



Formerly called the Humane  
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Thursday, February 27, 2025

Maryland Senate Education, Energy, and the Environment Committee  
Miller Senate Office Building  
11 Bladen St.  
Annapolis, Maryland 21401

Submitted by: Dr. Sara Shields, Director of Farm Animal Welfare Science, Humane World for Animals

**RE: Testimony in strong support of SB 806: Confinement of Egg-Laying Hens in Commercial Egg Production**

Dear Chair Feldman, Vice-Chair Kagan and members of the committee:

Thank you for the opportunity to provide testimony on SB 806, 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 World for Animals, 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 SB 806, a bill that would require modest protections for egg-laying hens.

The confinement of animals in intensive agricultural production systems is an important issue. Consumers and food companies are increasingly concerned about how food is produced and how animals are treated on farms. 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,<sup>1,2,3</sup> 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.<sup>4,5,6</sup> 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.<sup>7</sup> 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.**

**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 nesting 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 40% in 2024. 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. 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.<sup>8</sup> With advanced management practices, cage-free hens are healthy and productive.

Like any other business, farms must keep pace with new research, market shifts, and changing social norms. Requiring cage-free production systems ensures that new investments are future proof. 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 SB 806 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,



Sara Shields, PhD.  
Director, Farm Animal Welfare Science  
Humane World for Animals

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<sup>1</sup> 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.

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

<sup>3</sup> 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.

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

<sup>5</sup> 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.

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

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

<sup>8</sup> 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.