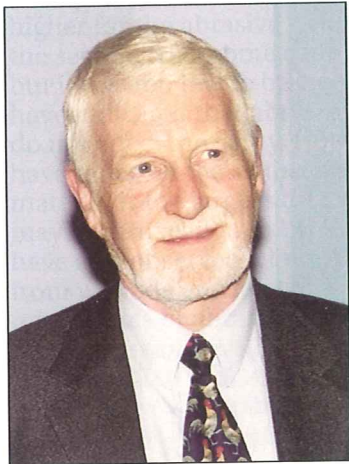


# Trying to make sense of poultry welfare issues in the EU



*The more the EC legislates on layer and broiler welfare, the more confusing the situation seems to become. Here the author highlights some of the anomalies, particularly those that arise from the interpretation by the national authorities. Hopefully, all these issues will have been clarified well before the Directives become law but time is running out. The author has also compiled a list of the advantages and disadvantages of the three main types of layer housing – conventional battery cages, enriched cages and free-range housing systems. — Dr John Savory*

**T**he welfare of livestock in EU countries is being influenced to an increasing extent by legislation emanating from Brussels, and by the way in which it is worded. Some regulations are already having an impact on poultry welfare, while others have yet to do so, and not all the consequences of this legislation are necessarily beneficial. This paper focuses on aspects of laying hen and broiler welfare, and how they are being, or will be, affected by current and (draft) future EU legislation.

## Laying hen welfare: EC Directive 99/74/EC

The most contentious piece of legislation is undoubtedly Council Directive 99/74/EC, which proposes a ban on conventional battery cages in the EU from January 2, 2012. One has to conclude that the decision to ban was taken for mainly political reasons because, arguably, it could not have been based on evidence in the EC Scientific Veterinary Committee's 1996 Report on the Welfare of Laying Hens. Moreover, in the UK Farm Animal Welfare Council's 1997 Report on the Welfare of Laying Hens, stated advantages of battery cages outnumber the disadvantages, whereas the opposite is the case for perchery/barn and free-range housing. Directive 99/74/EC will be reviewed in 2005 but if it goes ahead, the ban on battery cages will leave hens more exposed to the risks of feather pecking and cannibalism, bone injury, red mite infestation, disease and predation. It will also have a major

impact on commercial egg production in the EU, and probably cause increased importation of cheaper, cage eggs from outside the EU.

## Claw shorteners

Some provisions in Directive 99/74/EC applying to battery cages, took effect on 1 January 2003. Suitable claw-shortening devices were fitted although there is no consensus what is meant by "suitable" or what is an ideal claw length.

## How much space? How many hens?

Also, the minimum cage area per hen was increased from 450 to 550cm<sup>2</sup>. Presumably, this was intended to reduce the number of birds per cage by one. However, this requirement was worded as "cage area" (measured in a horizontal plane), rather than "floor area". This allowed one cage manufacturer to develop an "extended cage front", approved by DEFRA (the UK Government Department for the Environment, Food and Rural Affairs), which many commercial egg producers have now fitted to permit continued stocking with the original number of birds per cage.

## The litter conundrum

The outcome of DEFRA's "Consultation on a possible ban on the use of enriched cages for laying hens in England", completed in October 2002, was announced in March 2003. It is that the government will defer a decision until conclusions have been received from the planned review of Directive

# THE PROS AND CONS OF CAGE AND FREE-RANGE SYSTEMS FOR LAYING HENS

## CONVENTIONAL BATTERY CAGES

### Advantages

- Less labour for stockworkers
- No floor eggs
- Total control of the environment (lighting, temperature, ventilation)
- Small group size
- Reduced risk of birds being denied access to food and water by other birds
- Birds separated from their droppings
- Reduced risk of disease
- Easier control of disease
- Easier control of external parasites
- Absence of litter problems
- Reduced risk of damage due to aggression, feather pecking and cannibalism
- Beak trimming not always necessary
- Low mortality compared to other systems
- Reduced risk of smothering

- No risk of predation

### Disadvantages

- Prevention of normal expression of behaviours, e.g. walking, foraging (pecking and scratching at litter), dustbathing, egg laying in a nest box, perching, wing stretching, wing flapping
- Barren environment
- Variation between cage tiers (feather pecking and cannibalism most common in top tier)
- Lack of exercise can reduce bone strength.
- Cage structure may cause damage to feathers (abrasion) and feet (bumble foot)
- Risk of entrapment
- Inability to escape aggression, feather pecking and cannibalism when this occurs
- Inspection of birds by stockworkers can be difficult, especially in top and bottom tiers

## ENRICHED CAGES

### Advantages

- Less labour for stockworkers
- Total control of the environment (lighting, temperature, ventilation)
- Small group size
- Reduced risk of birds being denied access to food and water by other birds
- Birds separated from their droppings
- Reduced risk of disease
- Easier control of disease
- Easier control of external parasites
- Reduced risk of damage due to aggression, feather pecking and cannibalism
- Beak trimming not always necessary
- Low mortality compared to other systems
- Reduced risk of smothering
- No risk of predation
- Provision of suitable claw shortening devices and resources intended to allow expression of wing-flapping, wing-stretching, ground-pecking, ground-

- scratching, nesting and perching behaviours
- Perching and increased exercise can increase bone strength

### Disadvantages

- Environment more barren than in non-cage systems
- Depending on cage resource design, prevention of full expression of foraging, dustbathing and perching behaviours
- Variation between cage tiers (feather pecking and cannibalism most common in top tier)
- Reduced exercise can reduce bone strength
- Cage structure may cause damage to feathers (abrasion) and feet (bumble foot)
- Risk of entrapment
- Inability to escape aggression, feather pecking and cannibalism when this occurs
- Inspection of birds by stockworkers can be difficult, especially in top and bottom tiers

## FREE-RANGE HOUSING

### Advantages

- Birds quiet and often easier to handle
- Freedom of movement and more exercise
- Enriched environment
- Access outdoors and ability to range extensively and eat fresh grass
- Opportunity to dustbathe in soil
- Provision of perches and nest boxes at different heights, allowing greater use of space
- Most behavioural needs satisfied
- Perching and increased exercise can increase bone strength
- Choice of nest boxes
- More space for birds to avoid aggression and cannibalism

### Disadvantages

- Stocking density can be too high in places, increasing risk of smothering
- Increased mortality
- Increased risk of feather pecking and cannibalism
- Greater need for low light intensity and/or beak trimming to control pecking damage

- Risk of some birds being denied access to food and water due to aggression
- Increased risk of disease, due to contact with droppings and wild birds
- Increased incidence of internal parasites, due to contact with droppings and/or consumption of earthworms containing eggs or larvae
- Increased incidence of external parasites, especially red mite
- Increased risk of collision and bone injury
- Floor eggs
- Increased risks of egg breakage and egg eating
- Reduced control of environment, especially near open popholes
- Risk of crop impaction due to consumption of uncut grass
- Exposure to predators and bad weather
- Less efficient conversion of food to eggs, due to egg breakage, increased energy costs and consumption of food by wild birds
- House layout and equipment makes it harder to inspect and depopulate birds

## Welfare Issues

99/74/EC in 2005. Currently, we await the outcome of the "Consultation on a possible ban on the use of enriched cages for laying hens in England", completed in October 2002. UK producers want to know if they can buy new systems that be converted from unenriched to enriched cages when the former are banned after 2011. Prototype enriched cage designs included a litter area where hens could dustbathe, typically on wood shavings. This was problematical, because eggs were laid there, rather than in the nest area, litter was dispersed and it had to be regularly replenished. However, because Directive 99/74/EC states that enriched cages must contain "litter such that pecking and scratching are possible" and does not mention "dustbathing", this allows a different interpretation of "litter".

In one manufacturer's latest prototype enriched cage, layers mash (litter) is delivered regularly onto a pan at the rear of the cage, from which hens can scatter it onto a square of Astroturf (litter area) situated underneath. In commercial trials with this prototype, hens spent much time pecking, scratching at and eating the mash particles on the Astroturf, despite the fact that the same food was freely available in the trough at the front of the cage. This appears to be a form of "contra-free-loading" behaviour, described previously in laying hens. It may be as rewarding as dustbathing, which birds can still express in "sham" form on the cage floor. It may also reduce the risk of feather pecking and cannibalism.

### When is a perch not a perch?

Another ambiguity in Directive 99/74/EC concerns perches. It is stated that alternative systems must have "adequate perches without sharp edges and providing at least 15cm per hen" but it is not clear what is meant by "adequate perches" or what height they should be. Some producers provide aerial (elevated) perches which hens use regularly and which may help to reduce pecking damage. However, other producers do not like them for various reasons and they argue that the slats in the floor of the "raised slatted floor" type of system can be regarded as "equivalent perch space", even where the slats are closer than the required minimum 30cm spacing. DEFRA accepts this interpretation, but it was decided recently that a perch must be something that a hen can grip with its claws. Some slatted (or perforated) floors, therefore, now require tubing to be attached to them to provide the "perches". There are anecdotal reports that hens do not use these.

There is a further ambiguity in Directive 99/74/EC relating to stocking density in alternative systems, and what is meant by "usable area".

### Yes or no to beak trimming?

The ruling on beak trimming, that it may be authorised provided it is carried out "on chickens that are less than 10 days old and intended for

laying", implies that it cannot be done subsequently to suppress outbreaks of cannibalism. Moreover, the Welfare of Farmed Animals (England) (Amendment) Regulations 2002 requires a total ban on beak trimming after 31 December 2010 and DEFRA recently announced an action plan to enable this without compromising bird welfare. This is at a time when the risks of feather pecking and cannibalism may already have been increased by the ban on meat and bone meal and may be increased further by the proposed ban on battery cages. It will also be increased in organic flocks by the EC's rejection of a request for formal derogation from the ban on synthetic amino acids in organic diets. Temporary derogation from this ban is to end on 1 July 2003.

### Upcoming Directive for broilers

A first draft for a Council Directive Laying Down Minimum Standards for the Protection of Broilers went for consultation in July 2002 and a subsequent draft is due later in 2003. It proposes that broiler stocking density shall at no time exceed 30kg/m<sup>2</sup> but that the "competent authority" may authorise higher stocking densities (up to 38kg/m<sup>2</sup>) for establishments that comply with certain requirements. These requirements relate to records kept for each house of ambient temperature, humidity, ammonia, mortality and the conditions of the birds at slaughter. This should please the British Poultry Council, which has argued that producers should be allowed to stock above the long-standing maximum of 34kg/m<sup>2</sup> because of superior climate control in modern housing. However, it does not take account of a conclusion in the Report on the Welfare of Chickens Kept for Meat Production (Broilers) of the EC Standing Committee on Animal Health and Animal Welfare (2000). This was that the impact of stocking density on welfare increases as the birds get older and hence that any stipulated maximum terminal density will have less impact on birds slaughtered at 5 weeks of age – routine practice in several EU countries – than on those slaughtered at 6 weeks or later.

### Let there be light – but not continuously!

Other requirements in this draft proposal are that there must be an uninterrupted period of darkness lasting at least 6 hours in every 24-hour period and that this should be preceded by a period of twilight. During the rest of the time, minimum light intensity must be 20 lux. As this is twice the previous recommendation for minimum light intensity, it may well cause increased general activity. It could therefore lead to a reduction in feed conversion efficiency but it may perhaps also help to reduce the incidence of lameness.

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The author presented this paper at the 2003 Annual Meeting of the UK Branch of the WPSA.