



# The Welfare of Laying Hens



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**In 2017 around 38 million commercial laying hens were reared in the UK<sup>1</sup>. They are kept in one of three systems – free-range (including organic), barn and cage. The use of non-cage systems is continually increasing, but about half of the hens in the UK are still kept in battery cages. Laying hens are naturally inquisitive animals, with strong desires to perform important behaviours, such as dustbathing, perching, foraging and preening. The RSPCA would like all hens to be reared in environments that enable them to perform their natural behaviours.**

## Laying hen natural history and behaviour

The domestic fowl (*Gallus gallus*) is descended from the red junglefowl of south-east Asia. They were domesticated about 6000-8000 years ago, initially for collection or fighting purposes. They have been bred more intensively for specific egg and meat production characteristics in only the last 50 years, during which time the ways of keeping poultry has also changed dramatically.

Commercial laying hen breeds have been bred to produce high egg yields and a typical breed today will produce more than 300 eggs a year. In comparison, hens in the 1960s produced about 200 eggs per year and wild junglefowl will lay around 60.

Although there is variation between strains of modern domestic fowl, they all retain some characteristics of their wild ancestors including perching, pecking, foraging, ground scratching and nesting behaviours.

Like wild junglefowl, laying hens exhibit a wide range of complex comfort and grooming behaviours. Hens preen their feathers to keep them in good condition by raising and ruffling them, arranging them with their beak and feet, stretching their wings and dustbathing. The desire to dustbathe is a particularly strong characteristic which has remained in the domesticated bird, providing both behavioural and physical benefits. During dustbathing, hens fluff up their feathers and toss dry litter material over their body and wings using their feet.

Elements of nesting and laying behaviours are still very much present in commercial hen breeds. Ideally, laying hens will find a quiet, enclosed place to lay their eggs. The egg laying process may include nest site examination, sitting, a pre-laying call, standing and cackling, and can take around half an hour to complete.

Laying hens have also retained a very strong instinct to perch, which at night helps to reduce the risk of predation, as well as conserving heat by roosting close together.

Hens respond to potential predators as junglefowl would, including by freezing, alarm calling, sudden movements away from danger, and, if caught, struggling and vocalisation. They are social animals and communicate with other members of the flock by contacts, visual displays and about 20 different calls. In small groups of hens, a ranking or 'pecking' order will be established.

Hens are omnivores and will spend much of the day pecking and scratching the ground for seeds, worms and insects.

Both wild junglefowl and domestic hens may naturally live to around 10 years of age.

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## Commercial egg production

There are two distinct stages in keeping laying hens. The first is **rearing**, where the chicks are housed immediately after hatching. At this stage, before they start to lay eggs, the young hens are referred to as pullets.

There is no specific legislation detailing requirements during this time, but pullet rearing farms typically house the birds indoors in barns, with a littered floor, which helps to absorb droppings and allows the birds to scratch and dustbathe. During the rearing phase, the vast majority of birds destined for non-cage systems in the UK will also have raised perches and a small proportion of pullets being produced for free-range and organic systems will have access to an outside range area. Some of those destined for cages will be reared in cages immediately after hatching.

At around 16 weeks of age, the pullets are transferred to the **laying** system – cage, barn or free-range, for which there are minimum standards set out in European law, and where there are facilities for egg collection. Laying hens will be kept on these farms until they are about 72 weeks of age, by which time they will have typically laid more than 300 eggs each, but production will be decreasing. The hens will then be transported for slaughter/killing and the meat can be used in products such as soups, pastes and pet foods.

In 2017, in the United Kingdom around 38 million hens were reared<sup>1</sup>, which produced:

- 48%\* of eggs in cages<sup>2</sup>
- 51%\* of eggs in free-range (including 2% organic) systems<sup>2</sup>
- 1%\* of eggs in barn systems<sup>2</sup>

\*figures rounded up/down.

Since the 1990s, the proportion of eggs produced in cages has generally decreased, while free-range has increased.

Enriched' battery cages © RSPCA



An 'enriched' battery cage system

## Laying system

### BATTERY CAGES

The term 'battery' describes the arrangement of numerous identical units together; in the case of battery cages for laying hens, this can mean wire mesh cages stacked up. There is no limit on how high the cage tiers can be stacked.

Since 1<sup>st</sup> January 2012, European legislation has required all battery cages to provide perches, a nest, a scratching area and at least 600cm<sup>2</sup> usable area per hen (750cm<sup>2</sup> including the nest area). These are known as 'enriched' or 'furnished' battery cages, and provide 9% more usable area compared to the previously used conventional barren battery cages. In total, there is less usable space than an A4 sheet of paper per hen, and a maximum of nearly 17 birds per square metre. The overall size of each enriched cage tends to be larger than conventional cages as they typically house 40 – 80 hens rather than 4 – 5.

There is no legal minimum size for the scratching and nesting areas in each cage, which typically comprise of a piece of Astroturf. The nesting areas usually have flaps attached from the top of the cage to make it a discrete area and the scratching mat commonly has some feed dropped onto it once a day for the birds to peck and scratch at. The wire floors are slightly sloped so that the eggs can roll out and be collected automatically on a conveyor belt. Food is provided on a moving track feeder outside the cage, which the birds lean out to access, drinkers are in the cage along with perches.

The height of the cages above the usable area must be a minimum of 45cm, this is measured from the wire floor rather than from the top of the perches. Droppings fall through the mesh floor and are collected on a belt under the cages allowing them to be removed automatically.

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## BARN

Barn systems house a flock of laying hens inside a building, usually in separate colonies of no more than 4,000 birds and at a legal maximum stocking density of 9 birds per square metre. On these farms the hens have room to move about and exercise, perches on which to roost and nest boxes in which they can perform their nesting behaviours and lay their eggs.

Nest boxes are enclosed and have a slightly sloped floor to allow the eggs to roll away for automatic collection. Food, water and perches are provided on a slatted area (usually plastic), which also allows droppings to fall through. A further one third of the house area must legally be covered in litter, usually around 10cm deep, for the hens to scratch, forage and dustbathe in. 'Multi-tier' barn systems provide additional levels above the ground, with the opportunity for birds to move up and down and perch at different heights.

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Inside of a free-range house

## FREE-RANGE

Housing for free-range hens has the same facilities and requirements as the barn system (see above), but with the addition of access to an outside range area through 'popholes' in the sides of the building. Legislation for free-range hens stipulates continuous daytime access to at least 4 square metres of range per hen, with adequate vegetation and shelter.

Free-range systems may also be organic, which is governed by further legislative and certification scheme requirements concerning organic egg production.

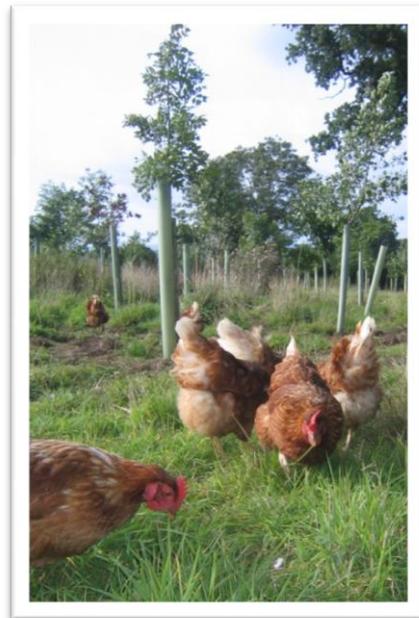
## Key welfare issues

### BATTERY CAGES

In June 1999, European Agriculture Ministers finally agreed that the conventional barren battery cage would be banned throughout Europe from 2012. This was a landmark step forwards for hen welfare. However, hens can still be kept in so-called 'enriched' cages (see page 2), which although they provide slightly more room and some additional facilities, in reality they still impose a restriction on movement and do not properly cater for the birds' full behavioural needs. Of particular concern in 'enriched' battery cages is that:

- the limited space can make it difficult for birds to move around and exercise, and to move away from other birds
- there is no minimum size of nest and scratch areas, which means they can be small, leading to competition and reduced nesting and foraging behaviours
- there are no facilities for proper dustbathing
- the position of the perches can make it difficult for hens to move around and rest undisturbed
- the available head room is decreased once perching
- it can be difficult to inspect birds in cages on bottom and upper tiers.

0464 © Rachel Grandfield



Laying hens ranging

# The welfare of laying hens

## INJURIOUS FEATHER PECKING

Injurious feather pecking involves hens pecking and pulling at the feathers of other hens, which can lead to more serious injuries and sometimes even cannibalism. It can occur in all laying hen systems and is considered to be a redirected foraging behaviour. Injurious pecking is not an aggressive behaviour. Aggressive pecking is a social behaviour relating to competition and the establishment of a pecking order.

The possible reasons for injurious feather pecking (and aspects which can help control or minimise the risk of a problem) vary widely and are not always easy to identify on individual farms or flocks, but can include the housing environment, space, breed, nutrition, health and pullet rearing. It can also break out as a result of sudden changes in things such as feed type or content, environment, or if there have been loud noises or disturbances such as low flying aircraft.

To reduce the risk of injurious feather pecking injuries, which can have a serious negative impact on the welfare of a bird, **beak trimming** is commonly carried out to remove the pointed tip of the beak, shortly after hatching. Where beak trimming is carried out, the law states it must be done before the birds are 10 days old and not more than one third of the beak can be removed. A change in legislation in England in 2010 also restricted the method of beak trimming to infrared, which is a non-invasive technique, involving less handling and proven to be more consistent than previous methods.

It is extremely disappointing that the serious problems that can occur from pecking and cannibalism cannot yet be fully and confidently avoided without beak trimming. However, the RSPCA is working together with industry to reduce the levels of injurious pecking within UK flocks, to reach a point where beak trimming is no longer deemed necessary.

## BONE DAMAGE

Evidence has shown that a significant proportion of hens from all production systems can suffer from bone fractures. Whether they occur during the birds' time on-farm or during handling and transport prior to slaughter/killing, fractures can have a serious negative effect on welfare.

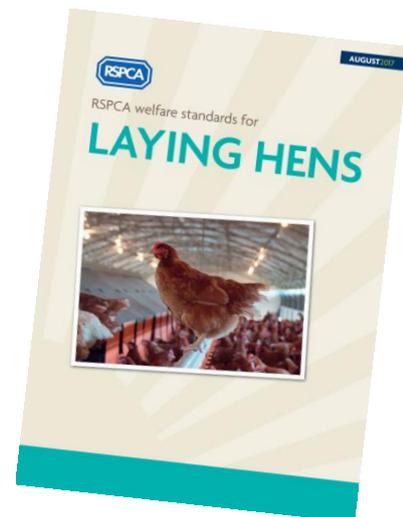
Housing design, breed management, nutrition and careful handling all have a part to play in minimising the risk of bone damage. It is also very important that birds are reared and housed in a way that allows them to exercise and build up bone strength, including during the early stages of pullet rearing, and that humane methods of on-farm killing/slaughter are considered.

## Work of the RSPCA to improve laying hen welfare

### WELFARE STANDARDS

The RSPCA encourages all laying hen producers to adopt the '*RSPCA welfare standards for laying hens*', which are regularly updated to help ensure that higher standards of animal welfare are met at all stages of the hens' lives.

The RSPCA has always been opposed to any cage system of producing eggs, so the welfare standards only permit free-range and barn systems, offering the birds space and facilities in which to carry out their natural behaviours. The standards represent 'good practice' in the care and welfare of hens and as such are much more strict and detailed than legal minimum requirements in key areas.



### CAMPAIGNING WORK

For many years the RSPCA has campaigned to have eggs from caged hens labelled to allow consumers to make an informed choice about which production system they support through their purchase. Since 2004, European legislation has required that all eggs and egg boxes be labelled according to the method of production. The Society is urging that labelling is clear and that all products containing eggs as ingredients are also labelled as eggs from free-range, barn or caged hens.

# The welfare of laying hens

In 2005, the RSPCA produced a report titled *The Case Against Cages – Evidence in favour of alternative systems for laying hens*. This report explains the different egg production systems and calls for all cages to be banned and replaced with barn and free-range systems. It also contains RSPCA commissioned economic research on the financial impact on producers of having to convert from conventional battery cages. Results show that the costs of some alternative systems, particularly multi-tier barns, are comparable to those of 'enriched' battery cages.

## ADVOCACY WORK

RSPCA Farm Animals Department staff represent the RSPCA on a number of government and industry committees, including the Laying Hen Welfare Forum (LHWF), a collaboration of industry, academics and poultry vets working together to improve the welfare of laying hens across a number of key issues, including feather cover. Prior to this, we were members of the Department for Environment, Food and Rural Affairs' Beak Trimming Action Group (BTAG) which worked to find and roll out practical solutions to keeping hens without the need for beak trimming.

## RESEARCH PROJECTS

In 2011, a three-year study commissioned by the RSPCA was completed by the University of Bristol, which looked at practical ways to encourage and increase the hens' use of the range. The number of birds using the range area in free-range egg production systems can sometimes be variable, but enticing birds outside can lead to improved

bone strength and a reduced risk of injurious feather pecking, so the results were used to help further develop the RSPCA welfare standards for laying hens.

### How can you help?

You can make a difference by choosing eggs laid by cage-free hens. All egg boxes must be labelled with how the hens were farmed. So check the box carefully, and don't buy eggs marked with 'Eggs from caged hens'.



Always choose eggs labelled RSPCA Assured. RSPCA Assured labelled products are produced by animals on farms inspected to RSPCA welfare standards. If you can't find RSPCA Assured labelled eggs then look for free-range, barn or organic.

Eggs are also used as ingredients in many different types of food, including ice cream, mayonnaise, cakes, quiches and sandwiches. Foods made with cage-free eggs will often be clearly advertised with the information on the packaging or in the ingredients list. If you are not sure then ask the retailer or manufacturer.

Take part in the RSPCA's campaigns for farm animals and download your guide to choosing cage-free eggs by visiting [www.rspca.org.uk/campaigns](http://www.rspca.org.uk/campaigns).

### Recommended further information

- RSPCA (2005) *The Case Against Cages – Evidence in favour of alternative systems for laying hens*.
- FAWC (1997). FAWC report on the Welfare of Laying Hens. Available from: [www.fawc.org.uk](http://www.fawc.org.uk)
- Council of Europe Recommendation concerning Domestic Fowl (1995): [www.coe.int](http://www.coe.int)

### References

1. Defra (2017). UK chick and poultry placings - monthly dataset [online]. Available from: <https://www.gov.uk/government/statistics/poultry-and-poultry-meat-statistics> [Accessed: 5 February 2018].
2. Defra (2017). UK egg packing station throughput and prices dataset [online]. Available from: <https://www.gov.uk/government/statistics/egg-statistics>. [Accessed 16 February 2018].