

The below chart is based on welfare topics covered in The HSUS report, “[Welfare Issues with Furnished Cages for Egg-Laying Hens.](#)” Welfare risks in cage-free systems, such as [mortality](#), can be addressed through proper management techniques, but behavioral restriction in cages is inherent to the system, and thus can only be adequately corrected by switching to cage-free housing.

Welfare aspects of housing systems for hens			
	Barren Battery Cage	Furnished Battery Cage	Cage-Free Barn/Aviary
Typical space per bird	67 in ²	116 in ²	144 – 216 in ²
Walking	Constrained	Constrained	Free expression
Running	Not permitted	Not permitted	Free expression
Jumping	Not permitted	Constrained	Free expression
Flying	Not permitted	Not permitted	Free expression
Perching	Not permitted	Constrained	Free expression
Exploratory Behavior	Not permitted	Constrained	Free expression
Dustbathing	Not permitted	Constrained	Free expression
Foraging	Not permitted	Not permitted	Free expression
Nesting	Not permitted	Constrained	Free expression
Exercise	Not permitted	Constrained	Free expression
Group Size	Smallest	Small	Large
Air Quality	Variable and dependent on management	Variable and dependent on management	Variable and dependent on management
Bone strength	Weak	Intermittent ¹	Strongest
Bone fractures ²	Less common during laying, but more common when removed from cages at depopulation	Not yet well studied	Common during the laying period, but less common during depopulation
Fatty liver hemorrhagic syndrome	More common	More common ³	Less common
Fear	More fearful	More fearful ⁴	Less fearful
Trapping injury ⁵	More potential	More potential, but not yet documented in scientific literature	Less potential
Mortality ⁶	Variable and dependent on strain and beak trimming status	Variable and dependent on strain and beak trimming status	Variable and dependent on strain and beak trimming status

¹ Leyendecker M, Hamann H, Hartung J, et al. 2002. Analysis of the egg shell stability and the bone strength of laying hens in three different hen housing systems. *Züchtungskunde* 74(2):144-55.

² Bone fractures and osteoporosis are the result of selective breeding programs for egg production, because the metabolic source for calcium used in shell production is bone. Exercise in cage-free systems along with breeding hens for improved bone strength could largely address this problem. For more information, see “An HSUS Report: A Comparison of the Welfare of Hens in Battery Cages and Alternative Systems” at www.humanesociety.org/assets/pdfs/farm/hsus-a-comparison-of-the-welfare-of-hens-in-battery-cages-and-alternative-systems.pdf

³ Rönchen S, Scholz B, Hamann H, and Distl O. 2008. Fat status in Lohmann Silver and Lohmann Tradition laying hens kept in modified small group housing systems, small group housing systems, furnished cages and an aviary system. *Berliner und Münchener Tierärztliche Wochenschrift* 121(1/2):11-8.

⁴ Rodenburg TB, Tuytens FAM, de Reu K, Herman L, Zoons J, and Sonck B. 2008. Welfare assessment of laying hens in furnished cages and non-cage systems: an on-farm comparison. *Animal Welfare* 17:363-73.

⁵ Appleby MC and Hughes BO. 1991. Welfare of laying hens in cages and alternative systems: environmental, physical and behavioural aspects. *World’s Poultry Science Journal* 47:109-28.

⁶ For more information, see “Understanding Mortality Rates of Laying Hens in Cage-Free Egg Production Systems” at www.humanesociety.org/assets/pdfs/farm/mortality_cage_free.pdf