Statement on the Welfare of Laying Hens

Introduction

The International Egg Commission (IEC), established in 1964, is the only organisation that globally represents the interests of the egg farmers and egg processors around the world. The IEC is made up of members representing 55 countries accounting for over 90% of the world egg production (FAOSTAT, 2007).

Human welfare and the welfare of laying hens are key concerns for all egg farmers around the world. This document presents the IEC position with a review of key elements to consider for evaluating the welfare of laying hens. The IEC is committed to updating this position statement regularly as new scientific data becomes available.

The IEC also considers that welfare of laying hens should not be treated as a stand-alone issue but as one among many socially important goals including food safety and security, human and animal health, environmental sustainability, rural development, gender equality and social justice.

As a general approach, improving the welfare of laying hens should begin with an assessment of the risks and opportunities in the entire system or production chain, and a search for improvements that will be practical in a given situation. These assessments should be premised on science based analysis of the needs and welfare of hens.

The IEC is aware that, the most effective approach to enhance laying hen welfare is likely to be a continual-improvement process based on sound scientific assessments rather than the imposition of radically different procedures.

The IEC also believes that it can provide a very relevant and practical input into the review and analysis of different standpoints related to international policies and regulations dealing with laying hens as well as serve as an advisor to international bodies such as the World Organisation for Animal Health (OIE) for building capacities to improve the good practices of welfare in laying hens.

Welfare Assessment

In 1965, the report of the Brambell Commission, established by the British government, presented many of the issues associated with modern farming practices. It identified the most serious threats to the welfare of farm animals, and made recommendations regarding practices that should or should not be allowed. The Commission also outlined a number of scientific issues which could not be resolved by the current scientific knowledge and set the stage for research over the next decades (Rushen, 2008).

As an outcome of this report, the Farm Animal Welfare Council (FAWC) formulated the welfare requirements known as the “Five freedoms” (Anonymous, 1992):

1. Freedom from hunger and thirst – by ready access to fresh water and a diet to maintain full health and vigour;
2. Freedom from discomfort – by providing an adequate environment, including shelter and a comfortable resting place;
3. Freedom from pain, injury and disease – by prevention or rapid diagnosis and treatment;
4. Freedom to express normal behaviour – by providing sufficient space, proper facilities and company of the animal’s own kind;
5. Freedom from fear and distress – by ensuring conditions and treatment which avoid mental suffering.
While most would agree with the philosophy of this general approach, it requires, to be useful in quantifying welfare risks, a number of clear definitions which are often not provided by its proponents.

Reviews on the welfare of laying hens by numerous authors over the past 20 years (Appleby et al., 1991; Cunningham et al., 1996; Duncan, 2001a; 2001b; Hester, 2005; Rodenburg et al., 2005a; Ferrante, 2009) have stressed the areas for improvements such as housing, husbandry practices, and the environment. Various authors have also commented on the lack of clear understanding of the behavioural patterns important to the birds and the lack of a commonly accepted and recognized approach to address the behavioural expression and problems of laying hens in commercial farms (Kilgour, 1978; Appleby, 1991; Veissier et al., 1999; Mollenhorst, 2005; Weeks et al., 2006; Veissier et al., 2007; Barnett et al., 2009b; Ferrante, 2009; Nicol et al., 2009).

In 2006, the Laywel project, commissioned by the European Union, proposed to evaluate the welfare of laying hens under various housing systems, taking into account pathological, zootechnical, physiological and ethological aspects. A series of conclusions and recommendations were made on various aspects of the housing systems, behaviour, health and other aspects of animal welfare. The report clearly stressed the needs for additional research to determine the influence of housing system design on behaviour during lay and on the nature, timing and provision of key resources such as foraging mediums, perches and nest boxes (Blockhuis et al., 2007).

At the present time, the IEC believes that each housing system has its advantages and disadvantages. No system can be considered as perfect or ideal. Along with the housing system, the experience of the workers who manage the birds within their defined environment plays the most critical part in ensuring the welfare of laying hens.

While welfare is often only associated with the type of housing system used and the expression of natural behaviour by the birds, some additional elements presented below should be taken into consideration for an overall evaluation of the welfare of laying hens and its implications on other important social and human goals.

**Bird Health**

As stated by the OIE (2008), animal health is a key component of animal welfare. Strict biosecurity is one of the most effective ways to maintain healthy flocks (Hinkle et al., 1999; Hester, 2005; Ferrante, 2009). By its nature, it is difficult to maintain high levels of biosecurity in free range systems where birds may be in contact with pest, parasites and wild birds. In addition, non-cage flocks can also be prone to endo and ectoparasitic infestations (Duncan, 2001b; Rodenburg, 2005a; Tauson, 2005).

**Egg Quality and Food Safety Aspects**

The quality and food safety of eggs is of great importance to both the egg producers and the consumers. Cage systems allowing the separation of the laying hens from the manure are superior systems from a bacteriological point of view (Reu, de, et al., 2005; 2008). Eggs produced in conventional cages have shown lower incidence of dirty eggs, less percentage broken and hair-cracked eggs than eggs produced in other systems (Reu, de, 2005; Mallet et al., 2006; Guesdon et al, 2004a; Guesdon et al., 2006; Reu, de, et al., 2008; Wall et al., 2008b; Singh et al., 2009a; Tactacan et al., 2009).
Atmospheric Pollution and Laying house environment

Ammonia emissions from animal operations constitute a large portion of the total ammonia emissions, with all poultry production responsible globally for about 2.1 million metric tons of ammonia emissions annually or 9% of the total emissions by domestic animals (Ritz et al., 2004). Manure and litter management is perhaps the most common methodology to reduce the formation and emission of NH₃ (Horne, van et al., 1998; Nicholson et al., 2004). Surveys of commercial operations have demonstrated that layer operations using conventional cages with manure removal belts generated less NH₃ emissions than those without a manure removal system (Roumeliotis et al., 2008). An additional advantage of reduced ammonia and odours in caged systems is a better internal environment for both the birds and the personnel managing these houses (Kristensen et al., 2000; Ritz et al., 2004; Powers et al., 2005).

Therefore, litter management is a critical element to consider during the evaluation of housing systems and their impact on the welfare of laying hens as well as on other important social and human goals

Management - Training of Poultry Personnel

The role of personnel handling and caring for laying hens is also critical for their welfare. Each housing system requires trained and experienced managers to guarantee the welfare of the birds, the safety and welfare of the staff working in these poultry houses and the optimum performance of a flock. Any new housing system should be tested thoroughly and the management of the birds should be monitored continuously and adjusted over time.

The IEC supports the need for appropriate training for people to provide for the welfare of birds and that of employees.

Research and Applied Science

The IEC fully supports measures introduced to improve the welfare of laying hens, provided they are based on sound scientific evidence. There is a considerable amount of work that is currently underway in numerous countries. The results of these studies will provide additional knowledge which is considered vital to inform government and industry policies on hen welfare.

The IEC, via its Animal Welfare Working Group, is committed to review, analyze and communicate the latest scientific research available to its member countries.

Industry Responsibility

The IEC believes that the egg farmers are best positioned to determine the most appropriate system of egg production taking into account the birds' welfare and health needs, as well as local socio-economic and environmental conditions, management skills available, food safety, egg quality and consumer demands.

Human Welfare

Among the various foods delivering essential nutrients to mankind, the egg has arguably a special place, being a rich and balanced source of essential amino acids and fatty acids, with significant amount of certain minerals and vitamins (Surai et al., 2001). In addition to being one of nature’s highest quality sources of proteins, a number of nutrients in eggs such as vitamins, minerals and omega-3 fatty acids play a key role in the development and maintenance of the brain and muscle tissues, in disease prevention and contribute to the well-being of the aging population (Horrocks et al., 1999; Granado et al., 2003; Chandra, 2004; Bourre, 2005; Eiander et al., 2007; Djoussé et al., 2008; Lukiw et al., 2008).
In 2007, the FAO estimated the number of undernourished people at 923 million, of which 907 million were in the developing world (FAO, 2008a). It must not be overlooked that in some of the world’s least developed and developing countries, including parts of Africa, Asia and South America, eggs are unaffordable to large sections of the population. In 53 out of 174 countries listed in the most recent FAO survey, egg consumption was less than 7g per person per day or less than one egg per week (FAO, 2008b).

It is therefore of the utmost importance that human welfare concerns and local prevailing socio-economic conditions be taken into account when discussing animal welfare.

**Animal Welfare Regulations / Code of Practice**

The IEC is respectful of the welfare regulations in all countries. However, the IEC believes that regulations relating to animal welfare must be science-based and should not require drastic changes that are not only costly and damaging to the industry, but could also be counter-productive to the welfare of the birds or to the food safety and quality of eggs (Bonney, 2006; Humphrey, 2006; Horne, van, et al., 2008). Regulations also need to be adapted to the state of economic development within countries.

The IEC is committed to making a positive contribution to the availability of scientific knowledge on the welfare of laying hens. In 2009, the IEC established a working group on Animal Welfare to assist in the review and dissemination of some of the latest research findings published around the world.

As the international representative body for the egg industry, the IEC communicates with the OIE (World Organisation for Animal Health) and believes that it can provide the best global knowledge to assist the OIE Animal Welfare Working group in the area of housing and management of laying hens.

The IEC will fully support measures introduced to improve the welfare of laying hens, provided they are based on sound scientific evidence and that they do not represent a threat to human welfare, social and economic development and to the objective of affordably feeding the people of the world, thereby enhancing food security.

**Conclusion**

There can be no doubt that significant progress has been made during recent years in both the design and construction of housing systems to enhance the welfare of laying hens. A number of scientific studies are currently underway and will provide more information on ways to further improve the welfare of laying hens for each housing system used.

The IEC considers that it is the responsibility of the egg industry to analyze carefully researched and considered studies and recommendations for the welfare of laying hens, while taking into consideration their effects on social goals such as human welfare and economic development. The IEC also considers that it is the responsibility of the egg industry to provide a feasible option for the global consumers and even more for those who lack a balanced nutritional status.

Egg farmers who adopt sound guidelines for the welfare of their birds will have a solid base from which to reassure consumers that they are practicing good management and care for their hens.

The IEC is committed to review, analyze and communicate the latest scientific research available to its member countries and participate along with international agencies in the setting of global standards for the welfare of laying hens.