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- UEVH Hygienists
- EVERI Veterinarians in Education, Research and Industry

**FVE draft position paper on  
'Moving towards more sustainable husbandry systems for laying hens'**

**DRAFT FOR CONSULTATION  
COMMENTS TO [INFO@FVE.ORG](mailto:INFO@FVE.ORG) BY 7 NOVEMBER 2020**

**Summary:**

Enriched cages are receiving increasing scrutiny as they restrict the ability of laying hens to perform inherent behaviours and thereby enjoy positive experiences and a Good Life. Some countries and several retailers are already moving to cage-free systems. The veterinary profession should provide leadership in the transition from enriched cages to alternative systems by providing guidance on improving the welfare of laying hens in current alternative systems and by contributing to development of better alternatives. The transition should be gradual with a reasonable (but not excessive) transition period. Care should be taken that the newly advised systems are future proof in terms of meeting the animals' physical, mental and behavioural needs and viable from a socio-economic and environmental perspective.

**Context**

- Laying hens are sentient beings. They are a gregarious species with an elaborate social behaviour based on a definite group structure when kept in flocks. They have excellent vision and hearing. They can recognise flock mates. They communicate with each other by displays or changes in posture or distinctive calls. Pecking behaviour and social signalling is very important. The desire to roost or perch above the ground is an inherent protective mechanism against ground predators. Preening and dustbathing are other inherent behaviours to maintain feather condition.
- Animal welfare is an essential aspect of sustainable livestock production systems. This entails that animals shall be kept in environments with which they can cope, be free from unnecessary suffering and be able to express important behaviours and not suffer from frustration and boredom. Animal husbandry systems shall allow for a good quality of life for animals and respect the 5 freedoms. In general, the environment shall be designed to fit the needs of animals, not the other way around.
- The concept of animal welfare is also changing – from a sole focus on freedom from negative experiences, to also include positive experiences. We need to move towards systems where animals not just survive, but are able to experience a Good Life (Mellor 2016, Webster 2016).
- In recent years, many companies (including many of the big retailers) have made cage-free egg commitments for both table eggs and shell eggs to move cage-free by 2025 or sooner (EggTrack European Report 2019 ). This will increase the demand for cage-free eggs in the near future. In some countries, i.e. Denmark and Sweden, some large retailers s have stopped selling eggs and egg products from

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- 52 cage-systems due to decreased consumer demand and pressure from animal  
53 protection societies. In Denmark and Sweden, these market trends have led to a  
54 steep decline in the number of enriched cage systems for laying hens.  
55
- 56 • Other countries have banned enriched cage systems by legislation. In Germany,  
57 enriched cages have been banned since 2016, with a transition period for  
58 buildings approved prior to March 31st 2012 to December 31st 2025.
  - 59 • The growing concern of the public and consumers is also evident from a recent  
60 European Citizens Initiative that collected more than 1.5 million signatures in  
61 2019 calling to end extreme confinement of farm animals in the EU. Animal  
62 welfare is an essential aspect of sustainable livestock production systems. Besides  
63 the ethical responsibility to the animals, consumer expectations have increased  
64 towards animal welfare.  
65

### 66 67 Role of the veterinary profession

- 68 • Enhancing, protecting and securing the health and welfare of animals is the  
69 veterinary profession's fundamental purpose. As advocates for good animal  
70 welfare, the veterinary profession should lead in terms of defining and supporting  
71 the achievement of a good quality of life and a humane death for all animals<sup>1</sup>.  
72 The veterinary profession should inform and raise societal awareness, inspire,  
73 facilitate, and lead in societal discussions on animal welfare by providing  
74 science-based knowledge, ethical reasoning and practical guidance. The  
75 veterinary profession should actively engage with and facilitate collaboration  
76 between researchers, industry (e.g. farmers and breeding companies), authorities  
77 and other relevant stakeholders to stimulate lasting improvements to animal  
78 welfare. Further research should be done on the ethology and principles of welfare  
79 science around the farming of laying hens.  
80
- 81 • As independent advisors, veterinarians should continue to inspire, support and  
82 work with farmers to adapt husbandry systems to improve animal welfare.  
83 Economically viable transitions to husbandry systems with a higher potential to  
84 provide positive experiences, such as expression of inherent behaviours, while  
85 limiting negative experiences, should be encouraged and supported by  
86 veterinarians from a veterinary science-based perspective.
- 87 • Changes to husbandry systems may involve large investments of farmers and the  
88 financial sector. Veterinarians play an important role as independent advisors to  
89 support farmers and other stakeholders to prioritise animal welfare in decisions  
90 regarding changes to husbandry systems, whether small or large scale, to ensure  
91 that systems are futureproof in animal health and welfare terms.
- 92 • FVE promotes regular veterinary visits to all establishments with animals and  
93 sufficient on-farm veterinary practice. The specific on-farm knowledge of  
94 veterinarians pose a unique opportunity to provide customised advice to farm-  
95 specific animal welfare challenges. The farm-specific knowledge of veterinarians  
96 is central in order to minimise potential negative impacts during transitions to  
97 alternative husbandry systems.

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<sup>1</sup> <https://www.fve.org/cms/wp-content/uploads/FVE-AVMA-CVMA-position-statement-on-animal-welfare-Clean-Version.docx.pdf>

## 100 Problem statement

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- 102 • Unenriched cage systems for laying hens originally came about to improve  
 103 productivity and efficiency of egg production with the benefits of better hygiene  
 104 and lower disease occurrence (Duncan, 2001; Appleby, 2003). Since the EU-ban  
 105 on unenriched cage systems in 2012, enriched cage systems have been the only  
 106 allowed cage system for housing of laying hens in the EU<sup>2</sup>.
- 107 • Enriched cage systems provide similar benefits as unenriched cages, but the  
 108 move towards increased emphasis on positive experiences and expression of  
 109 inherent behaviours as an integral aspect of animal welfare calls for a critical  
 110 review of the potential of enriched cages to offer a Good Life to laying hens,  
 111 including the performance of a range of highly motivated behaviours.
- 112 • Substantial scientific knowledge about hen welfare in enriched cages as well as  
 113 alternative systems exist, but the specific welfare challenges differ.
- 114 ○ Welfare challenges of current alternative systems, e.g. barn, free-range<sup>3</sup>  
 115 and organic systems, whether floor housing or aviaries, include:
- 116     ▪ Mortality: Most studies comparing mortality in cage and  
 117 alternative husbandry systems report higher average mortality  
 118 risk in alternative systems compared to enriched cages (e.g.  
 119 Sherwin et al. 2010; Weeks et al. 2016). However, the variation  
 120 in mortality in free-range systems indicates a potential to also  
 121 obtain a low mortality in alternative systems (Weeks et al. 2016).
- 122     ▪ Flock size: In terms of flock size, alternative systems usually  
 123 involve bird groups exceeding the number of hens that can form  
 124 a hierarchical social structure. Some studies have suggested that  
 125 undesired behaviours such as feather pecking and cannibalism  
 126 are more likely to occur in larger flocks (Rodenburg et al. 2005),  
 127 as is characteristic in current non-cage systems. Comparisons of  
 128 plumage condition of hens in enriched cages and alternative  
 129 systems have also indicated a better feather cover of hens in  
 130 enriched cages (Sherwin et al. 2010). However, feather pecking  
 131 and cannibalism are also associated with several other risk  
 132 factors, eg. genetics, housing and management (EFSA, 2005).
- 133 ○ Welfare challenges of hens housed in enriched cages include:
- 134     ▪ Space allowance: Limited space allowance of enriched cages  
 135 pose limitations in the ability to display aspects of behaviour for  
 136 which the birds have innate motivation, such as preening,  
 137 pecking, foraging and dustbathing (Rodenburg et al. 2005; Lay et  
 138 al. 2011). Other authors have concluded that more research is  
 139 needed to understand the space requirements of hens in terms of  
 140 available resources and social structure (Widowski et al 2016).
- 141     ▪ Complexity of the environment: Although enriched cages do  
 142 provide more options for expression of inherent behaviours than  
 143 unenriched cages, non-cage systems, and in particular free-range

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<sup>2</sup> [https://ec.europa.eu/food/animals/welfare/practice/farm/laying\\_hens\\_en](https://ec.europa.eu/food/animals/welfare/practice/farm/laying_hens_en)

- 144 systems, provide a more varied range of enrichments for hens to  
145 express a broader repertoire of inherent behaviours (Lay et al.  
146 2011).
- 147       ▪ Bone strength: Studies have indicated that hens housed in non-  
148 cage systems have better musculoskeletal health compared to  
149 hens in enriched cages, possibly due to the limitations on  
150 movement in cages (Hartcher & Jones, 2017). However, a recent  
151 systematic review did not support the link between housing  
152 system and prevalence of keel bone fractures (Rufener &  
153 Makagon 2020). Recent evidence also suggest that keel bone  
154 fractures are not caused by external trauma (Thøfner et al 2020).
  - 155 • As illustrated, both enriched cages and alternative systems involve trade-offs in  
156 terms of animal welfare. However, when housing laying hens in enriched cages,  
157 all the hens in a flock are restricted in terms of their ability to perform inherent  
158 behaviours (Rodenburg et al. 2005; LayWel 2006), and thereby their possibility  
159 to enjoy positive experiences and a Good Life. Non-cage systems that provide  
160 sufficient space and complexity of the environment, to a higher extent support the  
161 behavioural needs of laying hens, though undesired behaviours, such as feather  
162 pecking and cannibalism must be controlled to minimize negative experiences  
163 (Lay et al. 2011).
  - 164 • In the light of the scientific evidence and the evolution of animal welfare, the  
165 veterinary profession believes that moving away from enriched cages will  
166 improve the welfare of laying hens in the EU. The veterinary profession does  
167 acknowledge the benefits that enriched cages provide in terms of physical health  
168 and efficiency. It is essential that future transitions to alternative husbandry  
169 systems are not at the expense of physical health or food safety, but that all  
170 possible measures are taken to ensure that future alternative husbandry systems  
171 deliver good health outcomes as well as support behavioural needs and provide a  
172 range of behavioural opportunities.
  - 173 • The husbandry system is not the only impacting factor on the quality of life of  
174 laying hens – stockmanship, management practices, genetics of the birds, rearing  
175 environment and interactions between these factors play important roles (e.g.  
176 Lambton et al. 2013; Janczak & Riber 2015; Campbell et al. 2019). Genetics of  
177 laying hens evolve quickly and breeding companies have a continuous  
178 responsibility of monitoring and adapting breeding goals to support the best  
179 possible animal welfare outcomes.
  - 180 • Changes to animal husbandry systems must be both ethically and economically  
181 sustainable. This means that transition periods need to be realistic, without being  
182 excessive. Intermediate smaller scale changes to reach a complete transition  
183 should be encouraged as a means to gradually improve animal welfare.
  - 184 • The veterinary profession should facilitate and lead a balanced societal discussion  
185 on the potential of current husbandry systems to ensure a good quality of life for  
186 laying hens and how current husbandry systems can be improved to better meet  
187 the needs of laying hens to express inherent behaviours.

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<sup>3</sup> In free-range systems the birds have access to an outside area.

188 • FVE encourages national veterinary associations and bodies to promote the role  
189 of veterinarians in ensuring that decisions on changes to husbandry systems take  
190 animal welfare – both physical health and behavioural opportunity - into account.  
191 In part, changes will be market led, while for others funding for farmers to  
192 change husbandry systems should be foreseen e.g. via the Common Agricultural  
193 Policy, farm assurance schemes or national schemes.

194 • Consumer expectations towards animal welfare have led to changes in husbandry  
195 systems for laying hens in some countries. Continued support for current and new  
196 alternative husbandry systems are dependent on public interest, understanding  
197 and perception of acceptable animal welfare. The veterinary profession should  
198 encourage and educate citizens to support animal welfare-friendly products  
199 through their purchases, in turn supporting a sustainable transition towards  
200 husbandry systems that have the ability to balance both behavioural and health  
201 needs of laying hens and food safety.

202  
203 • The veterinary profession should continue to promote consumers valuing animal-  
204 derived food, reflected in fair prices that support a Good Life and humane death  
205 for farmed animals  
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## 207 Recommendations

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209 • To be sustainable, future husbandry systems for laying hens shall protect both the  
210 physical health and mental wellbeing of laying hens, provide positive experiences  
211 while limiting negative experiences, including the opportunity to express inherent  
212 behaviours.

213 • Laying hens shall be kept in a way, which neither negatively affects their health  
214 nor makes them more susceptible to infectious diseases. Housing conditions (e.g.  
215 space, temperature, air quality, enrichment, bedding quality, etc.) and the quality  
216 of feed and water shall meet the needs of the birds.

217 • Husbandry systems shall offer opportunities for positive welfare such as comfort  
218 and pleasure. Research in this field regarding laying hens is currently sparse, but  
219 should be prioritised to create a basis for updating recommendations for future  
220 husbandry systems.

221 • Recommendations to move away from cage systems not only apply to laying  
222 hens in the production phase, but also to pullets and breeding stocks.

223 • Apart from ensuring good animal welfare and health outcomes, future sustainable  
224 husbandry systems shall also consider the wellbeing and safety of producers,  
225 hygiene, biosecurity and food safety, the environment and be commercially  
226 viable. Some of these targets will be interlinked – e.g. maintaining a low  
227 mortality of laying hens could mean a lower carbon footprint per egg produced  
228 (Weeks et al. 2016).

229 • Stockmanship, management and genetically suitable breeds are key to achieving  
230 good animal welfare and health outcomes in any husbandry system. The effects  
231 of a suboptimal husbandry system can partially be counteracted by good  
232 stockmanship and management to provide an acceptable quality of life to  
233 animals, and the other way around. This also means that there is no such thing as

234 “big farms are bad and small farms are good”; a risk-based approach should be  
235 taken.

236 • The veterinary profession should provide leadership in the transition from  
237 enriched cages to alternative systems by providing guidance on improving the  
238 welfare of laying hens in current alternative systems and by contributing to  
239 development of better alternatives. The transition should be gradual with a  
240 reasonable (but not excessive) transition period. Care should be taken that the  
241 newly advised systems are future proof in terms of meeting the animals’ physical,  
242 mental, and behavioural needs and viable from a socio-economic and  
243 environmental perspective.

244 • Even though consumer demands and market trends play an important role in  
245 driving change to animal husbandry systems, legislative changes are needed to  
246 ensure lasting improvements.

247 • Aspects that need to be taken into account to improve husbandry systems for  
248 laying hens:

- 249 ○ Ensure chicks and pullets have early access to suitable enrichment and  
250 functional spaces to enable expression of high priority behaviours and  
251 decrease the risk of undesired behaviours later in life
- 252 ○ Enough space allowance
- 253 ○ Providing different functional spaces in a design that enables their optimal  
254 use – e.g. nest boxes, perches, dustbathing substrate
- 255 ○ Free range systems provide a highly complex environment, but the design  
256 needs to take predator risk and need for shade into account. Early access to a  
257 suitable outdoor range is desirable to maximise its use later in life.
- 258 ○ Good litter quality
- 259 ○ Sufficient enrichment material
- 260 ○ Light, air flow and quality, ventilation
- 261 ○ Performing well on animal health and welfare indicators, e.g. low mortality,  
262 good plumage condition
- 263 ○ Disease control, including parasitic prophylaxis
- 264 ○ Design that minimizes injuries to birds when entering and leaving the  
265 production system

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268 Suggested sources of more information on alternatives to enriched cages:

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- LayWel <https://www.laywel.eu>

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- Laying Hen Welfare Forum: <https://lhwf.co.uk/>

272 European Union Reference Centre for Animal Welfare for Poultry and other  
273 small farmed animals (launched in 2020 – not yet online)

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