

ANIMAL WELFARE (LAYER HENS) CODE OF WELFARE 2004 REPORT

Introduction

1. This report accompanies the draft Animal Welfare (Layer Hens) Code of Welfare 2004 which has been developed by the National Animal Welfare Advisory Committee (NAWAC), pursuant to the Animal Welfare Act 1999 (the Act). The Act requires that when NAWAC recommends to the Minister of Agriculture that a code of welfare be issued, the code must be accompanied by a report (section 74). That report must note:
 - (a) The reasons for the committee's recommendation; and
 - (b) The nature of any significant differences of opinion about the code, or any provision of it, that have been shown by the submissions; and
 - (c) The nature of any significant differences of opinion about the code, or any provision of it, that have occurred within the committee.

In providing this report, NAWAC notes that it fully considered all submissions it received, undertook an extensive review of relevant scientific literature, consulted with international researchers, and that there was lengthy debate among committee members on many points. This report is not required to, and does not attempt to, show every detail of the analysis and discussions that took place.

2. It should be noted that the Act does not define 'significant differences'. While there were a variety of different opinions expressed in the submissions, NAWAC did not consider that all differences necessarily represented significant differences of opinion. NAWAC has taken the view that significant differences are either where there are large numbers of submissions which are contrary to a minimum standard in the draft code or where a submission puts forward a justification based on scientific evidence or good practice for a different or alternative minimum standard. NAWAC notes that some individuals or organisations may vary in their interpretation of what are significant differences.
3. The Egg Producers Federation of New Zealand (EPF) reported that, as at November 2003 the New Zealand egg industry numbered just over 3 million birds with about 130 producers. 91.6% of layer hens were kept in cages, with 3.9% in barns and 4.5% in free-range systems. Egg consumption, according to

the EPF, had been steadily increasing in recent years, with annual consumption of 207 eggs per person in 2000.

Intensive, indoor cage production of eggs is therefore a major part of egg production in New Zealand. Approximately 87% of the cage layers are housed in modern style multi-layer cage units, mainly installed in the last 3-5 years. Alternative systems of egg production in New Zealand are currently either barn or free-range. The furnished or modified cage is not in use in New Zealand. The Royal New Zealand SPCA operates accreditation schemes for barn and free-range eggs. New Zealand enjoys a high avian health status, with most of the major avian diseases being absent from New Zealand; it therefore has very strict biosecurity controls with regard to importation of poultry and poultry products. New Zealand is self sufficient with regard to egg production and no eggs for eating (table eggs) are imported. Breeding stock is imported as fertile hatching eggs from Canada which are hatched under strict quarantine requirements imposed by the Ministry of Agriculture and Forestry. There is a small export trade of eggs, egg products and one-day-old chickens

Public Consultation

4. The Act allows for any individual or organisation to draft a code of welfare. This code was drafted by a writing group convened by the EPF. NAWAC acknowledges the extensive effort by the writing group and the EPF that contributed to the development of the draft code. In addition, as required by the Act, the code was consulted with representatives of those most likely to be affected by it. The code was consulted with commercial egg producers through direct correspondence or industry seminars held throughout the country during October 2001 in Dunedin, Christchurch, Nelson, Palmerston North, Tauranga and Auckland, with 85% of all commercial egg producers attending the seminars. In addition, other interested parties were consulted including the Royal New Zealand SPCA, Save Animals from Exploitation (SAFE), the New Zealand Veterinary Association (NZVA), the Animal Welfare & Behaviour Research Centre, AgriQuality New Zealand, MAF Biosecurity Authority and the NAWAC Poultry Industry Subcommittee.
5. Following a deliberation by NAWAC to ensure that the code complied with the purposes of the Act, was clearly written and readily understood, and that the code writing group had consulted with representatives likely to be affected by it (see section 71(2)(a)), the code was publicly notified on 16 July 2002, by public notices in the major newspapers in the four major centres, sent to all major libraries and to specific interested parties, as required by section 71 of the Act. NAWAC wishes to point out that at this stage NAWAC decided not to make any final decisions on the draft code until it had received submissions. The code is required to be publicly notified and for NAWAC to make up its mind prior to this notification would have meant that NAWAC was not following due process, by acting in a biased and predetermined manner.
6. A total of 245 written submissions, 2,921 SAFE forms and 70,720 Royal New Zealand SPCA postcards, were received during the notification period. Submissions received outside of the notification period were also reviewed.

7. Of the 245 written submissions received:
 - 148 less complex submissions principally opposed cage systems, including 3 small petitions with a total of 168 signatures.
 - 55 less complex submissions generally supported the Code.
 - 24 SAFE submissions with a covering letter were included with the above SAFE forms.
 - 7 complex submissions opposed the Code.
 - 6 complex submissions supported the Code.
 - 2 submissions neither supported nor rejected the Code.

8. NAWAC received three oral submissions – from the writing group and two producers. NAWAC members visited both caged systems and alternative systems (free-range and barn). NAWAC consulted with researchers Dr Lindsay Matthews, Professor Neville Gregory and Ms Kate Littin and reviewed relevant scientific literature (see Bibliography and References, but note that this is not a fully inclusive list). NAWAC notes that there is an absence of published scientific information on the welfare of layer hens kept under both cage and non-cage systems in New Zealand.

Main issues raised by submissions

9. Opposing submissions noted the following issues:
 - The banning of cages including modified/enriched cages as they prevent normal behaviour, cause physical and psychological injury and breach section 10 of the Act.
 - Cages are an area of major public concern and there are overseas precedents for banning them e.g. Switzerland.
 - The code as written would legalise cruel production practices which are contrary to the Act and not based on good practice, current scientific knowledge or public opinion.
 - The killing of male chickens should not be condoned.
 - Free-range production methods should be the only method of egg production.
 - No routine beak trimming.
 - Forced moulting must be stopped.
 - That farmers put profit ahead of animal welfare.
 - Ammonia levels must not exceed 10ppm.
 - Some submitters wanted a separate code for non-cage systems.

10. Supporting submissions noted the following:
 - The code as drafted represented a good bottom line for the industry and gave it some legal credibility.
 - The consultative process with the industry and the scientific input used to draft the Code all helped to produce a document that met the requirements of the Act.
 - Many stated they had improved their housing systems in the last 5 years to state-of-the-art equipment which brought about large improvements in animal welfare (e.g. beak trimming practices no longer needed).

- Some voiced concern over the tactics used in the SPCA and SAFE campaigns which opposed the draft code.
11. Other comments made in submissions included:
 - Acknowledgement that barn and free-range systems were harder to manage and that mechanisms had to be put in place to ensure that they are well managed.
 - Stocking densities should be specified in all production systems.
 - Restriction of vermin in free-range systems.
 - Whether nesting and perches should be included as part of the available space.
 - Natural daylight patterns should be followed.
 - Labelling of eggs as to their production method.
 - Lack of adequate guidance to ensure welfare is met in non-cage systems.
 - Greater regulation of the methods of euthanasia of male chicks and opposition to the use of instantaneous fragmentation.
 12. It should be noted that by recording these comments made in submissions, NAWAC is not expressing any opinions in this section about their veracity or otherwise, or whether NAWAC agrees or disagrees. NAWAC's intent is to record these comments as a summary of the issues raised in submissions received during the public consultation period.
 13. It was noted that some submissions were unclear on the legal status of minimum standards. Failure to comply with a minimum standard may lead to a prosecution under the Act. There was also misunderstanding about the difference between minimum standards and recommended best practices.
 14. The Act does not define minimum standard. NAWAC has taken minimum standard to mean the minimum level of care required to meet the welfare of the animal and to meet the obligations of the Act. The Act does not define recommended best practice. NAWAC has taken recommended best practice 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 the 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 of animals than is provided by a minimum standard. Failure to comply with a recommended best practice does not make an individual liable for prosecution under the Act. In many cases it is not possible to make a recommended best practice the minimum standard, while in others the minimum standard will be the best practice (e.g. stunning prior to slaughter).
 15. When recommending minimum standards and recommended best practices, NAWAC must take into account good practice, available technology and scientific knowledge. The Act does not define good practice. NAWAC has taken good practice to mean the 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.

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.

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

NAWAC may recommend minimum standards and recommended best practices, which do not meet the obligations of the Act but only in exceptional circumstances (section 73(3)). In making such a recommendation NAWAC must 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 or cultural practices or both;
- The economic effects of any transition from current practices to new practices. (section 73(4)).

Specific Significant Differences

16. The following are the significant differences (considered by NAWAC to have arisen) between the draft code submitted for public consultation and submissions received. It should be noted that differences were taken to be rejections of the code – either wholly or in part. NAWAC points out that it has considered all submissions and all aspects of the draft code. There were no significant differences of opinion expressed by NAWAC members.
17. There are a number of minimum standards, where the animal welfare implications are clearly self-evident and require no explanation for their inclusion (e.g. the provision of food and water). NAWAC has decided that it will not provide comment on those minimum standards or recommended best practices, but will provide explanations on minimum standards which it believes are complex, controversial or on which it received submissions with significant differences of opinion. Minimum standards as drafted may have been amended for a number of reasons, including: to make them legally robust, to ensure a more effective coverage of the issue, or to change from a recommended best practice to a minimum standard (or vice versa).

Scope of the Code

18. A number of submitters were of the opinion that there should be separate codes for cage and non-cage systems, or that a number of appendices covering specific features of cage and non-cage systems should be attached to a main code. The basis for this was their opinion that the code, as presented for public consultation, failed to address and enforce minimum individual requirements of each production system and that, in particular, free-range systems were not adequately covered. In addition, there was criticism that the code appeared to favour cage systems, providing greater detail about the advantages of cages but providing less information about the advantages of non cage systems.

NAWAC response:

NAWAC agrees that the public consultation draft may have had a stronger focus on cage systems. While NAWAC notes that about 92% of egg production is currently from caged birds, it was not NAWAC's intention to place a greater emphasis on cage systems. There are clearly advantages and disadvantages in all systems, and the code has since been amended to reflect this.

NAWAC has reached the conclusion that because cages that currently predominate in the industry provide a barren environment and little opportunity for birds to display many normal patterns of behaviour, they do not meet the obligations of the Act. It considers therefore that current cages should be phased out the future if there are shown to be economically viable alternative systems that provide better welfare.

While NAWAC did consider the possibility of separate codes, and it reviewed a separate draft code for free-range production which was included as part of one submission, it is of the opinion that all systems of commercial egg production can be, and have been, encompassed by one code. In fact, over half of the minimum standards in the code apply to both cage and non-cage systems. To have separate codes would entail a great deal of repetition. Where appropriate, the code, as recommended by NAWAC, contains separate minimum standards to deal with cage and non-cage systems.

Hatchery Management and Destruction of Cull Chicks

19. A number of submitters expressed the following concerns:
- Insufficient detail regarding procedures for euthanasing cull chicks and unhatched eggs, which could be detrimental to welfare.
 - Chick culling should not be condoned.
 - The welfare aspects of euthanasia by gassing or by instantaneous fragmentation.
 - The correct use of CO₂.
 - Hatched chicks should be removed from the hatcher soon after hatching.
 - There should be a maximum length of time that hatched chicks remain in the hatcher after hatching.

NAWAC response

While it may be unpalatable to some, euthanasia of male chicks, cull chicks and unhatched eggs is a necessary part of all modern egg production systems. It would be expected that approximately 50% of the chickens hatched will be male chicks which obviously are not able to lay eggs. Layer hens are different breeds to broiler chicken breeds, and therefore surplus male layer chicks cannot be used in the broiler industry. Until such time that we can selectively breed female layer chicks, male chicks will be an unwanted part of egg production and will have to be euthanased. Euthanasia must be carried out effectively and quickly without causing distress to the chicks. Both gassing and instantaneous fragmentation are practised internationally and NAWAC believes that the two procedures are acceptable, when carried out appropriately.

NAWAC notes that it is impractical to remove hatched chicks from the hatchers on a frequent basis as it would compromise the hatching of other chicks, due to temperature fluctuations caused by continual opening and closing of the hatchers. In addition NAWAC notes that the yolk sac provides nourishment for chicks for up to 72 hours following hatching.

Minimum Weights, Body Condition Scoring

20. Minimum standard 2 as originally drafted required that representative samples of rearing and laying flocks must be weighed weekly and checked against a recommended body weight profile for their appropriate management systems. However, not stated was that there should be a requirement to take remedial action should the representative weights not correlate with the expected weight at a particular age. NAWAC has amended this minimum standard to require remedial action once a specified percentage of birds falls below the recommended body weight profile.

In addition to weighing, NAWAC would also like to see the inclusion of body condition scoring to determine bird condition. The writing group were critical of the body condition scoring system, noting that it is impractical and subjective, and that bodyweight, egg production and egg size are more reliable and practical indicators of bird condition. The presence of feathers was also seen to be an impediment to carrying out the procedure. Training would also be needed.

NAWAC response:

Body condition scoring methods have been developed for a number of species including dairy cattle, sheep, pigs and broiler chickens. They 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.

NAWAC is concerned about the potential for the depletion of body reserves leading to emaciation especially in end-of-lay birds. A system of body condition scoring has been trialed which is relatively quick and easy, providing a reliable method for determining emaciation. The scale is only a 4-point scale and is therefore relatively easy to follow and differentiate. Increasing condition score was associated with increasing fatness and muscularity. 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.

An additional reason for promoting a condition scoring system is to allow independent assessors or inspectors to grade the condition of the birds, when necessary.

NAWAC therefore requests that independent research be carried out during the first two years following the issue of this code, so that it can make a decision on the use of body condition scoring in 2007. In the meantime, NAWAC has inserted a new recommended best practice that body condition scoring should be carried out in addition to weekly weighing.

Cage Systems

21. Cages, often colloquially referred to as 'battery cages', are a major area of public concern and opposing submissions called for the banning of cages, arguing that they do not comply with section 10 of the Act. Cages in use in New Zealand typically provide space for 5-7 birds, with a minimum floor space of 450 sq.cm, although there is a range of different floor space provided from 450 sq.cm to 550+ sq.cm per bird. These are referred to in the code and this report as either current or conventional cages. There are a number of systems using these cages in New Zealand which reflects the variety of different commercial brands which are available. There are no 'enriched' cages (also known as furnished or modified cages) used in New Zealand. Enriched cages typically provide more space for birds, and there are usually perches, a nest box and/or a dust bathing area. Some submissions also called for the banning of modified/enriched cages arguing that they also prevent normal behaviour, caused physical and psychological injury and were in breach of the Act.

Some European countries have introduced legislation banning or leading to a ban on conventional cages. The European Union (EU) will ban conventional (not enriched) cages from 2012, pending a review of the welfare of laying hens directive in 2005. Switzerland and Sweden banned conventional cages in 1992 and 1999 respectively. Switzerland has also banned furnished cages. Furnished cages will be permitted in the EU and they must provide at least 750 sq.cm of floor space per bird. Germany is proposing to ban all cage rearing of layer hens by 2007. In the USA, while there are no legislative requirements for the welfare of layer hens, companies, such as McDonald's are now requiring that producers supplying eggs must provide a minimum floor space of 450 sq.cm per bird.

In Australia, all new cages from 1 January 2001, had to provide a minimum floor area of 550 sq.cm per hen and any existing cages which comply with the 1995 standards (includes a minimum space allowance of 450 sq.cm) are to have an economic operative life of 20 years (i.e. to 2020). All other cage systems have to be scrapped by 1 January 2008, unless modified to comply with the above requirements.

The issue of layer hen housing is multi-factorial. All systems have inherent advantages and disadvantages from an animal welfare perspective but also from other perspectives such as animal health and food safety. An evaluation of the different production systems is a complex issue as it depends on the different weightings that different individuals place on health, production and physiological and behavioural parameters – all of which can be used to measure welfare. In addition, interpretation of scientific data may vary depending on the starting point of the reviewer (i.e. what their view of animal welfare is).

Some scientists believe that there is now clear scientific evidence that shows that current cages have major welfare problems since they prevent birds carrying out many of their natural behaviours, and that they therefore should be banned. However, it was also pointed out that others believe that there are still inadequate data supporting the view that current cages are detrimental to layer hen welfare.

NAWAC response:

NAWAC believes that current cages do not meet the obligations of the Act, since they provide a barren and unrewarding environment such that they do not fully comply with section 4 (i.e. they severely restrict birds' behavioural repertoire). However, while alternative systems generally provide more enriched environments, an ability to display normal behaviours and the ability to move away from other hens, there are potential welfare issues such as feather pecking, cannibalism, greater incidence of disease (including parasitism), and higher mortalities. One of the biggest advantages of modern cage systems is the high standard of hygiene, and the prevention of contact with faeces, which reduces the incidence of disease. The greater chances of free-range birds contracting exotic and epidemic diseases such as avian influenza from wild birds are also of concern. Cages also provide for small group sizes which hens appear to prefer (Boersma 2000); however this has to be weighed against the inability for caged hens to get away from each other, and research has shown that hens prefer to give each other more space and the opportunity to move away from other birds (Boersma 2000). Confinement in cages can also result in feather loss and skin damage from rubbing against the sides of the cage and other hens in the cage, although more modern designs address this issue. They can also suffer from foot and claw problems due to standing on a sloping wire floor. Caged hens have been found to have a higher egg productivity rate, which could also indicate better health, but cage produced eggs were lighter than those produced in barn and perchery systems. Conventional cages are the most economical with less capital, labour and material costs than alternative systems such as free range (Boersma 2000).

NAWAC is unable to recommend replacement of current cage systems with alternative systems until such time as it can be shown that, in comparison to current cage systems, 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.

NAWAC further notes that, due to the ban on importing eggs into New Zealand, any shortfall in the supply of table eggs to the New Zealand market could not be met from overseas suppliers. It is also 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 egg industry. NAWAC therefore wishes to see further research comparing current cages and alternative cage and non-cage systems. NAWAC will not make any final decision on whether current cages should continue, be modified or be banned, until 2009, when it will review that scientific research (both national and international).

Therefore, in deciding that current cage systems may remain at least until 2009, NAWAC has had to determine what should be the minimum space required per bird. Internationally a wide range still exists, from under 350 sq.cm per bird in the USA to 450-500 sq.cm per bird in the EU and 600-700 sq.cm per bird in Scandinavia. As noted previously, Australia has a minimum requirement of 550 sq.cm for all new cages, with phase out dates for existing cages.

Barnett and Hemsworth (2003) indicate that in general, within a range of 300-650 sq.cm per caged laying bird, increasing the area per bird results in an increase in egg production, food consumption, and bird weight, with a decrease in mortality. However as they further note, from the data found to date, it is difficult to determine whether or not providing more than 650 sq.cm is of benefit to the birds.

In a recent survey carried out by the EPF of layer hens in New Zealand, 62% of caged layers were housed at 501-550 sq.cm/ bird, 22% were at 451-500 sq.cm and 16% were at 450 sq.cm per bird and no birds were apparently housed at less than 450 sq.cm/ bird.

There is a considerable amount of support for non-cage systems, since they allow birds to display a greater range of natural behaviours (Barnett and Hemsworth 2003). It is generally agreed that bone strength is improved in non-cage systems, although it has been found that all systems which have perches cause keel bone deformation. (Barnett and Hemsworth 2003). Barnett and Hemsworth (2003) also found that when comparing cortisone levels in birds in cages and non cage systems, there is no clear evidence that there are better welfare consequences for birds in non non-cage systems, since the data are equivocal. These inconsistencies may be due to differences in cage sizes and/or group sizes in cages.

The Act requires minimum standards to be based on scientific knowledge, available technology and good practice. However NAWAC is also required to

take into account the economic consequences of recommending changes. There is clear evidence, using the Barnett and Hemsworth homeostasis approach, that there are welfare benefits from providing more space in conventional cages (such as reduced mortalities) and incorporating perches (resulting in increased bone strength). Enriched cages do provide more space and perches. The minimum space requirement in furnished cages in the EU shall be at least 750 sq.cm per hen, 600 sq.cm of which will be usable. Birds are able to perform more (but not all) natural behaviours than in conventional cages and have a high health status (due to lack of contact with faeces). However, feather pecking and cannibalism can occur if there are too many birds in the group and if there is no control such as beak trimming or reduced light intensities. As noted the EU directive is to be reviewed in 2005. Currently the UK is considering a proposal that enriched cages should also be banned, as well as conventional cages. NAWAC will also consider the use of enriched cages when it reviews the scientific research (both national and international) in 2009.

NAWAC therefore considers that a minimum standard of 550 sq.cm/bird should apply from 10 years from the issue of the code (i.e. 2014), with a phase-in period of a minimum of 500 sq.cm applying to all cages from 2008. . Notwithstanding this, as noted previously, NAWAC has indicated that it wishes to see current cage systems phased out, and NAWAC will therefore review its decision in 5 years from the issue of this code, taking into account all relevant scientific knowledge and international practices. NAWAC will, at that time, consider: current New Zealand and international research on cages and alternative housing systems; current good practice as it relates to cages and alternative systems; available technology; public submissions; international practices and trends; and the feasibility, practicality and economic effects of any change. All new cages installed after the issue of the code will be required to meet a minimum space requirement of 550 sq.cm per bird.

Forced moulting

22. A number of submissions called for the banning of forced moulting, arguing that it contravenes sections 4 and 10 of the Act.

Under natural conditions hens will reduce their food intake when they are incubating a clutch of eggs or when the shortening of day length causes the birds to stop laying, due to hormonal changes. In the latter, when birds stop laying, they move into a prolonged natural moult, when feathers are progressively replaced. In addition, stress, such as transportation, will also cause birds to moult naturally.

Forced moulting is an artificial process which 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 (Gregory, N.G unpub). It also saves on bird replacement costs. The main method used for inducing a forced moult is to withhold feed and water temporarily, although forced moulting can also be achieved by artificially manipulating day length. Forced moulting by means of

food deprivation has been banned in most European countries. In the USA, feed and water may be withdrawn for between 5 and 14 days, but fast food chains such as McDonald's and Burger King have banned their suppliers from using the practice.

Forced moulting causes severe physiological stress, which can result in the death of some birds, and it can be associated with high mortality rates.

The New Zealand industry reports that only a few producers carry out forced moulting, and that current mortality levels in New Zealand flocks are approximately 1.25-3.0% during the 6-8 weeks of moult. Gregory reports mortality figures of between 2 and 8% in a study which reviewed 15 different programmes of forced moulting.

NAWAC response:

While NAWAC has recommended that forced moulting should not be carried out, there is a proviso that it is permitted in the unlikely event that replacement pullets are unobtainable. However, NAWAC understands that the supply of replacement pullets is normally constant, and would only be reduced in cases of disease outbreaks or management failures, either overseas (from where genetic material is imported) or in New Zealand hatcheries, resulting in reduced numbers of replacement birds. Such an occurrence is possible if for example, avian influenza spread to the one of the limited number of countries from which New Zealand sources genetic material for breeder flocks. Such a situation could potentially cause considerable economic hardship for producers and also result in an interrupted supply of eggs. However these events would be exceptional occurrences and therefore, forced moulting will be a rare event in the New Zealand industry. NAWAC has recommended rigorous minimum standards in those instances where forced moulting is carried out.

NAWAC recognises that some free-range producers may source their replacement birds as end-of-lay caged layers. Removal of these birds from their cages, transportation and the placement on the property in free-range conditions could be a stressful situation for these birds and could cause the birds to go into a moult. NAWAC does not consider this to be a forced moult, and believes that provided adequate precautions as set out in this Code, are in place, this practice should be permitted to continue.

Beak trimming

23. Beak trimming is carried out to reduce feather pecking and cannibalism. Feather pecking and cannibalism can occur when birds are housed together. As noted previously it can especially be a problem in alternative systems. It is less of a problem in caged birds, possibly because of the smaller group size combined with controlled lighting.

Beak trimming is a potentially painful process. The literature suggests that there are no long term effects if it carried out within the first two days of life, and that carrying it out at 1 day of age is the least stressful (Matthews and Gregory

2002). However, if it is carried out later in life, chronic pain, beak deformities and the development of neuromas are likely to occur (Gentle 1991).

Beak trimming should be avoided if possible. A number of alternatives can be used, such as selecting chickens for reduced aggression, and using housing systems with controlled lighting. NAWAC notes, however, that New Zealand is reliant on overseas commercial bird strains for its breeder flocks, and is therefore also reliant on overseas breeders choosing to select for reduced aggression.

A number of submissions called for the banning of beak trimming. Submissions would suggest that there is a lack of understanding that beak trimming is carried out to some extent in all systems. There has been a need to beak trim birds in barn and free-range systems to prevent feather pecking and cannibalism. While birds in cages have also been beak trimmed, the industry has advised NAWAC that it is reducing the incidence of beak trimming, now down to 50% of caged layers. The Royal New Zealand SPCA has also advised that it is moving away from beak trimming of its accredited free-range flocks.

NAWAC response:

NAWAC recognises that feather pecking and cannibalism are possible occurrences with the housing of all layer hens, particularly in alternative systems where there are larger flock sizes or there is a reduced ability to control light levels.

The scientific literature suggests that beak trimming is less stressful and that there are fewer long term effects when it is carried out in the first few days of life. NAWAC has therefore recommended this as a minimum standard. NAWAC has also recommended a minimum standard that only permits beak trimming of older birds in emergency situations to help control outbreaks of cannibalism.

In addition, NAWAC has recommended a minimum standard that beak trimming can only be carried out by trained operators, and has included guidelines for beak trimming.

NAWAC encourages the industry to look for alternative methods of controlling feather pecking and cannibalism such as genetic selection for docile strains, avoidance of sudden changes in food composition, minimisation of aggression at key resources (feeders, drinkers, nest boxes, etc.), low density rearing, selection of 'low aggression' feeds, provision of certain substrates during rearing and the layer phase etc, so that beak trimming can be phased out.

Stocking densities for free-range

24. The deemed code of welfare for layer hens which replaced the previous voluntary code of recommendations and minimum standards contained a minimum space requirement for the outdoor space for free-range birds. Following a recent survey of the industry by the EPF, there appears to be

widespread compliance with the minimum outdoor space requirements. The Royal New Zealand SPCA also has adopted the minimum space requirements for its accreditation programme. The code as drafted by the writing group which was publicly consulted carried over the minimum outdoor space requirements for free-range.

NAWAC notes that the UK, EU, and Australia, also stipulate minimum outdoor space requirements. The code writing group has noted that the public perception of free-range is a 'large' grassy paddock where birds are free to roam. The writing group also noted that the Commerce Commission have been waiting for the introduction of the code so that it could deal with complaints relating to perceived breaches of the Fair Trading Act where producers claiming to be free-range have been found in fact to manage their birds on extremely small crowded patches of ground, devoid of grass or vegetation cover. The writing group argued that there will be potential adverse welfare consequences if it is left to the producers to decide how much space will be given outdoors.

The submissions ranged from asserting 11 sq.m/bird was insufficient, to stipulating that this figure was too restrictive and did not take into account different management systems, variations in land type, climatic conditions and vegetation and that it did not allow for innovation. A range of maximum flock sizes was also recommended in some submissions

NAWAC response:

NAWAC has set minimum stocking densities for both barns and free-range *housing*, since birds are unable to escape from each other, as they can do outside.

In regard to setting outdoor space requirements for free-range, NAWAC notes that internationally there is a range of minimum space requirements. NAWAC has decided that the issue of how much space is provided should be outcome based, focusing on the birds' health and welfare, rather than prescriptive. Accordingly, NAWAC has recommended minimum standards requiring that the outdoor space be managed to ensure that:

- the land does not become muddy or contaminated with poisonous plants, chemicals or organisms that cause or carry disease to an extent that could be harmful to the birds' health
- 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
- 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.

These minimum standards will be achieved in different ways depending on topography, climate, region, soil type, vegetation cover, management system, stockmanship etc.

Moreover, these minimum standards are reinforced by those relating to Disease and Injury Control (Minimum Standard No 16).

NAWAC notes that its legislated role is to recommend and advise on animal welfare issues and, as such, does not encompass the defining of production system classifications for industry labelling purposes.

Recommendation

25. NAWAC recommends that you issue the draft code as recommended to you, with the amendments and additions that NAWAC has made. NAWAC requests that you make this report publicly available when you issue the code.



Professor David J Mellor
Chairman
National Animal Welfare Advisory Committee

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