



**HUMANE SOCIETY
INTERNATIONAL**

Monday, February 12, 2024

*Chair Marc Korman, Vice Chair Regina T. Boyce and Members of the Environment and Transportation
Committee
Room 251
House Office Building
Annapolis, Maryland 21401*

Submitted by: Dr. Sara Shields, Director of Farm Animal Welfare Science, Humane Society International

**RE: Testimony in strong support of HB0357: Confinement of Egg-Laying Hens in Commercial Egg
Production**

Chair Korman, Vice Chair Boyce, and Members of the Committee:

Thank you for the opportunity to provide testimony on HB0357, a bill that is important for consumers and for animals.

I am an ethologist, a specialist in animal behavior and I completed my doctoral work at the University of California at Davis. I am the Director of Farm Animal Welfare Science for Humane Society International, and I work with farmers, corporations, governments, financial institutions, and veterinarians around the world to improve the welfare of farm animals. I respectfully request your support for HB0357, a bill that would require modest protections for egg-laying hens.

Consumers and food companies are increasingly concerned about how food is produced. It is well documented in scientific literature that certain aspects of intensive animal production are detrimental to the welfare of farm animals. This is particularly true for egg-laying hens confined to wire “battery cages,” which are so small the birds cannot even spread their wings. These systems prevent the expression of important natural behavior and have real physical consequences on the health and well-being of the animals. For example, the lack of normal movement and exercise is a prime cause of skeletal weakness in hens,^{1,2,3} birds already prone to osteoporosis due to genetic selection for egg production, which requires significant calcium metabolism. Hens in cages are unable to roost at preferred heights, dustbathe, forage or express other forms of highly motivated natural behavior, each with a particular biological function. Comfort behavior, such as stretching, wing-flapping, and preening, are also reduced or prevented in battery-cages.^{4,5,6} Feathers are important for body temperature regulation and protecting the underlying skin, but in cages, abrasion of the feathers against the wire can damage the hen’s plumage.⁷ A cage is simply not an acceptable housing environment for a hen.

Battery cages were widely introduced after World War II, at a time when we knew much less about the behavioral needs of animals. Confinement systems were promoted as part of a trend toward the mechanization and automation of agriculture. There was little understanding of the depth of animals’ ability to experience suffering. Since then, the concept of animal welfare has evolved and become much more widely recognized, parallel to the published scientific research in animal behavior and cognition. **This research has confirmed that hens are intelligent, active, inquisitive, social animals with complex needs beyond simply feed, water, and shelter.**



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This new science has been applied to improve animal housing designs in a way that complements the biology of the hens, rather than suppressing their natural behavior. Modern cage-free systems include features such as nest boxes, perches, and loose litter and are widely and successfully used around the world. In the United States alone, cage-free egg production has grown from a modest 4% of the total egg market in 2009 to 39% in 2023. Given the recent advances in legislation, and corporate commitments to purchase only cage-free eggs, this percentage is expected to continue to grow.

There is now a large body of advice and guidelines from universities, genetics companies, animal welfare certifiers and equipment manufacturers to assist egg producers in managing cage-free systems well. Cage-free hens are healthy and productive. **A 2021 meta-analysis of 6,040 commercial flocks with 176 million hens in 16 different countries found that mortality in cage-free systems is as low as it is in cages.⁸ With increasing experience managing cage-free housing systems, the productivity of cage-free hens is now approximately the same as that of caged hens (see graph, below).** This makes sense, because the same breeds of hens (with the same genetic background) are used in both systems, and they have the same rate of lay.

Opponents are concerned about the increase in labor associated with cage-free production. The flip side of this argument is that cage-free systems create more jobs. In a cage-free system, there are more people caring for the animals, which is an improvement in animal husbandry and an agricultural employment opportunity. Cage-free systems are more attractive to a younger work force, who value animal welfare.

Like any other business, farms must keep pace with new research, market shifts, and changing social norms. Consumers care about where their food comes from, and they expect animals to be well treated on farms. **Cage-free production is the industry best practice and battery cages are outdated and inhumane.**

Please enact HB0357 and bring Maryland's egg production in line with the science, and with modern expectations regarding how farm animals should be housed.

Thank you very much for your time and consideration of this important matter.

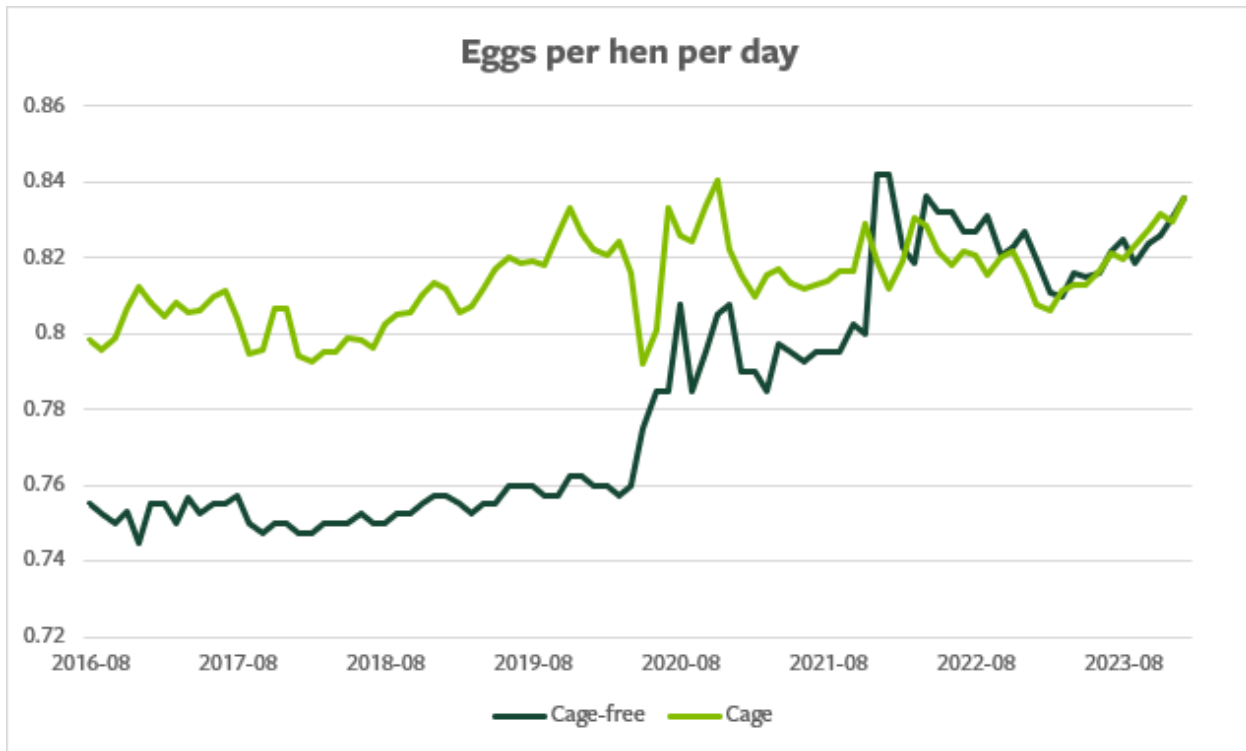
Sincerely,

A handwritten signature in black ink that reads "Sara Shields".

Sara Shields, PhD.
Director, Farm Animal Welfare Science
Humane Society International



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Graph: Eggs per hen per day calculated from annual USDA data provided here:

<https://usda.library.cornell.edu/concern/publications/1v53jw96n>

USDA Economic Research Service's own chart calculated with monthly data is here:

www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=107564

¹ Shipov A, Sharir A, Zelzer E, Milgram J, Monsonogo-Ornan E, and Shahar R. 2010. The influence of severe prolonged exercise restriction on the mechanical and structural properties of bone in an avian model. *The Veterinary Journal* 183:153–60.

² Knowles TG and Broom DG. 1990. Limb bone strength and movement in laying hens from different housing systems. *Veterinary Record* 126:354-6.

³ Norgaard-Nielsen G. 1990. Bone strength of laying hens kept in an alternative system compared with hens in cages and on deep-litter. *British Poultry Science* 31(1):81-9.

⁴ Nicol CJ. 1987. Effect of cage height and area on the behaviour of hens housed in battery cages. *British Poultry Science* 28:327-35.

⁵ Hughes BO and Black AJ. 1974. The effect of environmental factors on activity, selected behaviour patterns and "fear" of fowls in cages and pens. *British Poultry Science* 15:375-80.

⁶ Appleby MC, Mench JA, and Hughes BO. 2004. *Poultry Behaviour and Welfare* (Wallingford, U.K.: CABI Publishing).

⁷ European Food Safety Authority. 2023. Welfare of laying hens on farm. *EFSA Journal* 21(2):7789.

⁸ Schuck-Paim C, Negro-Calduch E, and Alonso WJ. 2021. Laying hen mortality in different indoor housing systems: a meta-analysis of data from commercial farms in 16 countries. *Scientific Reports* 11: 3052.