BVA British Veterinary Association | Policy statement

BVA and BVPA position on housing systems for laying hens

Introduction

The British Veterinary Association and British Veterinary Poultry Association are committed to advancing animal health and welfare based on veterinary expertise and scientific evidence. This position sets out our evidence-based views on the use of enriched cages, barn, free-range, and organic housing systems for laying hens to inform policy, support welfare improvements, and ensure animal welfare remains central to future decision making. When examining these systems, BVA considers the overarching principle that animals used by humans should have a life worth living and preferably a good life[1].

In the BVA Animal Welfare Strategy, we highlight that with developments in animal welfare science we are now better able to characterise animal welfare. In addition to this, frameworks for assessing and managing animal welfare have evolved. The World Organisation for Animal Health (WOAH) defines animal welfare as the "physical and mental state of an animal in relation to the conditions in which it lives and dies."[2] This definition reflects the understanding that welfare encompasses not only external conditions such as environment and treatment, but also internal experiences such as how animals feel about their external conditions.

We support the Five Domains model for animal welfare assessment. The model outlines the key elements that should be considered when assessing welfare, the importance of positive welfare states and mental wellbeing, and how the actions of humans directly impact animal welfare. Since its inception in 1994, the model has evolved to consider developments in animal welfare science. The most recent 2020 model centres on the following five domains:

1. Nutrition
2. Environment
3. Health
4. Behavioural interactions with other animals, people and the environment
5. Mental state

Production systems should offer stimulating living environments to allow for the performance of highly motivated behaviours; opportunities for positive welfare outcomes, such as comfort, pleasure, interest, and confidence; and excellent health outcomes. In this position we compare the current systems commonly used for egg laying hens in the UK with reference to the Five Domains model putting forward recommendations on what more can be done to support higher welfare laying hens.

Legislative context

The four UK administrations have separate legislation and codes of practice for keeping of laying hens. The Welfare of Farmed Animals (England) Regulations 2007, the Welfare of Farmed Animals (Scotland) Regulations 2010, the Welfare of Farmed Animals (Wales) Regulations 2007 and the Welfare of Farmed Animals Regulations (Northern Ireland) 2012.

All these pieces of legislation require the following, as a minimum, for keepers of laying hens across all systems:

- at least 750 cm² of cage area per hen, 600 cm² of which must be usable; the height of the cage other than that above the usable area must be at least 20 cm at every point and the minimum total area for any cage must be 2000 cm².
- access to a nest.
- litter such that pecking and scratching are possible.
- appropriate perches allowing at least 15 cm per hen.
- a feed trough which can be used without restriction must be provided, the length of which must be at least 12 cm multiplied by the number of hens in the cage.

[1]British Veterinary Association, *BVA Position on Animal Welfare* (July 2021) https://www.bva.co.uk/media/4273/full-bva-position-on-animal-welfare.pdf

[2] World Organization for Animal Health. 2023. "Animal Welfare." https://www.woah.org/en/what-we-do/animal-health-and-welfare/animal-welfare/.

- each cage must have a drinking system appropriate to the size of the group; where nipple drinkers are provided, at least two nipple drinkers or two cups must be within reach of each hen.
- to facilitate inspection, installation and depopulation of hens there must be a minimum aisle width of 90 cm between tiers of cages and a space of at least 35 cm must be allowed between the floor of the building and the bottom tier of cages.
- cages must be fitted with suitable claw-shortening devices.

The British Lion Scheme

The British Lion (BL) safety scheme provides assurance for over 90% of UK eggs. All eggs that carry the British Lion mark have been produced under the requirements of the British Lion Code of Practice which ensures the high standards of food safety. The code covers the entire production chain and ensures strict food safety controls including the guarantee that all hens are vaccinated against Salmonella and a 'passport' system ensuring that all hens, eggs and feed are fully traceable. Within the conditions of their scheme, they have criteria that must be met for hen housing and given their extensive coverage of the laying hen sector in the UK, we will be incorporating their definitions into this position.

Different housing systems for laying hens

According to UK Government figures the total throughput of eggs produced from the four systems are 71% free-range, 17.3% from enriched cages, 7.9% from barn housing and 3.7% from organic.[3] This means 82.7% of UK egg production already comes from cage-free systems. About 2,500 major food corporations currently have cage-free commitments, and an increasing number are successfully meeting their goals. The current split of the market could also be described as 74.7% being "outdoor-reared" flocks.

Enriched cages

In 2012 battery cages for laying hens were banned in the EU and UK, and enriched colony cages were created as an alternative. In the UK most of the new enriched colony cages are designed to contain between 40 and 80 birds.[4] They are required to have a small nesting area, perches 3-4" (approx. 7.5cm – 10.2cm) high along part of the cage, a small scratch area is provided with friable matter, and the cage is bigger to allow an increased freedom of movement compared to battery cages.[5] Enriched cages are used to maximise egg production and reduce costs whilst also helping to address some of the welfare issues that arise from keeping hens in cages.

Barn housing

Barn systems involve keeping laying hens in large indoor buildings for their entire laying lives. According to the BL scheme, hens can move freely around the house in the barn system. There is a maximum stocking density of 9 hens per square metre of useable area. Perches for the hens must be installed to allow 15 centimetres of perch per hen, and litter must account for one third of the ground surface. This is used for scratching and dust bathing. One nest box per five hens or communal nests, at the rate of 120 birds/m² of floor area, is provided. Linear feeders provide at least 10 cm per hen, or circular feeders provide at least 4 cm per hen. Hens have plenty of access to food and drink, with water and feeding troughs raised so that food is not scattered. Electric lighting is provided to give an optimum day length throughout the year. At the end of the laying period the house is completely cleaned and disinfected.[6]

Free-range

In addition to the minimum requirements for keeping laying hens, there are further requirements for a housing system to be defined as free-range. The BL definition is for an egg to be considered free-range hens must have continuous daytime access to runs which are mainly covered with vegetation and a maximum stocking density of 2,500 birds per hectare. The hen house conditions for free-range hens must comply with a maximum stocking density of 9 hens per square metre of useable area. Hens must be provided with nest boxes and adequate perches, providing 15 centimetres of perch per hen. Litter must account for one-third of the ground surface which is used for scratching and dust bathing.[7]

Organic

Organic systems for laying hens are run along similar lines to free-range except for a few key differences

[3] Department for Environment, Food & Rural Affairs, *Quarterly UK Statistics About Eggs: Statistics Notice, Data to Q4 2025*, https://www.gov.uk/government/statistics/egg-statistics/quarterly-uk-statistics-about-eggs-statistics-notice-data-to-q4-2025
[4] Egginfo, *Cage Egg Production*, https://www.egginfo.co.uk/egg-facts-and-figures/production/cage-egg
[5] British Hen Welfare Trust, *Enriched Cages*, https://www.bhwt.org.uk/egg-industry/enriched-cages/
[6] Egginfo, *Barn Egg Production*, https://www.egginfo.co.uk/egg-facts-and-figures/production/barn-egg
[7] Egginfo, *Free Range Egg Production*, https://www.egginfo.co.uk/egg-facts-and-figures/production/free-range-egg

including reduced stocking densities and longer perch lengths. There are several different organic assurance schemes with their own requirements such as British Lion, Soil Association and RSPCA Assured. According to the BL scheme for it to be considered organic, hens must be fed an organically produced diet and range on organic land. The hen house conditions for organic hens stipulate a maximum stocking density of 6 hens per square metre of useable area and a maximum flock size of 3,000 birds. Hens must be provided with nest boxes and adequate perches, providing 18 centimetres of perch per hen. Litter must account for one-third of the ground surface which is used for scratching and dust bathing.[8] Other assurance schemes such as Soil Association[9] and RSCPA Assured[10] have their own requirements for organic systems which include provision of more trees and bushes in the outdoor range as well as allowing hens outside at a younger age.

Table 1: comparison of egg laying systems

System	Hens in cages	Hens per m^2	Perch space per hen	Environmental provisions
Enriched Cages	Yes (40 – 80 per cage)	13-14	15cm	• Nesting space. • Perching space. • Scratch area.
Barn Housing	No	9	15cm	• Nesting space. • Perching space. • Space to move. • Litter for scratching and dust bathing.
Free-range	No	9	15cm	• Nesting space. • Perching space. • Space to move. • Litter for scratching and dust bathing. • Outdoor space for foraging.
Organic	No	6	18cm	• Nesting space. • Perching space. • Space to move. • Litter for scratching and dust bathing. • Outdoor space for foraging.

Applying the Five Domains model

The following sections will evaluate enriched cages, barn housing, free-range and organic systems using the Five Domains model.

Domain One – Nutrition

Across all four systems, UK legislation requires hens to have safe and consistent access to plentiful supply of food and drink. Due to the significant number of hens competing for food in cage-free systems, particularly barn housing and free-range, some hens lower down the social hierarchy may have to wait their turn to eat. In outdoor systems having access to an outdoor range can provide a more varied diet for laying hens with access to insects and plants if provided although this is minimal. However, hens use of the range can vary significantly so not all hens benefit from the system in this regard.[11]

Domain Two – Physical Environment

In enriched cages, the provision of nesting space, perching space and a scratch area does allow for hens to express some natural behaviours, but this is quite limited. Significant space restrictions and inadequate provision of environment enrichment mean several natural behaviours are limited such as wing flapping[12], dust

[8] Egginfo, *Organic Egg Production*, https://www.egginfo.co.uk/egg-facts-and-figures/production/organic-egg
[9] Soil Association, *Laying Hen and Pullet Standards Consultation*, https://www.soilassociation.org/our-standards/laying-hen-and-pullet-standards-consultation/
[10] RSPCA Assured, *Standards for Chickens and Laying Hens*, https://www.rspcaassured.org.uk/standards/chickens-hens
[11] Larsen, H. et al. 2018. "Relationship between Welfare and Individual Ranging Behaviour in Commercial Free-Range Laying Hens." *Animal* 12 (11): 2356–64. https://doi.org/10.1017/s1751731118000022.
[12] Bongiorno, V. et al. 2025. "Unflappable: Wing Flapping of Aviary-Housed Laying Hens Following Spatial Restriction." *Applied Animal Behaviour Science* 292 (November): 106830. https://doi.org/10.1016/j.applanim.2025.106830.

bathing[13], and foraging[14]. Birds in cages are kept on wire flooring which has been shown to produce poorer health and welfare outcomes.[15]

The cage-free systems allow laying hens to stretch, flap their wings and fly, and perform other natural behaviours such as pecking, scratching and laying their eggs in a nest.[16] In addition to nesting space and perching space, the provision of environment enrichment, suitable litter substrate and increased space to move all provide hens with more opportunities to engage in movement and comfort behaviours, and social interactions.[17] Provision of suitable enrichment such as an assortment of "toys" can reduce stress and incidences of feather pecking.[18]

Laying hens are highly motivated to access outdoor space where they can find grass and other valuable resources and perform species-specific behaviours[19] which is only available in free-range and organic systems. With organic systems going even further by providing larger outdoor ranges and more popholes to encourage greater use of the outdoor space. Some barn housing includes verandas which provide safe access to the outdoors. However, open housing makes it more challenging to manage environmental conditions and certain biosecurity measures, and increased litter provision and hen movement has been demonstrated to reduce air quality if not managed correctly.[20] Indoor systems allow for more effective control of environmental conditions and certain biosecurity measures such as contact with infected wild bird and parasites. A well monitored indoor system also helps maintain good air quality with suitable air conditioning.

Although all systems must provide perching to varying degrees, there are slight differences in the interpretation of legislation in Scotland and Northern Ireland compared with the England and Wales. In England and Wales, slatted flooring can currently be used for perches whereas Scotland and Northern Ireland require the provision to be distinct raised or aerial perches. Laying hens have a tendon-locking mechanism which allows them to perch with minimal energy expenditure.[21] This is thought to be linked to their ancestorial past where hens would perch high in the trees away from predators. It could be argued that having flat perches prevents a greater expression of a natural behaviour.

Within cage-free systems, housing normally contains either single tiered or multi-tiered aviaries. These systems attempt to maximise the available space by having a ground floor level for suitable litter substrate and appropriate environmental enrichment combined with rising tiers containing nests and perches. This typically allows birds more space to spread out and jump around the housing structure whilst keeping food and water away from waste and litter. Conveyor belts can help with waste management and egg collection. There is some evidence which indicates that hens prefer to perch higher[22] so the provision of multiple tiers of suitable length[23] is something to consider as producers transition from enriched cages. This, if managed correctly, could allow for carbon footprint targets to be maintained as a well-run tiered system can allow for more laying hens to be kept in the same area, making use of the vertical space.

Domain Three – Health

Limited mobility within cages negatively affects the skeletal quality and development of layer hens.[24] Cage-free

[13] Louton, H., et al. 2016. "Dust-Bathing Behavior of Laying Hens in Enriched Colony Housing Systems and an Aviary System." *Poultry Science* 95 (7): 1482–91. https://doi.org/10.3382/ps/pew109.
[14] Weeks, C.A., and C.J. Nicol. 2006. "Behavioural Needs, Priorities and Preferences of Laying Hens." *World's Poultry Science Journal* 62 (2): 296–307. https://doi.org/10.1079/wps200598.
[15] Heerkens, J. L.T., et al. 2015. "Specific Characteristics of the Aviary Housing System Affect Plumage Condition, Mortality and Production in Laying Hens." *Poultry Science* 94 (9): 2008–17. https://doi.org/10.3382/ps/pev187.
[16] Compassion in World Farming. 2012. "About Egg Laying Hens." 2012. https://www.ciwf.org.uk/farm-animals/chickens/egg-laying-hens/.
[17] Fiorilla, E., et al. 2024. "Effects of Housing Systems on Behaviour and Welfare of Autochthonous Laying Hens and a Commercial Hybrid." *Applied Animal Behaviour Science* 274 (May): 106247–47. https://doi.org/10.1016/j.applanim.2024.106247.
[18] Tahamtani, F. M., Kittelsen, K., and Vasdal. G. 2022. "Environmental Enrichment in Commercial Flocks of Aviary Housed Laying Hens: Relationship with Plumage Condition and Fearfulness." *Poultry Science* 101 (4): 101754. https://doi.org/10.1016/j.psj.2022.101754.
[19] Mancinelli, A. C. et al. 2025. "Assessing the Motivation of Laying Hens to Outdoor Space Access." *Applied Animal Behaviour Science* 285 (April): 106581. https://doi.org/10.1016/j.applanim.2025.106581.
[20] David, B. et al. 2015. "Air Quality in Alternative Housing Systems May Have an Impact on Laying Hen Welfare. Part I—Dust." *Animals* 5 (3): 495–511. https://doi.org/10.3390/ani5030368.
[21] Quinn, T. H., and Baumel. J.J. 1990. "The Digital Tendon Locking Mechanism of the Avian Foot (Aves)." *Zoomorphology* 109 (5): 281–93. https://doi.org/10.1007/bf00312195.
[22] Campbell, D.L.M., Makagon M.M, Swanson J.C, and Siegford J.M. 2016. "Perch Use by Laying Hens in a Commercial Aviary." *Poultry Science* 95 (8): 1736–42. https://doi.org/10.3382/ps/pew111.
[23] Brendler, C, and Schrader, L.. 2016. "Perch Use by Laying Hens in Aviary Systems." *Applied Animal Behaviour Science* 182 (September): 9–14. https://doi.org/10.1016/j.applanim.2016.06.002.
[24] Rodríguez-Navarro, A.B, et al. 2018. "Influence of Physical Activity on Tibial Bone Material Properties in Laying Hens." *Journal of Structural Biology* 201 (1): 36–45. https://doi.org/10.1016/j.jsb.2017.10.011.

systems are more diversified housing systems promoting better anatomical development of hens compared with cage systems.[25] It has also been found that increased environment enrichment lowers overall corticosterone levels, indicating reduced levels of stress.[26] The reduced stocking densities in organic systems do make it easier to deliver care on an individual level but it is not clear that an organic diet or rearing lifestyle provides better health outcomes for laying hens when compared with the other cage-free systems.

A particular health and welfare issue that typically arises more often in cage-free systems, though not exclusively, is keel bone fractures in laying hens. The keel bone is the prominent ridge on the sternum of flighted birds to which the wing muscles attach. Selection for early sexual maturity and high egg production in commercial laying hens have led to increased bone fragility and susceptibility to fractures due to the high calcium requirement for formation of eggshells resulting in bone weakness. This weakness can predispose laying hens to increased incidences of bones breaking when they collide with housing structures and misjudge landings which are more likely to happen in open systems. Hens have more space to move around and subsequently more objects to crash into. These fractures significantly impact the welfare of laying hens who show marked differences in natural behaviours such as perching, nest use, and movement, indicating reduced mobility and potentially negative affective states.[27] There are measures that can be implemented to reduce the incidences of keel bone fractures. These include an omega-3 and vitamin D rich diet[28], perches design[29] [30] and optimising perch positions to reduce the force on the keel bone when hens navigate the spaces.[31]

Another potential health challenge that is more common in cage-free systems is parasitic infection. Gastrointestinal nematodes can negatively impact welfare and productivity through intestinal damage, impaired nutrient absorption, reduced egg production, and increased susceptibility to secondary diseases. Control is further complicated by the resilience of parasite eggs in the environment, frequent reinfection cycles linked to faecal contact, and limitations in anthelmintic effectiveness and use, particularly in systems with outdoor access.[32] Red mites are another potential issue for rearing hens across all systems. They can induce anaemia, decrease egg production, increase stress, feather pecking and mortality, and impact public health.[33] The greater control over biosecurity for indoor systems does reduce the risk of both parasitic and disease incursion.

To address some of these challenges, nets and good fencing can be used to limit contact with wild birds and predators, and guard animals can be used to scare them away. Efforts can be taken to reduce the instances of standing water and wild bird faeces forming in the outdoor environment. The microbial content of water and foodstuffs can be screened for contamination by scanning systems and farmers can remain vigilant for signs of parasitic infection before serious infestation takes place.[34]

Domain Four – Behavioural Interactions

The risk of predation is far greater in outdoor systems. Being outside means foxes, minks, and badgers can get into outdoor areas and kill laying hens.[35] Some requirements for organic systems include the provision of more trees and bushes providing shading and protection from predation. Schemes also require hens to have access

[25] Cygan-Szczegielniak, D., et al. 2025. "Research Note: The Influence of Housing System on Digestive System, Femur and Tibia Bone Dimensions of Laying Hens." *Poultry Science* 104 (12): 106003. https://doi.org/10.1016/j.psj.2025.106003.
[26] Nordgreen, J. et al. 2024. "The Effect of Rearing and Adult Environment on HPA Axis Responsivity and Plumage Condition in Laying Hens." *Animals* 14 (23): 3422. https://doi.org/10.3390/ani14233422.
[27] Riber, Anja B., Casey-Trott T.M, and Herskin M.S. 2018. "The Influence of Keel Bone Damage on Welfare of Laying Hens." *Frontiers in Veterinary Science* 5 (February). https://doi.org/10.3389/fvets.2018.00006.
[28]Abraham, M. E., et al. 2023. "N-3 Essential Fatty Acid and Vitamin D Supplementation Improve Skeletal Health in Laying Hens." *Poultry Science* 102 (12): 103089. https://doi.org/10.1016/j.psj.2023.103089.
[29] Stratmann, A. et al. 2015. "Soft Perches in an Aviary System Reduce Incidence of Keel Bone Damage in Laying Hens." Edited by Cédric Sueur. *PLOS ONE* 10 (3): e0122568. https://doi.org/10.1371/journal.pone.0122568.
[30] Stratmann, A., and Ringgenberg, N. 2024. "Perch Shape and Material Affect Perch Use and Health Parameters of Laying Hens during the Rearing and Laying Phase." *Journal of Applied Poultry Research* 33 (4): 100474. https://doi.org/10.1016/j.japr.2024.100474.
[31] Rufener, C., et al.. 2020. "Perch Positioning Affects Both Laying Hen Locomotion and Forces Experienced at the Keel." *Animals* 10 (7): 1223. https://doi.org/10.3390/ani10071223.
[32] Sharma, N. et al. 2019. The Impacts of Ascaridia Galli on Performance, Health, and Immune Responses of Laying Hens: New Insights into an Old Problem. Poultry Science 98 (12): 6517–26. https://doi.org/10.3382/ps/pez422.
[33] Sigognault Flochlay, A., Thomas, E., and Sparagano, O. 2017. "Poultry Red Mite (Dermanyssus Gallinae) Infestation: A Broad Impact Parasitological Disease That Still Remains a Significant Challenge for the Egg-Laying Industry in Europe." *Parasites & Vectors* 10 (1). https://doi.org/10.1186/s13071-017-2292-4.
[34] Bonnefous, C, et al. 2022. "Welfare Issues and Potential Solutions for Laying Hens in Free Range and Organic Production Systems: A Review Based on Literature and Interviews." *Frontiers in Veterinary Science* 9 (August). https://doi.org/10.3389/fvets.2022.952922.
[35] Bestman, M., and Bikker-Ouwejan, J. 2020. "Predation in Organic and Free-Range Egg Production." *Animals* 10 (2): 177. https://doi.org/10.3390/ani10020177.

to the outdoors at a younger age, which gives the birds more confidence to use the range.[36] [37] [38]

Free-range, organic, and barn housing all offer greater freedom of movement allowing hens to engage in social activities and play with other hens. By comparison, laying hens kept in enriched cages have been found to show increased instances of fearfulness and depression.[39] Certain behaviours such as forms of preening can be social activities which are significantly limited in enriched cages, due to lack of suitable litter and lack of space when cages are fully stocked.

Feather pecking is a complex and multifactorial problem, where birds peck at the feathers of other birds, sometimes pulling them out and eating them. The types of feather pecking can vary from gentle feather pecking, severe feather pecking, to cannibalistic pecking. The challenges of feather pecked birds can be significant. The health and welfare of the affected birds is compromised, and the physical, and therefore financial, losses can be great. This challenge can happen across all four of the egg laying systems and a key reason for it is frustration of natural behaviours and overcrowding. We explore this in more detail in the BVA and BVPA policy position on feather pecking in laying hens. To address this issue, hens generally have their beaks trimmed using infra-red light when they are a day old, except in most organic systems. It is widely accepted by industry and hen welfare organisations such as The British Hen Welfare Trust that beak trimming is the most cost-effective, sustainable solution to preventing injurious pecking and therefore retaining good welfare.[40] Cage-free systems offer more stimulation and greater enrichment, which is one part of controlling for feather pecking. BVA and BVPA conclude once all management strategies are in place and good feather cover is being regularly achieved throughout lay, keepers should consider stopping beak treatment in future flocks, in consultation with a veterinary surgeon and other appropriately qualified technical advisors.

There is scope for more research into ways of managing feather pecking that do not result in the need to trim the beaks of laying hens. Although feather pecking cannot be eliminated, optimising management practices can reduce the frequency and likelihood of this behaviour, thereby improving welfare.[41] Other potential remedies include providing individual nest boxes, additional perching opportunities and higher litter quality. All of these can help reduce the chances of feather pecking by reducing frustration and stress.[42] Research indicates that there are many organic farms (without regular beak trimming) that do not have significant welfare issues with their chickens, suggesting that knowledge and technical skills of farmers is crucial in managing welfare issues.[43]

Smothering is the phenomenon where birds pile en masse in an area resulting in injury and suffocation of birds. Research into the causes of smothering, which is also often related to the genetic temperament of the flock, is lacking as the events occur unpredictably. They are difficult to induce experimentally, and birds behave differently in the presence of an observer. Smothering on a large scale is not typically seen in enriched cages. This is likely due to the limited number of birds within individual cages and therefore the physical piling up of a vast number of birds is less likely to occur. To reduce the risk of smothering, the importance of well-trained stockpersons cannot be overstated. Having attentive staff can prevent smothering events from escalating if caught early. Housing can be designed to prevent areas that allowing hens to build up and get stuck.

Domain Five – Mental State

As the above domains feed into the mental state of laying hens kept within each of the systems, we can conclude that enriched cages, whilst providing a safe place to keep laying hens, do not go far enough to support a positive mental state. The limits placed on movement and expression of natural behaviours means they do not allow for many examples of positive mental state. Whilst the capacity for negative states is much greater. Free-range, organic, and barn housing all allow for greater expression of natural behaviours and more varied environments producing more positive mental states. Each of those systems do produce their own welfare challenges which

[36] Soil Association. n.d. “Organic vs. Free Range Eggs | 5 Differences | 2020 Update.” www.soilassociation.org. https://www.soilassociation.org/take-action/organic-living/what-is-organic/organic-eggs/.
[37] “Better Chicken and Hen Welfare: Look for the Label.” 2025. rspcaassured.org.uk. 2025. http://rspcaassured.org.uk/standards/chickens-hens.
[38] “Organic Eggs UK | Official Egg Info.” n.d. Www.egginfo.co.uk. https://www.egginfo.co.uk/egg-facts-and-figures/production/organic-egg.
[39] Jeon, H., et al. 2025. “Welfare Characteristics of Laying Hens in Aviary and Cage Systems.” *Poultry Science* 104 (5): 104987. https://doi.org/10.1016/j.psj.2025.104987.
[40] British Hen Welfare Trust. n.d. “Beak Trimming - the Facts!” BHWT. https://www.bhwt.org.uk/beak-trimming/.
[41] British Veterinary Association and British Veterinary Poultry Association July 2019 “BVA and BVPA Policy Position on Feather Pecking in Laying Hens.” https://www.bva.co.uk/media/3696/bva-and-bvpa-policy-position-on-feather-pecking-in-laying-hens.pdf.
[42] British Veterinary Association and British Veterinary Poultry Association July 2019 “BVA and BVPA Policy Position on Feather Pecking in Laying Hens.” https://www.bva.co.uk/media/3696/bva-and-bvpa-policy-position-on-feather-pecking-in-laying-hens.pdf.
[43] Van de Weerd, H.A., Keatinge, R. and Roderick, S. 2009. “A Review of Key Health-Related Welfare Issues in Organic Poultry Production.” *World’s Poultry Science Journal* 65 (04): 649–84. https://doi.org/10.1017/s0043933909000464.

must be addressed, however the capacity for producing good welfare and a 'good life' for laying hens is significantly greater compared to enriched cages systems.

Summary

Looking at the evidence above it can be concluded that enriched cages, whilst offering a significant improvement on the barren cages in terms of meeting some welfare needs of laying hens, they do not go far enough to support a 'good life'. In the UK, year on year the total percentage of laying hens kept in cages has dropped from around 63% of the flock in 2006[44] to less than a fifth in 2025.[45] With Defra launching a consultation, in January 2026, on a possible ban of cages for laying hens the direction of travel is clear and a shift away from cages for laying hens is highly likely. It is time for these systems to be phased out and replaced by either free-range, organic or barn housing. The simple addition of more space allowing for greater expression of natural behaviours and more varied environmental enrichment means that laying hens have a greater capacity for higher welfare. However, there are legitimate concerns that if managed incorrectly, this could result in the UK importing more eggs and products containing eggs from countries that use barren cages and enriched cages thereby moving the welfare issue abroad and also putting the UK poultry industry at a disadvantage.

What is also clear from the evidence is that these alternative systems come with their own challenges for welfare, which must be addressed. Access to the outdoors does not necessarily always mean better welfare. Risks of predation, exposure to diseases like Avian Influenza and parasitic infections, whilst these are health issues, they do lead to negative welfare outcomes. Greater freedom of movement can increase the likelihood of smothering and keel bone fractures and not having access to an outdoor range of some kind, for barn housing, can limit the full expression of natural behaviours. Most, it not all, of these concerns can be reduced by the implementation of good biosecurity measures, secure housing with suitable enrichment, appropriate bird genetics, and competent, well-trained stockpersons[46]. Having barns that are spacious and seek to reduce stock density, well laid out functional areas for expression of natural behaviours, ample meaningful enrichment opportunities and a good diet can all help improve hen welfare. These in addition to close monitoring of health and welfare outcomes, including feather cover, keel bone fractures and flock behaviour, are all highlighted as important ways barn housing can be managed to help offset the potential issues we have described above.[47] The genetic makeup of laying hens can be a factor in smothering, keel bone fractures, feather pecking and overall behavioural management. Laying hens should be carefully selected for traits that improve these conditions where possible.

In addition to pushing for a ban on enriched cages for laying hens, there must be a clear and well thought out transition period of at least 5 years whilst stockpersons who shift from caged systems to cage-free are suitably trained to adapt effectively to the changes[48]. We also think that poultry farmers should explore possible improvements for alternative systems that further support better outcomes for laying hens.

Recommendation 1: Enriched cages for laying hens should be phased out with a transition to husbandry practices that better support hen health and welfare. These alternatives should be free-range, organic or barn housing.

Recommendation 2: UK government must use every mechanism at its disposal to ban the importation of eggs, liquid eggs and powdered eggs produced from countries who keeping laying hens in caged systems.

Recommendation 3: A minimum 5 year transition period should be implemented from the date of the ban to enable the laying hen industry, UK Government, and other key stakeholders to make the necessary changes. These stages of shifting away from the current systems to the new systems must be clearly laid out and adequately funded by UK Government and devolved administrations where appropriate. Any transition away must factor in the direction of travel in the EU to ensure a level playing field for UK producers.

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[44] Farm Animal Welfare Council 2007 "Opinion on Enriched Cages for Laying Hensuk Opinion on Enriched Cages for Laying Hens Scope."https://assets.publishing.service.gov.uk/media/5a7ded62e5274a2e87dae6c5/FAWC_opinion_on_enriched_cages_for_laying_hens.pdf.

[45] Defra 2026. "Quarterly UK Statistics about Eggs – Statistics Notice (Data to Q4 2025)." GOV.UK. January 22, 2026. https://www.gov.uk/government/statistics/egg-statistics/quarterly-uk-statistics-about-eggs-statistics-notice-data-to-q4-2025.

[46] Leenstra, F., et al. 2014. "Laying Hen Performance in Different Production Systems; Why Do They Differ and How to Close the Gap? Results of Discussions with Groups of Farmers in the Netherlands, Switzerland and France, Benchmarking and Model Calculations. Leistung von Legehennen In." *Europ.Poult.Sci* 78. https://doi.org/10.1399/eps.2014.53.

[47] "Higher Welfare Systems for Laying Hens -Practical Options Food Business." n.d. https://www.compassioninfoodbusiness.com/media/7428685/higher-welfare-systems-for-laying-hens-practical-options.pdf.

[48] Schuck-Paim, C, Negro-Calduch, E., and Alonso, W.J, 2021. "Laying Hen Mortality in Different Indoor Housing Systems: A Meta-Analysis of Data from Commercial Farms in 16 Countries." *Scientific Reports* 11 (1). https://doi.org/10.1038/s41598-021-81868-3.

Recommendation 4: During the transition period, for those moving from enriched cages, there should be shared learning of best practice to enable farmers and producers to confidently and competently support animal welfare in the new systems.

Recommendation 5: The poultry industry should implement the above improvements to produce better welfare outcomes for laying hens.

Government Farming Support Schemes

The Animal Health and Welfare Pathway is a part of the new domestic agriculture policy in England. A key aspect of the Pathway is offering support to farmers to produce healthier, higher welfare animals. The welfare priorities in the scheme include supporting producers to transition away from confinement systems, such as cages for laying hens. This offers the perfect opportunity to begin the move away from the current cage system, towards an eventual ban, as part of a long-term agricultural strategy.

In May 2024, UK Government announced the Laying Hen Housing for Health and Welfare grants. These grants were introduced for producers with 1000 or more hens aimed at supporting farmers to undertake infrastructure projects to improve the health and welfare of their animals and support environmental sustainability and innovation. These grants can be used to build verandas, which help reduce welfare issues such as feather pecking. They reduce crowding within indoor housing, increase range use, and provide access to fresh air and natural light when range access is not possible, including when a housing order is in force. The grants can also be used to update housing stock with features such as fixed bio-secure, multi-tier housing with non-flicker LED lighting and mechanical ventilation. Funding can also cover roof-mounted solar photovoltaic systems. These grants are a clear demonstration from UK Government that they intend to support poultry farmers to move towards higher welfare systems for flocks of laying hens.

Although this is not mentioned specifically in the Sustainable Farming Scheme[49] in Wales, the Whole Farm Plan[50] in Scotland, or the Animal Welfare Pathway[51] in Northern Ireland we would like to see similar support schemes included in their programmes.

Recommendation 6: UK Government should incorporate our suggested improvements into the Laying Hen Housing for Health and Welfare grants as part of the Animal Health and Welfare Pathway. The devolved administrations should look to implement similar improvements into their own farming grant schemes.

Future considerations

Avian Influenza

Avian Influenza (AI) is an ever-present threat and whilst it is not exclusive to outdoor systems, and it is not always clear how the disease gets into a flock, indirect contact with wild birds and their faeces are key risk factors.[52] Across 2025 this issue was demonstrated with significant ongoing AI outbreaks all over the UK leading to mandatory housing measures being introduced for a significant proportion of the year leading to all outdoor flocks being kept indoors to reduce the risk of exposure to the disease. We would have to conclude the prevalence of AI in UK over the past 5 years has become the norm, so we expect the rearing practices for free range and organic hens to change significantly. If restrictive housing measures need to be kept in place for most of the year, then most of these birds would effectively be kept in barn housing all year round. This could impact hen welfare as those that have previously been used to foraging outside are now unable to do so, and increased costs for producers[53] could subsequently increase costs for consumers with housing orders being in place.

This presents a challenge but also a potential opportunity to explore the feasibility of indoor free-range systems whereby laying hens are kept indoors but differs to barn housing by providing an outdoor styled range which is

[49] "Sustainable Farming Scheme 2026: Scheme Description [HTML] | GOV.WALES." 2025. GOV.WALES. July 28, 2025. https://www.gov.wales/sustainable-farming-scheme-2026-scheme-description-html#ua12-animal-health-welfare.
[50] "Whole Farm Plan Full Guidance." 2024. Ruralpayments.org. 2024. https://www.ruralpayments.org/topics/all-schemes/whole-farm-plan/.
[51] "Animal Welfare Pathway- Advancing Animal Welfare in Northern Ireland 2025-27." Department of Agriculture, Environment and Rural Affairs. https://www.daera-ni.gov.uk/publications/animal-welfare-pathway-advancing-animal-welfare-northern-ireland-2025-27.
[52] Jensen, H.A., et al. 2025. "Risk Factors for the Incursion of Highly Pathogenic Avian Influenza Virus into Poultry and Other Captive Bird Holdings in Denmark from 2020 to 2023: A Case-Control Study." *Preventive Veterinary Medicine* 236 (March): 106419. https://doi.org/10.1016/j.prevetmed.2025.106419.
[53] Barnes, A.P., et al. 2024. "Financial Impacts of a Housing Order on Commercial Free Range Egg Layers in Response to Highly Pathogenic Avian Influenza." *Preventive Veterinary Medicine* 228 (April): 106209–9. https://doi.org/10.1016/j.prevetmed.2024.106209.

incorporated into the housing system. This has the potential to offer a space to forage and range but with the added protections of the internal environment, allowing for tighter control of biosecurity measures. These systems are already in place in the Netherlands with Rondeel[54] and Kipster.[55] We would like to see more research into how these systems support hen welfare and call on producers and UK Government to explore them as a viable alternative to housing laying hens which could offer the best of both indoor and outdoor systems.

Recommendation 7: More research should be conducted on indoor free-range systems, looking at hen health and welfare and whether it could be a feasible alternative housing system.

Environment and sustainability

As we have described above, there is a delicate balance to consider when advocating for different animal husbandry systems. A move away from cage systems will have an impact on the carbon footprint of egg laying hens and other environmental and sustainability factors. Giving hens more space to move will not only mean more space is required to house them but it also means that more feed will need to be provided to sustain the hens whilst reducing stocking density will mean less output for the same amount of space. We would like to note here that we have concerns around competing Government priorities and the need for departments to realise what they are asking for. Farmers and producers are being asked to reduce their carbon footprint and reach net zero targets, but then proposed bans on cages for laying hens will likely increase the carbon footprint of egg laying facilities. It is important that planning permission to shift to higher welfare systems away from cages is not held up by Government net zero targets or other bureaucratic processes. Animal welfare improvements do not need to come at the expense of environmental commitments if managed and supported effectively by Government and industry.

In the BVA position on UK sustainable animal agriculture we are clear that sustainable animal agriculture should be undertaken in a way that is environmentally, ethically and economically acceptable for consumers, producers and wider society. As part of this, animal health and welfare should not be unnecessarily compromised to address human need and to be considered sustainable, agricultural systems must work towards the positive health and welfare of all farmed animals raised within them.

Shifts to higher welfare systems will likely cost more to produce, possibly causing consumers to look for more affordable options. This is why it is very important that any transition period is clearly mapped out and financially supported by UK Government and devolved administrations where appropriate. We cannot risk exporting the welfare issue abroad by importing more products that are cheaper and produced to lower welfare standards than we allow in the UK. Although free-range, organic or barn housing may increase costs of production and the environmental impacts of the husbandry systems, that should not be enough of a reason to prevent a change to higher welfare production methods.

Within the context of One Health, the veterinary profession should promote the benefits of sustainable consumption, coupled with properly valuing quality animal-derived products, where quality encompasses good animal health and welfare, food safety, environmental protection and fair returns for producers.

Conclusion

This policy position has assessed UK laying hen housing systems through a welfare lens and concluded that, while enriched cages meet some basic behavioural needs, they deliver significantly poorer welfare outcomes than cage-free systems and should be phased out. With around 83% of UK egg production already cage-free, the direction of travel towards free-range, organic, and barn housing is clear. These alternative systems require continued improvement through strong biosecurity, suitable enrichment, appropriate genetics, and skilled stockpersons. Any ban must be supported by a clearly staged and adequately funded transition period, aligned with developments in the EU, to maintain a level playing field and avoid the displacement of welfare impacts by implementing a ban on importing eggs, liquid eggs and powdered eggs from caged systems. UK and devolved governments have a key role in embedding these improvements within existing support mechanisms, with their respective farming grant schemes, while further research into indoor free-range systems is needed to strengthen the evidence base and inform future housing policy.

[54] "About Us - English - Rondeel Eieren." 2025. Rondeel Eieren. August 13, 2025. https://www.rondeeleieren.nl/en/about-us/.
[55] "Chickens." 2024. Kipster. August 28, 2024. https://kipster.farm/kipster-chickens/.