

Inquiry into the use of battery cages for hens in the egg production industry: Response to questions on notice

16/9/2019

To the Upper House Select Committee,

Thank you for the opportunity to provide evidence on the use of battery cages for egg production in NSW. I provide below my response to questions taken on notice.

- 1) "Chicken livers are sold in some butcher shops, chicken shops and so forth. When consumers buy that fatty live that has poisoned those hens, is there any scientific evidence that it could affect humans? I am not sure. It is just curiosity."

Response: I believe this question was in response to a discussion about the emergence of spotty liver disease in extensively housed poultry (mainly in free range layers and also sometimes in broiler breeders). I have found no evidence that this can affect humans who consume chicken livers or chicken eggs. Advice from the Queensland Government is prevention of outbreaks via improved husbandry, hygiene and biosecurity, and treatment of affected birds with antibiotics (prescribed by a veterinarian) via feed additives, with observation of withholding periods

<https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/livestock/animal-welfare/pests-diseases-disorders/spotty-liver>

- 2) "I would be interested, if you could no notice, review that most recent study (Shini et al 2019, Fatty liver haemorrhagic syndrome occurrence in laying hens: impact of production system, Avian Pathology 48 (1): 25-34 and give us your observations on it".

Response: This study confirms previous findings (both Australian and international) that fatty liver haemorrhagic syndrome is one of the main causes of death in caged layers, associated with restricted movement and increased production in cage systems. The risk of developing this disease was the same for hens in environmentally controlled sheds as for those kept in naturally controlled sheds. The difference in mortality rate from this disease between caged versus barn and free-range systems is marked (74% of necropsied hens, compared with 0-5%). In contrast, there was no significant difference in overall mortality rates between the three housing systems. This study provides further evidence for the need to move away from cage systems for laying hens.

- 3) "There is evidence that there is significant keel bone damage in free-range systems as well and I ask you to respond to that" (by looking at studies mentioned by The Hon. Ben Franklin).

Response: There is an unacceptably high incidence of bone fractures in all housing systems for laying hens. For birds in barn and free-range systems, keel bone fractures are due to the combination of poor bone strength and the increased opportunity to exercise without due attention to variables that increase the risk of injury. Keel bone fractures in these systems can be prevented by genetic selection for bone strength, providing opportunities to exercise and develop locomotor and balancing skills during the rearing environment, consistency in the rearing and laying environments, optimal diets (including sufficient calcium and a balance of omega-3 and omega-6 fatty acids), careful perch design

and placement, and avoiding high stocking densities that prevent accurate landing and predispose to injuries.¹⁻³

- 4) Reference to study that showed perching availability lowers the risk of piling and smothering:

Response: Lay et al (2011) Hen welfare in different housing systems. Poultry Science 90: 278-294.

Dr Rosemary Elliott

1. Donaldson, C.J. and O'Connell, N.E., (2012) The influence of access to aerial perches on fearfulness, social behaviour and production parameters in free-range laying hens. Applied Animal Behaviour Science. 142:51-60.
2. Moinard, C., Rutherford, K.M.D., Haskell, M.J., McCorquodale, C., Jones, R.B. and Green, P.R. (2005) Effects of obstructed take-off and landing perches on the flight accuracy of laying hens. Applied Animal Behaviour Science. 93:81-95.
3. Anna Shipov, Amnon Sharir, Elazar Zelzer, Joshua Milgram, Efrat Monsonego-Ornan, and Ron Shaha. 2010. The influence of severe prolonged exercise restriction on the mechanical and structural properties of bone in an avian model. The Veterinary Journal 183:153-160.