

# **ANIMAL WELFARE (BROILER CHICKENS) CODE OF WELFARE 2001**

**PUBLIC DRAFT**

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## **SAFE SUBMISSION**

**Save Animals From Exploitation Incorporated (SAFE)**

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**SUBMISSION – Animal Welfare (Broiler Chickens) Code of Welfare 2001  
Public Draft**

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## **PURPOSE**

SAFE acknowledges the benefits of a code of welfare for broiler chickens however believes the public draft dated 30 October 2001 fails to demonstrate even the most basic provisions of animal welfare.

SAFE has serious concerns regarding the lack of animal welfare considerations and provisions for animal welfare referred to as Minimum Standards and Recommended Best Practices.

SAFE questions the authenticity and credibility of the working party to formulate a code based on animal welfare given vested economic interests.

SAFE's submission will demonstrate the following:

- a) The inconsistencies and failures within the draft to sufficiently address basic animal welfare issues as required by the Animal Welfare Act 1999.
- b) That the proposed minimum standards will severely compromise the welfare and behavioural needs of broiler chickens resulting in widespread and routine, animal welfare problems.
- c) That these proposed standards reflect existing industry farming practices primarily based on farmer convenience and profitability, not animal welfare.
- d) That the Animal Welfare (Broiler Chickens) Code of Welfare 2001 does not reflect the views of an informed public regarding broiler chicken production systems within New Zealand.
- e) That there is sufficient, well-documented, credible research to conclude that the proposed Minimum Standards and Recommended Best Practices contradict basic broiler chicken welfare standards.

For these reasons, SAFE rejects the proposed Animal Welfare (Broiler Chickens) Code of Welfare 2001 and challenges NAWAC to provide credible research and evidence to support the proposed standards and practices contained herein.

## INTRODUCTION

SAFE is a national animal welfare and rights organisation with a 60-year history in New Zealand. SAFE has over 2,000 members and an estimated 350,000 supporters nationwide. With offices staffed full-time in Auckland and Christchurch, SAFE has local contacts and grassroots campaigners throughout New Zealand. SAFE's primary role is education and campaigning for the rights of animals. SAFE is fundamentally opposed to all forms of animal abuse and actively campaigns to educate the public as to how they can prevent animal suffering.

Factory farming is one of SAFE's primary campaign issues and our aim is to have it prohibited on the grounds of its inherent cruelty and inadequate animal welfare standards. SAFE has extensive knowledge, resources and experience of addressing animal welfare and rights issues.

SAFE is affiliated with many international animal protection organizations including the World Society for the Protection of Animals (UK), Australian and New Zealand Federation of Animal Societies (Aust), Compassion in World Farming (UK), United Poultry Concern (USA), Animal Liberation (Aust), In Defense for Animals (USA), People for the Ethical Treatment of Animals (USA), Animal Defenders (UK) and the Humane Society (Aust and USA).

## **BIOLOGY AND BEHAVIOUR OF POULTRY**

### **History**

Poultry originated from Red Junglefowl of the Indian subcontinent (Kemp, 1985) from which the domestication of the chicken occurred about 1400 BC. The native habitat of Red Junglefowl was bamboo forest, where they had a life span of 15 to 20 years. (Porter, 1942). Despite thousands of years of breeding, there are hardly any differences in behaviour between our domestic chicken and the Junglefowl (Swiss Society for the Protection of Animals, 1994).

### **Characteristics**

Pecking is a major characteristic activity for poultry which is incorporated into nearly every aspect of life, including escaping the egg, the search for food, drinking, obtaining space and asserting dominance (Kilgour and Dalton, 1984). Searching for food takes up most of the chicken's time. In natural conditions, poultry will spend 50 per cent of their time foraging for food. Poultry are omnivorous and peck through the ground litter for seeds, small insects and grains. They possess extremely good eyesight and will peck at any object that contrasts with its background.

Poultry are wary and shy, with a strong sense of personal space. They maintain a personal space around their heads, achieved by head tilts and body orientation. Common activities include pecking, eating, dust-bathing, roosting and nesting. Reluctant fliers, chickens prefer to stay on the ground. Roosting on perches at night is the only activity where chickens prefer to leave the ground (Kilgour and Dalton, 1984). Roosts of between 6 and 30 birds are usually located in groups of trees located at the centre of their territory. Roosts are separated by about 60 metres (Kilgour and Dalton, 1984).

Daily activities are structured with different activities occurring at defined times of the day. Fowls leave their sleeping areas before dawn; the male accompanies and guards during the morning forage. Although they eat insects and worms, they mainly live on seeds, fruits and berries. The feeding technique involves scratching at the ground to expose food. The chicken will then step back and peck at anything edible.

Midday usually sees the fowls return to their sleeping areas where they will preen thoroughly and rest. They are fond of taking sunbathes, especially after bad weather. They stretch and ruffle feathers to try and expose as much as possible of their body to the sun. Poultry require sunlight to maintain their general health and for the generation of vitamin D. The desire to seek out sunlight increases the longer that poultry spend away from it (Swiss Society for the Protection of Animals, 1994).

In the afternoon birds go off to feed again, repeatedly stopping to preen, rest and dust-bathe. Lasting for around 20 minutes at a time, dust-bathing occurs on average every second day. Dust-bathing maintains the condition of feathers by cleansing them of old grease. During winter, poultry seek out sunny places to dust-bathe, while in summer they prefer the shade. In the late afternoon, they spend almost the whole time foraging for food. They then return to their roosts just before dusk. The nights are spent roosting as high up as possible in trees, several metres off the ground (Swiss Society for the Protection of Animals, 1994).

### **Social organisation**

Poultry are an extremely social bird with an elaborate social system. They keep in contact with other birds via a large variety of complex communication methods, including a variety of vocalisations, body postures and movements, which can also be used to maintain social dominance (Kilgour and Dalton, 1984).

Although able to distinguish over 80 members of their own species, they prefer to live in small groups. The social structure is comprised of 5 to 10 hens and one male that mates with each of them. The male's presence is important in reducing fighting among the females and maintaining a stable pecking order of up to 90 birds (Duncan, 1973). Threat, avoidance behaviour, age and comb size maintains social ranking (Swiss Society for the Protection of Animals, 1994).

### **Nesting and maternal behaviour**

A seasonal breeder, poultry are secretive and particular about their nesting site, examining nesting areas with care. Their natural preference is to nest on the ground in a semi-dark or shady area. Scratching a hollow in the ground forms the nest. The egg is laid after an hour. Several hens may lay their egg in the same nest, resulting in a grouping of eggs belonging to a number of hens. Over the next 20 days a broody hen looks after the eggs, leaving the nest for only 20 - 40 minutes per day to feed. Once hatched, the chicks first response is to seek warmth and cover, usually provided by their mother.

Chicks bond very quickly to the first object they see: within one hour of hatching chicks will follow objects and after 9 - 20 hours bonding is complete. The chick will then be able to recognise its mother and her calls. Chicks are active and adaptable and are able to pick up learned behaviour quickly, learning activities by watching and imitating the mother.

## **BROILER PRODUCTION AND ANIMAL WELFARE**

Current production methods of rearing broiler chickens have inherent welfare problems that cause widespread suffering to the birds. Depriving broiler chickens the opportunity to satisfy their natural behavioural needs in intensive production systems also leads to welfare problems. Research has demonstrated significant welfare concerns. For example, a University of Bristol study in the early 1990s found almost 26 per cent of broiler chickens were lame in the last weeks of their life and probably suffering chronic pain and distress (Turner, 2000).

More recent scientific evidence suggests there has been no real improvement in the welfare of broiler chickens since 1990 and in some respects welfare has even worsened (Turner, 2000). In March 2000 the EU Scientific Committee on Animal Health and Animal Welfare (SCAHAW) produced a 150-page report on broiler welfare citing over 500 references.

“This report points to numerous flaws in the current welfare situation and lack of progress by the industry in tackling well-documented welfare problems.” (Turner, 2000, p. 5). Given that New Zealand producers use breeding stock originating from overseas (Sutton, 2001) and that production technologies are substantially the same as overseas technologies, it is highly likely that the New Zealand industry is experiencing similar problems.

In the last 30 years, the time taken to produce a broiler chicken weighing 2kg has been almost halved, from more than 10 weeks to less than 6 weeks (SCAHAW, p 9).

The British Government is so concerned about poor broiler chicken welfare that it is spending 400,000 pounds on research into aspects of broiler welfare including studies on stocking density and leg health (Reuters, 2001).

The reality of developing and implementing a legally binding code of practice based on animal welfare will have ramifications on the poultry industry if it is serious in addressing animal welfare issues. SAFE does not believe PIANZ or any of the leading poultry producers within New Zealand is serious about providing basic animal welfare standards within their industry. This public draft Code is testimony to this point. SAFE is highly skeptical of responding to a Code that does nothing more than legally sanction widespread animal abuse to New Zealand's largest intensive indoor confinement system.

## **THE CODE FOR BROILER CHICKENS**

In the Draft 11 of the Code the last paragraph in section 1.3 (which refers to how the Code relates to the Animal Welfare Act 1999) - Obligations on owners or people in charge of animals state: "The minimum standards in a code set out the detailed actions that will enable the above obligations to be met." The minimum standards are in place in order to ensure that physical, health and behavioural needs of animals are met in a manner in accordance with good practice and scientific knowledge. It also ensures an injured animal "receives treatment that alleviates any unreasonable or unnecessary pain or distress being suffered by the animal."

SAFE sought clarification from PIANZ as to how the minimum standards within Draft 11 of the Code met the requirements of the Animal Welfare Act 1999. These sections have since been omitted and therefore SAFE seeks an explanation as to why this section has been removed.

SAFE also refutes the claim made in section 1.9 Interpretation: ". . . They represent the minimum standards of care that are acceptable to New Zealand society".

## **MISREPRESENTATION AND STRUCTURE**

The proposed title of the code is misleading and does not truly reflect its content. SAFE believes the proposed code actually counters animal welfare and only serves to legalise unacceptable animal abuse. Clearly, the proposed minimum standards contravene animal welfare standards for rearing broiler chickens for meat production. Unless animal welfare issues rate a greater significance SAFE recommends the code title amend to:

Minimum Standards for Rearing Broiler Chickens for Human Consumption Code 2001

SAFE is surprised at the lack of professionalism and clarity of the proposed draft 11 and public draft, as well as the lack of reference to, and disregard for, the terms of the Animal Welfare Act 1999. Ambiguous clauses and vague sentences, particularly regarding the minimum standards, make this code literally unenforceable in any legal capacity. SAFE is very concerned at the sub-standard manner this code has been drafted to a point it must question the legitimacy of the code itself, and its relevance toward enforcing animal welfare standards.

## INCONSISTENCES

There are an overwhelming number of inconsistencies between the objectives of the Code and the Draft Code's attempt to incorporate existing industry production systems that conflict with the Animal Welfare Act 1999. SAFE is extremely critical that the principles of the Code have been ignored to support existing industry standards that do not meet basic animal welfare standards.

The Introduction, Purpose and Interpretation of the Code are clear in their intent to govern animal welfare yet this is continually contradicted by statements of necessity and industry status quo.

In draft 11 for example, section 1.7 - Contents of this code (page 8) states: "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 minimise 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.

This code also takes account of:

- good practice,
- scientific knowledge, and
- available technology."

SAFE questioned how PIANZ and National Animal Welfare Advisory Committee (NAWAC) will justify the nature of broiler chicken production based on the above position. Again, most of this section is deleted from the public draft.

SAFE also questioned why Minimum Standard No. 6 – Stocking densities stated a maximum stocking density of 40kg of liveweight where the best practice states 36–38kg. The Recommended Best Practice stocking density has since been deleted.

## OMISSIONS AND FAILURES

SAFE has identified omissions and failures to address vital issues within the Code relating to rearing broiler chickens. SAFE believes these omissions and failures must be corrected in the Code. These include:

- a) Omission of breeder birds used for the supply of broiler chicks.
- b) Lack of clarity and definition between indoor and outdoor production systems.
- c) Reference to on-site disposal of dead or culled birds that are collected daily from sheds.
- d) Maximum growth rate (grow out) periods and minimum slaughter age not specified.
- e) Routine use of antibiotics and vaccinations is permitted.
- f) Maximum acceptable levels of mortality are not specified.
- g) Outbreaks of disease and high levels of mortality must be made legally notifiable to the appropriate authorities.
- h) Registered broiler commercial operations must be required to supply annual audits of flock management details to the appropriate government body for independent assessment.
- i) Routine on site inspections must be undertaken by an independent government body to aid in policing and monitoring of the Code.

SAFE is disappointed that working party has failed to observe any of these points as significant factors in its developmental process for inclusion in this Code. This is despite the statement in Section 1.8 - Preparation and revision of the Code that it: “. . . has been reviewed by representatives of the industries, veterinarians, advisors, animal scientists, welfarist and members of the general public.” (p. 6)

SAFE disputes the consultation process was thorough. If it wasn't for the publicity raised by SAFE and the RNZSPCA the only means for the public to know of this consultation process was a small notice in the public notices section of some daily newspapers.

SAFE finds it inexcusable that both NAWAC and the Minister of Agriculture claim the public has been fully advised of this consultation process.

SAFE also questions why neither NAWAC or the office of the Minister of Agriculture failed to issue a release or make a public statement as to the release of the public draft code seeking public submissions.

SAFE believes this failure to adequately notify the public is a deliberate attempt to restrict and hinder the public consultation process. Without the work of both SAFE and the RNZSPCA to highlight this issue to the public the number of people in a position to make a submission would have been minimal, if not pathetic.

SAFE questions that NAWAC and the Minister of Agriculture can maintain the claim of an informed New Zealand public solely on the basis of a few public notices?

## DEFINITIONS AND TERMS

SAFE has identified inconsistent terminology and definitions that misrepresent, and are likely to confuse or misled.

SAFE recommends the following changes (in bold):

owner or other person in charge:	<b>owner/employer or appointed (by owner/employer) person in charge</b>
alternative production systems	<b>organic production system</b>
environmentally controlled shed	<b>indoor intensive confinement system</b>
harvest/processing plants	<b>slaughter/slaughterhouse</b>
broiler chicken houses/house	<b>broiler sheds/shed</b>

SAFE questions the clarity of the definition of who is ultimately in charge of an animal at any given time. The code tends to slide accountability to the action or task at hand, ie: handling, inspection or transportation. SAFE believes the onus must remain the responsibility of the owner or employer who commissions employees or contractors to undertake these various duties. SAFE believes both remain liable and should not exclude the owner or employer of legal responsibility.

## **MINIMUM STANDARDS AND RECOMMENDED BEST PRACTICES**

### **Minimum Standard Legal Obligations**

This section on Legal Obligations is characterised by imprecise, subjective and undefined words and phrases which could mean different things to different readers. For example, 1 (b) "where practicable", "unreasonable or unnecessary pain"; 2 (d) "ill-treat a broiler chicken"; 2 (f) and (g) "significant" and "non significant" surgical procedures. Such subjective language cannot protect broiler chicken welfare.

SAFE challenges NAWAC to supply evidence of how these Legal Obligations will be met given New Zealand's current broiler chicken production methods. How will NAWAC ensure the physical, health, and behavioural needs (Section 1, a) of the majority of New Zealand's 67 million broilers chickens are met?

SAFE questions how NAWAC can defend (Section 2,a) given scientific evidence that shows the majority of the birds live their last remaining weeks of life in pain, distress and discomfort.

How will NAWAC ensure that the owner or person in charge will not "ill-treat a chicken"? (Section 1, d).

SAFE argues that the broiler industry manipulates and exploits broiler chickens to the extent that the typical production system is inherently cruel. This has resulted in the majority, if not all, broiler birds being ill-treated in some form or capacity.

Scientific studies and surveys of broiler production overseas show significant levels of suffering, pain and distress due to severe welfare problems directly contributed to selective breeding and production methods. Broilers' unnaturally high growth rates place great strain on their legs, heart and lungs. A 1999 survey in Denmark found leg disorders in 57 per cent of the birds. (Turner, 2000) The high prevalence of heart and lung disease was highlighted by a 1992 study of causes of death of birds arriving dead at UK slaughterhouses (Gregory & Austin, 1992). It was found that 20 per cent of the birds had diseases such as ascites that were "thought to have compromised their survival".

SAFE believes the increasing demand placed on broiler chickens for rapid growth blatantly disregards animal welfare. SAFE insists NAWAC must be able to prove broiler birds within intensive production systems do not suffer similar inflictions.

## **Minimum Standard No.1 - Hatchery Management**

### SAFE's recommendations:

That the Minimum Standard be altered as follows:

(b) Euthanasia procedures must be well documented and only ever undertaken by sufficiently trained staff competent of disposing live animals humanely. Staff must be fully trained to operate any equipment or machinery in this process.

That the following be added to the Minimum Standard:

- The time interval from first chicks hatching to removal of chicks from the hatcher must be monitored.
- Hatched chicks must be removed from the hatcher within 15 minutes of hatching.
- The standard must specify minimum holding room conditions, ie: acceptable temperature range and airflow.

## **Minimum Standard No. 2 – Food and Water**

A critical factor that leads to welfare problems for broiler chickens is their excess food intake, unnatural artificial diet and food nutrient levels. In 1976, the amount of feed a broiler needed to reach a 2 kg body weight was 5 kg, in 1997 it was 3.3 kg. It is now estimated to be 3 kg (SCAHAW, p 9). Research shows using a lower nutrient density feed in the first 3 weeks improves leg bone quality and reduces susceptibility to lesions and leg abnormalities (Raine, 1986; Lilburn et al, 1989).

### SAFE's recommendations:

That the following be incorporated into this Standard:

(a) All broiler chickens must have access to adequate amounts of fresh, uncontaminated feed each day. All food must comply with the New Zealand Code of Good Manufacturing Practice for Compound Feeds, Premixes and Dietary.

(d) All chickens must have continuous access to clean water that is not contaminated or deleterious to health.

(e) Water supplied to the broiler shed or pen must be potable and continuously available at all times and must meet New Zealand Drinking Water Standards. Water supplied to broiler chickens must be regularly tested to ensure it continues to meet these standards.

- That provisions for minimum and maximum nutrient levels are specified.
- Chickens must be given food appropriate to their species. They must be fed adequate quantity of feed to maintain good health and to satisfy all their nutritional needs.

### **Minimum Standard No. 3 – Shelter and Other Facilities**

#### SAFE's recommendations:

That clause (f, iii) should read "All broiler chickens must have ready access to the range. There must be one pophole per 600 chickens. Each pophole must be no smaller than 450mm high and 2 m wide to allow the passage of more than one chicken at any one time."

That the following be added to clause (g):

- Alarm systems and their back-up source must be regularly checked to ensure that they are operational.

That the following be added to clause (h):

- Suitable fire extinguishers must be installed in intensive broiler chicken sheds, and in feed milling areas where these are adjacent to broiler chicken sheds.

### **Minimum Standard No. 4 – Shelter and Shade**

The minimum standard is extremely vague and therefore does not ensure acceptable welfare levels.

#### SAFE's recommendations:

That the Minimum Standard be altered as follows:

- Inclusion of 'extreme climatic conditions' to cover other forms of weather patterns in addition to rain and wind.
- Reference to adequate shade and shelter from the environment (wind and sunlight) should be included. This should include adequate shade and shelter relevant to stocking densities.
- In alternative production systems that are not fully enclosed additional shelter outdoors must be provided to protect all broiler chickens from extreme climatic conditions including excessive sunlight to ensure their welfare.

## **Minimum Standard No. 5 – Equipment**

### SAFE's recommendations:

That the following amendment be made to clause (a):

"Back-up systems and alarms must be checked daily and any defects must be rectified immediately."

That clause (b) includes "It must not be possible to deactivate alarms and back-up systems."

## **Minimum Standard No. 6 – Stocking Densities**

SAFE totally opposes this minimum standard and the subsequent recommended stocking density of 38kg of liveweight per m<sup>2</sup>. SAFE also refutes the acceptable parameter of exceeding this stocking density under "extraordinary circumstances".

SAFE demands PIANZ provide scientific evidence to support such stocking densities. Significant reports and research papers challenge this stocking density as a minimum standard acceptable to ensure high animal welfare standards. This includes:

- An expert committee of the German Federal Ministry of Agriculture in 1974 stated the stocking density should not exceed 30kg/m<sup>2</sup>. In a more recent report of the same Ministry they stated 30 and 37 kg/m<sup>2</sup> depending on management conditions (Anon., 1993).
- Switzerland has an upper limit at 30 kg/m<sup>2</sup>.
- SCAHAW recommends a maximum stocking density of 25 kg/m<sup>2</sup> to avoid major welfare problems. As effects of stocking density vary according to the type of building and ventilation system SCAHAW recommends that "maximum stocking rates be specified for a particular building and climatic control capacity. Only when a producer is able to maintain an air and litter quality as specified in this report should an increase in the stocking rate towards the maximum specified be allowed." (SCAHAW, p. 110).
- Welfare problems resulting from high stocking densities include restriction of natural behaviour, contact dermatitis and heat stress. As stocking densities increase, crowding restricts natural behaviour such as pecking, scratching, walking and preening (Turner 2000, pp. 12-13). Contact dermatitis may increase with increased stocking density due in part to dirtier litter and restricted movement (Turner 2000, p 13).

- Recent research indicates that heat stress may occur at stocking densities of between 28 and 40 kg/m<sup>2</sup>. Broilers were found to start to pant regularly from 3 or 4 weeks of age and the amount of panting increased with increased stocking density (Turner 2000, p. 14).
- The Scientific Committee concluded from the evidence that “Pathologies (breast blisters, chronic dermatitis and leg disorders) are a result of high stocking” and that “the presence of infectious agents and hockburn has been shown to be worse at 30 – 40 kg/m<sup>2</sup> than at 30 kg/m<sup>2</sup>.”
- The Scientific Veterinary Committee on Animal Welfare (2000) estimated that reducing stocking density from 38kgm<sup>2</sup> to 30 kgm<sup>2</sup> would increase production costs by about 5 per cent; reduction of stocking rate to 25 kgm<sup>2</sup> from 38 kgm<sup>2</sup> would increase costs by about 10 per cent; and decreasing density to 20kgm<sup>2</sup> would increase costs by 17 per cent. These increased costs would, however, be partially offset by a reduction in mortality rate due to improved animal welfare, therefore a stocking density of 25kgm<sup>2</sup> might only lead to an overall 7 per cent increase in production costs compared to 38kgm<sup>2</sup>.
- In addition, overcrowding subject chickens to excessive stresses and has proven to be detrimental for their welfare. Leg weakness is common due to lack of space for exercise. In a study of leg weakness in commercial intensively reared broilers, 10 per cent were identified as normal (divided into six categories ranging from normal to immobile), and 90 per cent being found to have a detectable abnormality in their gait. In 26 per cent their welfare was compromised as a result of their leg weakness – the researchers emphasised that there is likely to be chronic pain and discomfort for these birds. (Kestin, et al, 1992).
- It has been established that a chicken requires 600cm<sup>2</sup> to stand and move, 800cm<sup>2</sup> to perform grooming and 1500 – 1800cm<sup>2</sup> for a full wing stretch (Dawkins & Hardie, 1989).
- The higher the stocking density, the higher the standard of management required to ensure that broiler welfare does not decrease - not all farmers have the skills to manage high-density operations without seriously compromising animal welfare (Moynagh, 2000; SCAHAW, 2000, p. 15). Stocking density should not, therefore, be discussed without reference to management issues, eg: staff training, staffing levels.

### SAFE's recommendations:

- SAFE believes that in order for a broiler chicken to exhibit natural patterns of behaviour it must be entitled to freely walk, move around, wing flap, and stretch adequately. Based on the current research SAFE recommends a minimum stocking density of 2kg/m<sup>2</sup>. This is based on what SAFE perceives is a minimum space a bird should be entitled to in order to express its natural behavioural needs.
- SAFE believes that one broiler bird (equivalent to 2kg in live weight) should be entitled to sufficient space to express normal patterns of behaviour and that this space should be no less than 1 square metre.
- Clause (d) should be reworded more specifically eg: "Records must be kept for each shed detailing stocking densities (expressed both as kg/m<sup>2</sup> and as bird number and average weight) and daily mortalities. These records must be kept for a minimum of five years for auditing purposes."

### **Minimum Standard No. 7 – Lighting**

The Farm Animal Welfare Council acknowledges that very dim light can cause welfare problems. In practice, light levels can often be below 10 lux. Studies show there are various welfare problems at light intensities below 20 lux. One study showed chicks up to the age of 2 weeks preferred brightest light (200 lux) with older birds at 6 weeks of age, preferred dimmer environments (6 lux) (Davis, et al, 1999).

In Switzerland, animal welfare law says that natural light should be provided for broilers if possible; if not possible, lighting should not be provided for longer than 16 hours.

The German Federal Ministry of Agriculture recommends a 24-hour daylight cycle (SCAHAW, 2000).

In Sweden, by law, a minimum of 2 hours of continuous darkness must be provided to intensively confined broilers (SCAHAW, 2000).

SAFE challenges PIANZ to supply documented evidence to detail how denying an animal sufficient resting and sleeping periods does not compromise animal welfare standards? SAFE rejects the proposed minimum standard of the "one hour darkness per day."

SAFE's recommendations:

This Minimum Standard must:

- Specify a lighting intensity of no less than 100 lux for broiler chickens.
- Specify that chickens must be provided with 8 hours minimum of continuous natural or equivalent lighting conditions per day (no less than 100 lux) and that broiler chickens receive 8 hours minimum continuous darkness per day (resting period).
- In clause (b) change the word 'may' to 'must' ". . . . intermittent light patterns must be introduced. . ."
- That Clause (c) be omitted.
- Clause (d) be altered to "Brooding chicks must have a lighting intensity of a minimum of 100 lux for at least 5-7 days after placement."
- Clause (f) be altered to "During inspection a minimum of 100 lux of light must be provided."

**Minimum Standard No. 8 - Ventilation**

SAFE recommends that this Minimum Standards require routine, daily measurement of air quality and that records be maintained and kept for auditing purposes.

SAFE's recommendations:

Clause (b) should be modified as follows: "Where levels of 10 ppm or more of ammonia within the shed are detected, immediate and appropriate action must be taken to increase ventilation or address the cause of the gas (eg: wet litter), or both, to ensure a return to levels below 10 ppm."

### **Minimum Standard No. 9 – Temperature**

Minimum standards must be included for minimum and maximum temperatures within the shed depending on the age of the birds. Mandatory provisions must be made to ensure sheds are able to remain at a stable temperature taking into account of climatic variables, environmental factors and age of birds.

#### SAFE's recommendations:

Clause (c) must be changed to read: "Temperature must be recorded twice daily and action taken immediately to correct temperature fluctuations."

Add the following as clause (d) "If at least 10 per cent of a flock show persistent panting prompt action must be taken to reduce environment temperature."

### **Minimum Standard No. 10 – Litter Management**

Maintenance of good litter quality is essential for broiler welfare. Failure to do so results in respiratory problems and contact dermatitis in the birds (SCAHAW, p. 57). SAFE questions why alternative outdoor systems have not been given any consideration regarding ground management, as this is important for bird welfare.

#### SAFE's recommendations:

That clause (c) be reworded as follows: "Attention must be given to water ingress and leaking drinkers to avoid excessive moisture caking and ammonia production and any such problems must be remedied immediately."

That the following Best Practices become Minimum Standards:

- At shed placement time the minimum depth of wood shaving litter should be 50-75mm and the depth of shredded paper should be sufficient to provide a minimum of 20mm when packed down by the broiler chickens.
- At no time should there be any bare areas of floor.
- Litter that has caked should be removed or turned and the underlying cause should be remedied.
- Litter should be used for one growing cycle only and then replaced.

### **Minimum Standard No. 11 – Disease and Injury Control**

Given the historical level of health problems associated with broiler chicken production SAFE believes this section fails to prevent common disease and injury problems. Numerous overseas studies document the health problems and diseases and injuries sustained by broiler chickens during their short lives. These problems have been shown to cause significant and often-chronic pain and discomfort to the birds. For example, contact dermatitis is a widespread problem in European broiler production and is characterised by lesions of the skin on the breast, hocks and feet of the birds. Such lesions can cause pain and constitute an animal welfare issue. Ascites and sudden death syndrome are two widespread lethal diseases.

The fact that MAF and PIANZ accepts a mortality of over 2 million birds that die prematurely signifies significant health and welfare problems within New Zealand's own broiler industry. SAFE demands scientific evidence is provided to support that such problems do not exist within the New Zealand poultry industry.

SAFE also believes there is insufficient provision for individuals to be qualified in a manner that can properly diagnose and monitor health problems and disease during inspections.

SAFE argues it is not physically possible for one person to undertake a daily inspection of a shed with some 10,000 birds, and be expected to inspect all birds.

SAFE is concerned that at no point is there reference to seeking a veterinary assessment or report on the health and condition of the birds.

#### SAFE's recommendations:

That the Minimum Standard be modified as follows:

(f), (i) A detailed inspection of the flock in each barn or shed must be undertaken at least once a day by an experienced flock handler.

(f), (iv) Lighting must be increased and of sufficient lux to make inspection easy.

(h) Inspection records must be kept for a minimum of 5 years and be audited by an independent body.

### **Minimum Standard No. 12 – Humane Destruction**

This section is not clear and fails to consider the humane killing of sick and injured animals on site. Individuals responsible for killing sick and dying chickens must be experienced and trained to ensure the animal is killed quickly and humanely.

- There be reference made to the disposal of the bodies.
- That there be reference to seeking a veterinary assessment or report on the condition of the bird prior to determining its fate.

#### SAFE's recommendations:

- That in clause (a) 'may' be changed to 'must' ie, " . . . when necessary must be carried. . "
- Clause (c) must specify what is appropriate training.
- That clause (d) be added: "That all sick or injured birds are humanely killed onsite as immediately as possible and must not be transported to the slaughterhouse."

### **Minimum Standard No. 13 – Pre-loading**

#### SAFE's recommendations:

- That clause (a) is vague and relates more to transport rather than pre-loading.
- Modify to: (a) Food must not be withheld from broiler chickens for more than 12 hours prior catching.
- That clause (b) be altered to read: "Broiler chickens must not be deprived of water prior to catching and loading."

That the following be included as Minimum Standards:

- With the exception of day-old chicks, broiler chickens should not be held in containers for longer than 6 hours.
- When a delay is anticipated and the holding time is likely to exceed 12 hours, either the broiler chickens must be released into a shed where they have access to food and water, or immediate slaughter must be arranged in another slaughterhouse.
- The time spent in containers is calculated from the time the broiler chickens are first placed in them, not from when the journey begins.

### **Minimum Standard No. 14 – Catching and Loading**

This standard needs to incorporate 'Catching, loading and unloading'.

Manual catching may result in low levels of injuries if all catchers are careful, conscientious and well supervised (Kettlewell and Turner 1985; Berry et al, 1990). In practice, however, manual catching is often rough and causes injury to the birds (Bayliss and Hinton, 1990).

The capture of broiler chickens and their transportation to the slaughterhouse are major sources of trauma and trauma-related injuries and death. A large proportion of the bruises found on broiler carcasses arises during the catching and loading of birds prior to slaughter (Gerrits et al, 1985; Bingham 1986a,b; Bayliss, & Hinton 1990; Scott 1993). The most effective method that prevents injury is using both hands around the bird's body (Parry, 1989).

SAFE rejects the proposal that four chickens may be carried in each hand. This is based on evidence to suggest this can substantially increase the risk of dislocation of the hip joint and associated hemorrhaging. Handling a chicken by one leg increases the risk of hip displacement (Stevenson, 1993).

There is sufficient evidence to conclude current catching and loading practices cause serious welfare problems based on the high demand for speed and efficiency. The practical application of routinely catching thousands of birds within a reasonable period implies a brutal and often callous attitude toward animal welfare concerns.

There is no reference to mechanical catching methods. SAFE demands MAF and PIANZ defend the proposed limit of 4 birds per hand do not increase risk of injury.

#### SAFE's recommendations:

That clause (a) be reworded to read: "All members of catching and transporting crews must be correctly trained and supervised and have sufficient knowledge of animal welfare and the handling of broiler chickens."

That clause (d) be reworded to read: "No more than one broiler chicken must be carried at any one time in both hands of a catcher."

That the following be added to the Minimum Standard:

- Broiler chickens must not be carried by one leg.
- Broiler chickens must be handled carefully and catches must work quietly and calmly to avoid unnecessary distress and injury to the birds.
- Lighting in sheds must be dimmed during catching so that the birds stay calm and still.

**Minimum Standard No. 15 – Loading Densities**

SAFE is totally opposed to the proposed maximum loading density of 65 kg/m<sup>2</sup>. SAFE has concerns that the working party and PIANZ has not considered welfare to propose such densities. SAFE requires PIANZ to provide evidence to support such recommendations is based on animal welfare. Heat and humidity increases dangerously in crowded crates and without sufficient ventilation birds may become dehydrated and die of heat stroke (Freeman, 1984).

SAFE's recommendations:

The following be included as minimum standards:

- The number of broiler chickens per container that is appropriate must take into account available floor space in the containers, the body size of the broiler chickens and environmental conditions at the time of transport.
- All broiler chickens must be able to rest on the floor of the cage at the same time and remain evenly distributed.
- The maximum density allowance must be decreased during summer, especially if the weather is hot or humid.

### **Minimum Standard No. 16 – Transport Containers**

SAFE is appalled at the flippant attitude of the working party to conclude the only minimum standard required relates to height of the crates for birds being transported. SAFE believes the minimum height of 21cm for slaughter-size broiler chickens compromises bird welfare given a bird typically requires 60cm to fully stand.

This standard must contain clauses referring to the way crates are handled during transport, as this is a major cause of trauma and injury (Gregory and Austin, 1992).

SAFE is very concerned at overseas research that concludes high mortality and injury during transport. A survey by Gregory and Austin (1992) found that the number of birds dead on arrival at the slaughterhouse was .19 per cent. Just over half the birds (51 per cent) had died from heart failure and 35 per cent of these had ascites. SAFE questions the level of incidences of injury and mortality in New Zealand and seeks clarification from PIANZ on this.

#### SAFE's recommendations:

That the following clauses be added to this Minimum Standard:

- Containers or crates must be managed to prevent toe or foot damage to broiler chickens when they are withdrawn, and when the crates are dragged, stacked or opened and be strong enough to prevent collapse when other containers are stacked on top.
- Crates must be maintained to allow broiler chickens to be put in and taken out without causing injury. Since there are gaps in the crates there is the possibility that heads, feet or legs of broiler chickens may protrude. Every endeavour must be made to avoid injury to the broiler chickens when handling crates.
- Minimum height for broiler chickens must be no less than 30cm.

### **Minimum Standard No. 17 – Unloading and Shackling**

Unloading and shackling is very stressful for chickens and must be carried out with care to minimise trauma.

Clause (f) of this standard implies that “jolts or unevenness in the line” causes wing flapping by shackled birds. This is misleading. A 1998 study observed that “considerable numbers of chickens show violent struggling and wing-flapping responses when they are inverted and suspended from shackles.” (Jones, et al., 1998). The authors of the study stated that although shackling duration rarely exceeds one minute, such struggling for even such a short time must cause suffering. The author’s note that such struggling reduces the likelihood of effective stunning as struggling birds may raise their heads, avoiding the water bath. The study confirmed previous research findings that the use of opaque hoods or heavy curtains covering the birds reduces or eliminates such struggling.

Broiler chickens must be properly stunned before slaughter.

#### Recommended Best Practice

Stress of unloading, shackling and slaughter can be lessened if the chickens are rendered unconscious in their transport containers by gassing with CO<sub>2</sub> or argon (Mohan, et al., 1990).

#### SAFE's recommendations:

Clause (b) is very vague. It should recognise other climatic conditions and other factors such as excessive noise, bright lights and unnecessary disturbances eg: vehicles, people and noisy machinery.

Clause (e) should be reworded to read: "All crates must be inspected on arrival at the slaughterhouse for chickens that have sustained injuries or died during transport. Any injured broilers must be unloaded and humanely destroyed immediately."

The following clauses should be added:

- Containers of broiler chickens must be moved so that broiler chickens remain in an upright position. If a conveyor is used for unloading crates of live broiler chickens, the conveyor angle must not be excessive causing broiler chickens to pile up.
- Containers must not be thrown or dropped. They must be moved smoothly during unloading.
- Chickens must be removed from crates carefully to avoid injury and distress.

## **MANAGEMENT PRACTICES**

To be included as an additional Minimum Standard

### General Information

- Surgical procedures must not be undertaken on broiler chickens in New Zealand systems.
- Chemical caponisation must not be practiced in any form.
- Commercial broiler chickens must not be raised in cages or fed hormonal growth promotants.

## **GENERAL**

Staff must be required to pass a competency test and receive a certificate to ensure they are competent to undertake the responsibilities cited in this code. These include: diagnosis of injury and disease, humane destruction, catching and loading, record keeping, basic animal welfare standards, and legal obligations of the “person in charge” of animals. Such competency tests should be administered by PIANZ and be the legal responsibility of management or the owner to implement.

Too many of the minimum standards are qualified by contestable and imprecise words and phrases: “in accordance with both good practice and scientific knowledge”, “where practicable”, “unreasonable or unnecessary pain or distress”, “ill-treat”, “significant surgical procedure” (p. 9); “reasonable precautions” (p. 13). 'Reasonable', 'practicable', or 'significant' are highly subjective.

It must be remembered that Codes of Welfare under the Animal Welfare Act 1999 are now legally binding. Imprecise language is an anathema to the legal profession and unacceptable in legally binding documents.

## **CONSUMER MARKET**

Consumers worldwide are becoming increasingly concerned with the welfare, environmental and health aspects of animal production. In New Zealand, over 330,000 members of the public signed a petition opposing the battery hen cage and a further 80,000 signed a petition against the dry sow stall.

In response to consumer pressure major food businesses such as McDonalds and Burger King are requiring their suppliers to adhere to stricter animal welfare standards (Reuters News Service, 2001).

In the United Kingdom, due to consumer concern over welfare of broiler chickens, demand for free-range chicken is increasing and up to 40 per cent of chicken sold in one supermarket chain is free-range (Turner, 2000).

As a senior EU animal welfare officer has said, "Concern for animal welfare and a desire for improvement is a consumer driven issues and it will not go away." (Moynagh, 2000, p. 113).

### **FREE-RANGE AND ORGANIC PRODUCTION SYSTEMS**

Free-range and organic production systems typically use slow-growing chickens (slaughter age of 56 or >81 days), lower stocking densities than intensive systems (eg: 25 kg/m<sup>2</sup>), provide outdoor access, and limit group sizes to no more than 4,800 birds (SCAHAW, 2000). A number of scientific studies indicate that such production systems result in fewer welfare problems.

A Bristol University study of free-range broiler chickens found that despite the birds being fast-growing commercial strains, when allowed to roam freely fewer birds developed leg weakness (Limbri, 1992).

Mortality rates in "Label Rouge" (a French "free-range" production system) have been estimated at 0.25 per cent per week compared to 1 per cent per week for standard broilers (SCAHAW, 2000).

## CONCLUSION

SCAHAW concluded that most welfare issues concerning broiler chickens are due to selective breeding to increase growth rate and to improve feed conversion (Turner 2000, p. 6). Growth rates have steadily increased over the past 30 years and the time required to grow a broiler chick to slaughter weight (2 kg) has been halved. This is likely to continue to decrease by one day every year up to at least 2007 (Turner, 2000).

Serious and common welfare problems due to an accelerated growth rate include leg problems such as lameness, heart disease, and increased mortality (Turner 2000, p. 7), and the need for feed restriction in breeding birds (Turner 2000, p. 11). Welfare problems are therefore inherent in intensive broiler production systems. The draft code does not, and cannot, prevent welfare problems resulting from the use of fast-growing breeds of birds.

As growth rates continue to increase a corresponding increase in leg problems is certain to result as selection against leg disorders is of low importance to breeding companies relative to factors such as growth rate and food conversion ratio. A review of broiler breeding indicated that selection against leg disorders rates only 9th out of 12 factors that breeding companies take into account (Turner, 2000). Such predictions indicate that welfare of intensively reared broiler chickens will continue to decrease.

The New Zealand public is not informed of the manner in which broiler chickens are reared for meat production. In fact, most people are not even familiar with the word 'broiler'. The code is not representative of public opinion as stated in the code's preamble. This statement is highly misleading and misrepresentative. SAFE believes the majority of New Zealand society will conclude the current broiler industry standards are unacceptable on the grounds of animal welfare. If this were true the draft code would not reflect public opinion and need reconsidering. Furthermore, substantial overseas research quantifies serious animal welfare problems prevalent within the broiler industry. On this basis, substantial scientific evidence is required from PIANZ and NAWAC to support their recommendations of minimum standards, to satisfy animal welfare is not compromised.

SAFE is opposed to factory farming and therefore opposed to the broiler production industry. SAFE believes this code will serve as a license to manipulate, ill-treat, abuse and exploit chickens in a manner that contradicts recognised animal welfare standards. For PIANZ and NAWAC to sanction such legislative animal abuse will signify the level of exploitation both these bodies are willing to accept. As the first Code drafted after the implementation of the Animal Welfare Act 1999 this shows a general disregard for the terms of the Act. The nature of this Code should, SAFE believes, lead to questions being raised by the Director-General about the willingness or ability of NAWAC and animal exploitation industries to take the Act seriously in drafting future Codes. SAFE is confident that New Zealand society will not agree with the minimum standards presented in this Code and that these views should be reflected in developing a code of practice which demonstrates sound animal welfare standards.

The poultry industry must be required to demonstrate to independent assessors that it, at least, meets the minimum standards contained in the Code (as mentioned on page 10, (h) and (i)).

## REFERENCES

- Anonymous, (1993). Broiler Collector. *Poultry World* 137: 23.
- Bayliss P.A. & Hinton M.H., (1990). Transportation of broilers with special reference to mortality rates. *Applied Animal behaviour Science* 28: 93-118
- Berry, P. S.; P.J. Kettlewell; & P. Moran (1990). The AFRC Mark I. Experimental broiler harvester. *J Agric. Eng. Res.*, 47: 153-163
- Bingham, A. N., (1986). Automation of broiler harvesting. *Poultry Int.*, 25: 41-42
- Dawkins, MS & Hardie S., (1989). Space needs of laying hens. *British Poultry Science*. 30: 413-416.
- Davis N.J., (1999). Preference of growing fowls for different light intensities in relation to age, strain and behaviour. *Anim. Welf.*, 8: 193-203
- Duncan, I. 18 October, 1973: "Can the Psychologist Measure Stress?"
- Freeman, B. (1984). Transportation of Poultry. *World's Poultry Science Journal* 40: 19-30.
- Gerrits, A. R.; de Koning. K & Mighels, A. (1985). Catching broilers. *Poultry* 1: 20-23
- Gregory N.G. & Austin S.D., (1992). Causes of trauma in broilers arriving dead at poultry processing plants. *Vet Rec.*, 131: 501-503
- Kemp, (1985). Pure Breed Poultry Raising
- Kestin S.C. (1992). Prevalence of leg weakness in broiler chickens and its relationship with genotype. *Vet. Rec.*, 131: 190-194
- Kilgour R., Dalton C. (1984). Livestock behaviour. Methuen.
- Lilburn M.S., (1996). Relationships among mineral balance in the diet, early growth manipulation and incidence of tibial dyschondroplasia in different strains of meat type chickens. *Poultry Science*.
- Mohan, A., et al (1990): Effect of Electrical and Gaseous Stunning on the Carcass and Meat Quality of Broilers. *British Poultry Science* 31: 725-733.
- Moynagh, J. (2000). EU Regulation and Consumer Demand for Animal Welfare. *AgBioForum*, 3(2&3): 107 - 114.

Parry, R. T., (1989). Technological developments in pre-slaughter handling and processing. In: G. C. Med (ed.): Processing of Poultry, Elsevier, Amsterdam, The Netherland, pp 65-101

Porter, (1942): Domestic and Ornamental Fowl.

Swiss Society for the Protection of Animals. 1994. Laying Hens: 12 years of Experience with New Husbandry Systems in Switzerland. Poultry working group of Swiss Society for the Protection of Animals.

Raine H. (1986). Manipulating broiler growth curve improves profitability. *Poultry International*, March.

Reuters News Service. (2001) British Agency Campaigns for Chickens' Rights. Available from <http://www.planetark.org/dailynewsstory.cfm/newsid/13431/story.htm>. Downloaded 26.11.01.

Scientific Committee on Animal Health and Animal Welfare, (2000). *The Welfare of Chickens Kept for Meat Production (Broilers)*. European Commission, Health and Consumer Protection Directorate-General.

Scott, G. B., (1993). Poultry handling: a review of mechanical devices and their effect on bird welfare. *World's Poult. Sci. J.* 49: 44-57

Sutton, J. (2001) Speech to the 2<sup>nd</sup> International Poultry Broilers Nutritionists' Conference, 13 February, 2001, at Rotorua.

Turner, (2000). *The Welfare of Broiler Chickens: An analysis of the European Scientific Committee report of March 2000.*