



## OIE GUIDELINES FOR THE ON-FARM WELFARE OF CHICKENS RAISED FOR MEAT

### SUBMISSION BY THE INTERNATIONAL COALITION FOR ANIMAL WELFARE<sup>1</sup>

June 2009

#### Introduction

The International Coalition for Animal Welfare (ICFAW) welcomes the decision by the OIE Animal Welfare Working Group to produce guidelines concerning the on-farm welfare of chickens raised for meat (broilers). Broilers are by far the most numerous of all farmed animals; worldwide over 50 billion chickens are reared annually for meat.

As globally the majority of chickens raised for meat are produced industrially, ICFAW's submission focuses on the health and welfare problems that are associated with industrial production.<sup>2</sup>

Industrial chicken production can be broadly defined as large scale farming usually of an intensive nature, where the production system/management style treats the animals as commodities and does not proactively support or allow management of them according to their individual needs. It is characterised by the keeping of up to 50,000 birds in a large shed that becomes crowded as the birds grow larger and very crowded as they approach full size. Nearly all chickens used in industrial production are fast growing breeds vulnerable to leg disorders and cardiovascular malfunction. Scientific research has established that industrially produced chickens are subject to a range of serious health and welfare problems.

ICFAW welcomes the emphasis placed by the OIE on welfare outcomes but believes that the OIE guidelines should also address resource and management inputs as guidance as to how to produce desired outcomes will be helpful to producers. Good inputs, for example regarding space allowance and environmental enrichment, are essential for creating acceptable welfare potential. In addition, good husbandry and management, for example the achievement of good litter and air quality, are required for that potential to be fulfilled. In short, the quality of resources and management cannot be ignored as, if these are poor, one cannot expect to achieve good welfare outcomes.

ICFAW hopes that the OIE guidelines will address the following matters.

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<sup>1</sup> The member organisations of the International Coalition for Animal Welfare, representing more than 12 million individual supporters internationally, include: Compassion in World Farming, Eurogroup for Animals, the Humane Society of the United States and Humane Society International, the International Fund for Animal Welfare, the Japanese Farm Animal Welfare Initiative, the National Council of SPCAs, the Royal Society for the Prevention of Cruelty to Animals, and the World Society for the Protection of Animals.

<sup>2</sup> Steinfeld H. *et al.*, 2006. Livestock's Long Shadow: Environmental Issues and Options. Chapter 3. Food and Agriculture Organisation of the United Nations. Rome. [http://www.virtualcentre.org/en/library/key\\_pub/longshad/A0701E00.htm](http://www.virtualcentre.org/en/library/key_pub/longshad/A0701E00.htm).

## Contact Dermatitis

This includes foot pad dermatitis, hock burn and breast blisters.

If litter conditions are suboptimal, there is a considerable risk that the chickens will develop contact dermatitis on their feet, hocks and/or breast. A number of welfare schemes use foot pad dermatitis as a key welfare indicator.

Foot pad dermatitis, hock burn and breast blisters are usually caused by poor litter quality (wet or sticky litter containing a high level of ammonia from faeces) which can result from a range of factors including water spillage, inappropriate feed composition, enteric infections, poor ventilation and overcrowding (a greater number of birds in a given space will lead to the production of an increased amount of droppings which can result in wet, dirty litter).

In addition, birds with leg disorders and more generally birds that are heavy for their age are more vulnerable to contracting contact dermatitis than non-lame and lighter birds as they spend a greater proportion of their time squatting in the litter which, if of poor quality, is likely to cause contact dermatitis.

Contact dermatitis can cause pain, slower weight gain (perhaps due to pain-induced inappetence), downgrading, and reduced profits for producers. In addition, the lesions of contact dermatitis can be a gateway for bacteria.<sup>3</sup>

In conclusion, foot pad dermatitis, hock burn and breast blisters can signify the presence of a range of poor welfare factors and as such are important welfare indicators.

**ICFAW recommendation on contact dermatitis:** The OIE guidelines should require incidences of foot pad dermatitis and hock burn to be kept down to low levels, and should set out both the risk factors and effective prevention strategies for foot pad dermatitis and hock burn. No birds should have foot pad or hock lesions. However, whilst working towards this target, the average level of both foot pad dermatitis and hock burn should not exceed 4%.

## Litter Quality

For the reasons outlined above and for general reasons of comfort, health and behaviour, the availability, quality and management of litter are important.

**ICFAW recommendation on litter quality:** The floor of chicken houses should be covered with litter which should be maintained in a dry friable state.

## Stocking Density

Providing sufficient living space is a fundamental requirement of acceptable welfare but does not, on its own, ensure it. Sound genetics as well as good management and husbandry - including good litter and air quality and environmental enrichments - are also required.

A recent review of the scientific literature has concluded that stocking density is a central issue of chicken welfare.<sup>4</sup> Scientific studies show that at higher stocking densities, pathologies (chronic dermatitis and leg disorders), walking ability and the presence of infectious agents are worse than at lower densities.<sup>5</sup> Similarly,

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<sup>3</sup> Berg C., 2004. Pododermatitis and hock burn in chickens. In: Measuring and Auditing Broiler Welfare (eds. Weeks C. and Butterworth A.). CAB International.

<sup>4</sup> Bessei W., 2006. Welfare of broilers: a review. World's Poultry Science Journal. Vol 62, September 2006: 455-466.

<sup>5</sup> Hall A., 2001. The effect of stocking density on the welfare and behaviour of broiler chickens reared commercially. Animal Welfare 10: 23-40.

at higher densities, movement and general activity are reduced and disturbance of resting (as birds jostle each other) is increased. This reduced activity contributes to the leg weakness problems that are prevalent in fast growing chickens.

It becomes harder to inspect birds effectively as crowding increases. A higher density of chickens generates additional heat, humidity and ammonia. Disease is more likely to spread where conditions are crowded, humidity is high and the birds' immune systems are compromised by stress.

Higher densities can also lead to (i) reduced litter quality and hence to increased levels of contact dermatitis<sup>6</sup> and (ii) reduced air quality which is associated with respiratory problems.

The EU Scientific Committee on Animal Health and Animal Welfare concluded in 2000 that: "It is clear from the behaviour and leg disorder studies that the stocking density must be 25 kg/m<sup>2</sup> or lower for major welfare problems to be largely avoided and that above 30 kg/m<sup>2</sup>, even with very good environmental control systems, there is a steep rise in the frequency of serious problems."<sup>7</sup>

**ICFAW recommendation on stocking density:** The OIE guidelines should encourage producers (i) to avoid high stocking densities and in particular (ii) to adopt a maximum density of 30 kg/m<sup>2</sup> and (iii) to adopt a maximum stocking rate of 19 birds/m<sup>2</sup>.

### Air Quality and Temperature

Levels of ammonia, carbon dioxide, carbon monoxide and dust must be maintained at a point where they do not harm the chickens. High temperatures, particularly combined with high humidity, can lead to heat stress and, in the worst cases, to high levels of mortality.

**ICFAW recommendation on air quality and temperature:** The OIE guidelines should encourage producers to avoid exceeding the following concentrations<sup>8</sup>:

<b>Ammonia</b>	15 ppm (parts per million) at bird head height
<b>Carbon dioxide</b>	3,000 ppm at bird head height
<b>Carbon monoxide</b>	50 ppm, averaged over an 8 hour period
<b>Dust</b>	10 mg/m <sup>3</sup> , averaged over an 8 hour period

Producers must, through forced or natural ventilation and, if necessary, heating and cooling systems, (i) maintain a thermally comfortable environment and (ii) avoid extremes of heat, humidity and cold.

### Cage Confinement

Cage manufacturers are encouraging producers to keep broilers in cages. ICFAW is opposed to the use of cages for broilers as they impede movement due to high stocking densities and limited availability of space and prevent natural behaviour such as scratching, pecking and dust bathing.

**ICFAW recommendation on the use of cages:** The OIE guidelines should not permit broilers and broiler breeders to be kept in cages.

<sup>6</sup> Sanotra G.S., Lawson L.G. and Vestergaard K.S., 2001. Influence of stocking density on tonic immobility, lameness and tibial dyschondroplasia in broilers. *Journal of Applied Animal Welfare Science* 4(1): 71-87.

<sup>7</sup> European Commission's Scientific Committee on Animal Health and Animal Welfare's report on the Welfare of Chickens Kept for Meat Production (Broilers). 21 March 2000, Brussels, Belgium. [http://www.europe.eu.int/comm/food/fs/sc/scah/out39\\_en.pdf](http://www.europe.eu.int/comm/food/fs/sc/scah/out39_en.pdf).

<sup>8</sup> RSPCA Freedom Food standards for meat chickens, February 2008 and Council Directive 2007/43/EC laying down minimum rules for the protection of chickens kept for meat production.

## Lameness and Cardiovascular Malfunction

The chickens used in today's industrial meat production reach slaughter weight about twice as quickly as 35 years ago. This change has been achieved by genetic selection for fast growth, specialised diets and, in some countries, growth-promoting antibiotics. The legs fail to keep pace with the rapidly growing body and often are unable to support it properly. As a result many chickens suffer from painful, sometimes crippling leg disorders. The heart and lungs, too, often cannot keep pace with the body growth and many chickens succumb to Ascites or Sudden Death Syndrome

Scientific research has established that leg and heart problems stem to a large extent from the use of fast-growing breeds,<sup>9</sup> with infectious agents also being responsible for some serious leg disorders.

A bird's level of lameness can be determined by assessing its walking ability. The University of Bristol's Gait Scoring Guide is widely used to assess walking ability.<sup>10</sup> The Bristol score ranges from 0 (the bird displays smooth, fluid locomotion) to 5 (the bird is incapable of sustained walking on its feet). Research has concluded that welfare is compromised in birds with gait scores of 3 or more, as birds with such scores are likely to experience pain and discomfort.

**ICFAW recommendation on lameness and cardiovascular malfunction:** The OIE guidelines should encourage producers to keep lameness down to low levels. The guidelines should:

- require any bird with a gait score of 4 or 5 to be humanely killed immediately, and
- encourage producers to keep the level of birds with a gait score of 3 below 4% on average.

The guidelines should also include practical guidance as to the steps that can be taken to reduce the incidence of lameness. Such steps include the use of slower-growing breeds, the provision of sufficient space and environmental enrichment to stimulate activity and hence greater leg strength, and the introduction of sufficient light intensity and periods of darkness which will also promote activity.

## Environmental Enrichment

The inclusion of environmental enrichments, such as straw bales, ramps and platforms, pecking objects, scattering of whole grain and the provision of brassicas (e.g. cabbage, cauliflower, broccoli) improve bird health and welfare by encouraging birds to be more active thereby promoting improved leg strength.

**ICFAW recommendation on environmental enrichment:** The OIE guidelines should require the provision of environmental enrichments.

## Lighting

Chickens are often kept in almost constant dim light. Such conditions maximise feed intake and discourage activity thus maximising growth rate. Such lighting regimes are detrimental to welfare because:

- near constant light means that chickens do not have a sufficient period of darkness to rest;
- fast growth rates lead to high levels of leg disorders and heart problems;
- reduced activity is associated with leg weakness and contact dermatitis; and
- very low light levels can cause eye abnormalities.

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<sup>9</sup> Kestin S.C., Gordon S., Su G. and Sørensen P., 2001. Relationships in broiler chickens between lameness, liveweight, growth rate and age. *Veterinary Record* 148: 195-197.

<sup>10</sup> Kestin S.C., Knowles T.G., Tinch A.E. and Gregory N.G., 1992. Prevalence of leg weakness in broiler chickens and its relationship with genotype. *Veterinary Record* 131: 190-194.

**ICFAW recommendation on lighting:** Where the light source is artificial:

- in each period of 24 hours, birds should have a continuous period of darkness of at least 6 hours (except for birds up to 7 days of age and for 3 days prior to slaughter, when the minimum continuous darkness must be at least 2 hours);
- changes in light levels should take place in a stepped or gradual manner to allow chickens sufficient time to prepare for the light or dark period; and
- the minimum light intensity should be 20 lux, with preferably an average minimum illumination of 100 lux over at least 75% of the floor area.

The guidelines should encourage the use of natural light as this is likely to be beneficial to bird welfare by, for example, increasing activity and enriching the birds' environment. The light openings within the shed should correspond to at least 3% of the total floor area of the house.

## **Mortality**

High mortality rates indicate the presence of serious health and welfare problems on the farm.

**ICFAW recommendation on mortality:** The OIE guidelines should encourage producers to achieve low rates of mortality (including culling). If mortality exceeds 0.3% in a 24-hour period an investigation to find the cause must be carried out and remedial action must be taken to prevent a recurrence.

## **Broiler Breeders**

The high growth rates that are common in industrial broiler production result in broiler breeders being subjected to severe restricted feeding regimes that result in chronic hunger, frustration and stress.<sup>11</sup> The use of feeding regimes that lead to chronic hunger is wholly inconsistent with the first of the *Five Freedoms*.

A number of mutilations (beak trimming, dubbing, de-spurring, de-clawing, toe-removal) are commonly carried out on broiler breeder chicks.

**ICFAW recommendation on broiler breeders:** The breeding companies should be encouraged to select for slower growing birds that are much less susceptible to leg problems and cardiovascular malfunction than fast growing breeds. This would enable restricted feeding regimes to be brought to an end.

Broiler breeders should be kept in such a manner that mutilations are not necessary, and, accordingly, the use of these mutilations should be phased out.

## **Competence and Training**

Personnel involved in attending to chickens must have an understanding of the relevant animal welfare requirements and receive appropriate training to enable them to perform their tasks competently. This is particularly important for the catching of birds.

**ICFAW recommendation on competence and training:** Personnel involved in handling and caring for chickens should be competent and should receive appropriate training to equip them with the necessary practical skills and knowledge of chicken behaviour, health and needs. With regards to catching, birds should be caught and carried by both legs. Indeed, best practice is to carry the birds upright, no more than two at a time, instead of inverting them and carrying them by their legs.

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<sup>11</sup> Savory C.J., Maros K. and Rutter S.M., 1993. Assessment of hunger in growing broiler breeders in relation to a commercial restricted feeding programme. *Animal Welfare* 2: 131-152.