system should be assessed for the likelihood of infectious and parasitic disease and appropriate control systems put in place to prevent them.

Minimum Standard No. 16 – Disease and Injury Control

- (a) A detailed inspection of each flock must be undertaken at least once a day.
- (b) Mortalities, including culls, must be monitored and recorded and dead birds removed from the flock daily.
- (c) Birds recognised in the flock as having diseases, injuries or other conditions that may affect their ability to compete over the long term or that may ultimately lead to death must be killed by a humane method or treated therapeutically as soon as they are recognised.
- (d) Medication must be used only in accordance with registration conditions, manufacturers' instructions or professional advice.
- (e) If the early signs of a disease outbreak are recognised or suspected or mortalities are greater than expected then appropriate intervention must be undertaken by a suitably qualified person.
- (f) If houses are not electronically monitored and controlled, sufficient inspections must be undertaken during which temperature, light levels, availability of feed, feeding systems, water and all air vents are checked, and where problems are encountered, appropriate remedial action must be taken to protect the welfare of the birds.
- (g) Premises and equipment must be thoroughly cleaned and disinfected before restocking to prevent the carry over of disease-causing organisms to incoming birds.

Recommended Best Practice

The practice of moving birds between cages in order to fill up cage spaces created by ongoing mortality should be discouraged.

3.8 Humane Destruction

Introduction

Destruction of birds may be carried out on individuals, such as culls and runts, or on large numbers in the case of a disease outbreak. There are various methods of destruction and their use will depend on the situation.

Minimum Standard No. 17 – Humane Destruction

- (a) Humane destruction when necessary must be carried out in an acceptable manner such as concussion followed by neck dislocation, electrical stunning followed by neck dislocation, neck dislocation alone, or euthanasia using gas mixtures of at least 70% CO₂ in air, or a mixture of 70% CO₂ and 30% argon.
- (b) When humane destruction is done by gassing then the procedure must be sufficient to ensure collapse of every bird within 35 seconds of exposure in the gas and birds must remain in the gas for at least a further four minutes following collapse. Birds must be carefully inspected to ensure that they are dead.
- (c) Persons undertaking humane destruction must be appropriately trained and must ensure that the birds are managed gently and calmly at all stages of the process.
- (d) Any equipment used to undertake humane destruction must be well maintained in order to operate efficiently.

3.9 Stockmanship

Introduction

Birds kept in controlled environment production systems are entirely reliant on the provision of their needs by human management. The care of the birds, at whatever stage of production, therefore requires both experience and the observance of high standards.

Under the Act the “owner” of an animal or the “person in charge” is responsible for meeting the legal obligations to animal welfare. This code is intended to encourage all those responsible for its implementation to adopt the highest standard of husbandry, care and handling, to equal or exceed the minimum standards. While this code is based on current knowledge and technology available at the time of issue, it does not replace the need for experience and common sense in the handling of the birds.

The importance of good stockmanship cannot be over-emphasised. Those responsible for the care of birds should be competent and well trained. Personnel should be appropriately instructed in the care and maintenance of birds and how their actions may affect the chickens’ welfare. Knowledge of the normal appearance and behaviour of chicks, chickens, pullets and layer hens is essential for their health and welfare. It is important that those in charge of the birds should be able to recognise early signs of distress or disease so that prompt action is taken or advice sought.

Owners or operators should ensure that their personnel either have the relevant knowledge and training or appropriate supervision to ensure that the health and welfare needs of the birds in their care are met. Personnel should undergo training either formally or on the job by experienced supervisors.

Any contract or temporary staff should be trained and competent in the relevant activity. Quality assurance programmes should emphasise the importance of training of personnel. The Agriculture Industry Training Organisation lists a number of training qualifications for those involved in the poultry industry.

Information on these qualifications and accredited training providers is available from the Agriculture Industry Training Organisation, PO Box 10 383, Wellington, or from the NZQA web site:

<http://www.nzqa.govt.nz/framework/>

Minimum Standard No. 18 – Stockmanship

- (a) Birds must be cared for by personnel who possess the appropriate ability, knowledge and professional competence to maintain their health and welfare, in accordance with the minimum standards listed in this code.

4. Catching, Loading, Transport, Unloading and Sale

Introduction

Because the ownership of the birds normally changes at the farm gate the responsibilities of the two parties, farmer and transporter/carrier are separate.

Where transport guidelines exist they should be consulted, or where a code of welfare on transporting animals exists, it must be complied with, otherwise transport should generally be in accordance with the *Code of Recommendations and Minimum Standards for the Transport of Animals within New Zealand* or any code that replaces that code.

All persons in charge of the birds including producers, staff and contract transport operators should be aware of any guidelines or code of welfare on transporting animals. Attention should be given to the preparation of safe and secure transport.

5. Management Practices

5.1 Flight Restriction

Introduction

Flight restriction is an issue for small outdoor producers, when considering flock control measures.

Recommended Best Practice

If flight restriction is required it is recommended that only the flight feathers of one wing should be trimmed.

6. Quality Management

6.1 Quality Assurance Systems

Recommended Best Practice

To help ensure that standards of animal welfare and husbandry are maintained, each commercial facility should implement a quality assurance system that provides for written procedures. The elements of the quality assurance system should provide for the minimum standards and recommendations for best practice of this code.

The quality assurance system should require continual review of existing systems and procedures that could enhance the welfare of layer hens. Producers and the Egg Producers Federation should encourage ongoing debate and assessments of management practices that may improve the welfare of layer hens. Where improvements to current practice are identified, these should be communicated to producers via appropriate technology transfer methods such as seminars, workshops, and industry newsletters.

The quality assurance system should provide for all incidents resulting in significant sickness, injury or death of birds to be fully investigated and documented. Where the results of an investigation may have implications for current industry management practices, a report outlining the incident and implications should, as soon as it is available, be forwarded to the appropriate industry body for consideration.

General Information

Under the Animal Products Act 1999 commercial egg producers are required to have a Whole Flock Health Scheme in place for all egg production and have the required Risk Management Programmes registered with the New Zealand Food Safety Authority, Ministry of Agriculture and Forestry.

6.2 Records

Information

The maintenance of good records is an integral part of a quality assurance system and good farm management.

Parameters that relate to stocking densities of houses and other aspects of animal welfare should be available for auditing purposes.

Appendix I: Defences

1. Strict Liability

In the prosecution of certain offences under the Animal Welfare Act 1999 committed after 19 December 2002, evidence that a relevant code of welfare was in existence at the time of the alleged offence and that a relevant minimum standard established by that code was not complied with is rebuttable evidence that the person charged with the offence failed to comply with, or contravened, the provision of the Animal Welfare Act to which the offence relates. (See sections 13(1A), 24(1) and 30(1A) of the Animal Welfare Act 1999, as amended by the Animal Welfare Amendment Act 2002).

2. Defences

It is a defence in the prosecution of certain offences under the Animal Welfare Act 1999 if the defendant proves that there was in existence at the time of the alleged offence a relevant code of welfare and that the minimum standards established by the code of welfare were in all respects equalled or exceeded. (See sections 13(2)(c), 24(2)(b) and 30(2)(c)).

If a defendant in a prosecution intends to rely on the defence under section 13(2)(c) or 30(2)(c), the defendant must, within seven days after the service of the summons, or within such further time as the Court may allow, deliver to the prosecutor a written notice. The notice must state that the defendant intends to rely on section 13(2) or 30(2) as the case may be, and must specify the relevant code of welfare that was in existence at the time of the alleged offence, and the facts that show that the minimum standards established by that code of welfare were in all respects equalled or exceeded. This notice may be dispensed with if the Court gives leave. (See sections 13(3) and 30(3)).

3. The strict liability provisions and the defence of equalling or exceeding the minimum standards established by a code of welfare apply to the following offences -

Failing to provide

Section 12(a) A person commits an offence who, being the owner of, or a person in charge of, an animal, fails to comply, in relation to the animal, with section 10 (which provides that the owner of an animal, and every person in charge of an animal, must ensure that the physical, health, and behavioural needs of the animal are met in a manner that is in accordance with both good practice and scientific knowledge).

Suffering animals

Section 12(b) A person commits an offence who, being the owner of, or a person in charge of, an animal, fails, in the case of an animal that is ill or injured, to comply, in relation to the animal, with section 11 (which provides

that the owner of an animal that is ill or injured, and every person in charge of such an animal, must, where practicable, ensure that the animal receives treatment that alleviates any unreasonable or unnecessary pain or distress being suffered by the animal).

Section 12(c) A person commits an offence who, being the owner of, or a person in charge of, an animal, kills the animal in such a manner that the animal suffers unreasonable or unnecessary pain or distress.

Surgical procedures

Section 21(1)(b) A person commits an offence who, without reasonable excuse, acts in contravention of or fails to comply with section 15(4) (which provides that no person may, in performing on an animal a surgical procedure that is not a significant surgical procedure, perform that surgical procedure in such a manner that the animal suffers unreasonable or unnecessary pain or distress).

Transport

Section 22(2) A person commits an offence who fails, without reasonable excuse, to comply with any provision of subsection (1) (which provides that every person in charge of a vehicle or an aircraft, and the master of or, if there is no master, the person in charge of, a ship, being a vehicle, aircraft, or ship in or on which an animal is being transported, must ensure that the welfare of the animal is properly attended to, and that, in particular, the animal is provided with reasonably comfortable and secure accommodation and is supplied with proper and sufficient food and water).

Section 23(1) A person commits an offence who, without reasonable excuse, confines or transports an animal in a manner or position that causes the animal unreasonable or unnecessary pain or distress.

Section 23(2) A person commits an offence who, being the owner of, or the person in charge of, an animal, permits that animal, without reasonable excuse, to be driven or led on a road, or to be ridden, or to be transported in or on a vehicle, an aircraft, or a ship while the condition or health of the animal is such as to render it unfit to be so driven, led, ridden or transported.

Ill-treatment

Section 29(a) A person commits an offence who ill-treats an animal.

4. Inspection of premises

Section 127(1) Inspectors appointed under the Animal Welfare Act 1999 have the power to enter any land or premises (with the exceptions of dwellings and marae), or any vehicle, aircraft or vessel, at any reasonable time, for the purpose of inspecting any animal.

Inspectors include officers of MAF Compliance and Enforcement Group, inspectors from approved organisations (e.g. Royal New Zealand SPCA, AWINZ) appointed by the Minister, and the Police.

Appendix II: Codes of Welfare

Codes of Welfare

- Animal Welfare (Broiler Chickens: Fully Housed) Code of Welfare No.1. 2003
- Animal Welfare (Rodeos) Code of Welfare No.2. 2003
- Animal Welfare (Layer Hens) Code of Welfare No.4. 2004
- Animal Welfare (Zoos) Code of Welfare No.5. 2004
- Animal Welfare (Circuses) Code of Welfare No.6. 2005
- Animal Welfare (Pigs) Code of Welfare No. 3. 2005

List of Regulations and Circular Deemed to be the Animal Welfare (Commercial Slaughter) Code of Welfare 2002

- Clauses 1(a) and 2, and the heading preceding clause 2, of Part 7 of the Schedule 1 of the Fish Export Processing Regulations 1995 (SR 1995/54)
- Regulation 80(1) of the Game Regulations 1975 (SR 1975/174)
- Regulation 76 of the Meat Regulations 1969 (SR 1969/192)
- The Slaughter of Stock, Game, and Poultry Regulations 1969 (SR 1969/194)
- New Zealand Fishing Industry Agreed Implementation Standards 003.4 Live Eels and Rock Lobsters Circular 1995

Published Codes of Recommendations and Minimum Standards

- Code of Recommendations and Minimum Standards for the Sea Transport of Sheep from New Zealand, September 1991 Code No. 2
- Code of Recommendations and Minimum Standards for the Welfare of Sheep, July 1996 Code No. 3
- Code of Recommendations and Minimum Standards for the Welfare of Dairy Cattle, June 1992 Code No. 4
- Code of Recommendations and Minimum Standards for the Welfare of Deer During the Removal of Antlers, July 1992 Code No. 5, Amendments August 1994, August 1997
- Code of Recommendations and Minimum Standards for the Welfare of Horses, February 1993 Code No. 7
- Code of Recommendations and Minimum Standards for the Welfare of Bobby Calves, July 1997 Code No. 8
- Code of Recommendations and Minimum Standards for Care of Animals in Boarding Establishments, August 1993 Code No. 9

- Code of Recommendations and Minimum Standards for the Welfare of Animals at the Time of Slaughter at Licensed and Approved Premises, July 1996 Code No. 10
- Code of Recommendations and Minimum Standards for the Sale of Companion Animals, September 1994 Code No. 11
- Code of Recommendations and Minimum Standards for the Welfare of Animals Transported within New Zealand, November 1994 Code No. 15, Amendments May 1996, August 1998
- Code of Recommendations and Minimum Standards for the Welfare of Animals at Saleyards, June 1998 Code No. 16
- Code of Recommendations and Minimum Standards for the Emergency Slaughter of Farm Stock, December 1996 Code No. 19
- Code of Recommendations and Minimum Standards for the Welfare of Dogs, May 1998 Code No 20
- Code of Recommendations and Minimum Standards for the Welfare of Ostrich and Emu, June 1998 Code No. 21

Published Guidelines

- Guidelines for the Welfare of Stock from which Blood is Harvested for Commercial and Research Purposes, April 1996
- Guidelines for the Welfare of Yearling Fallow Deer During the Use of Rubber Rings to Prevent Antler/Pedicle Growth, September 1997
- Guidelines for the Welfare of Red and Wapiti Yearling Stags During the Use of Rubber Rings to Induce Analgesia for the Removal of Spiker Velvet, September 1998

<p>Codes and Guidelines may be obtained from:</p> <p>Executive Co-ordinator Animal Welfare MAF Biosecurity Authority Ministry of Agriculture and Forestry P O Box 2526 WELLINGTON</p> <p>Tel: 04 474 4129 e-mail: animalwelfare@maf.govt.nz</p>	<p>or can be inspected at:</p> <p>ASB House Reception Level 3 101-103 The Terrace WELLINGTON</p>
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Codes and Guidelines are available on MAF's website. The web page address is:

<http://www.biosecurity.govt.nz/animal-welfare>

Appendix III: Beak trimming

Beak trimming

A3.1 Background

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 an independently accredited standard has been shown to improve trimming procedures and bird welfare. The following information should be used as a guide to beak trimming by the 'hot blade' method only. It should be noted that although hot blade trimming is the most commonly used method, there are alternatives such as, 'cold cutting' (using secateurs), and electric removal, which may be more suitable depending on the circumstances.

A3.2 Preparing for beak trimming

A3.2.1 Preparing the equipment

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

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
- the power cable is kept as short as possible and hung 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 tipped 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

A3.3.1 Placing a chick against the beak trimmer

Check beak trimmers are fitted with a gauge in which there are a number of holes of different sizes.

Pick up each chick carefully in the palm of your hand, taking care not to squeeze it. 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 3-7 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 tipper, 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-quarter 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. Any bleeding or injured chick should receive appropriate corrective treatment or be humanely euthanased.

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

Make sure that each drinker contains an adequate depth of water (i.e. at least 8mm) when it stops filling and the feeder contains a minimum of 12 mm of feed.

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

Record:

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

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