

Report on H.299
Prepared by the Livestock Care Standards Advisory Council
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H.299

Subject: Agriculture; shell eggs; animal cruelty

URL: <https://legislature.vermont.gov/assets/Documents/2018/Docs/BILLS/H-0299/H-0299%20As%20Introduced.pdf>

The following statements are not supported by our current scientific knowledge:

Lines 17-18: (2) Stress increases the risk of salmonella infection among egg-producing chicken hens

Lines 6-8: (5) The State should establish minimum housing requirements for egg-producing chicken hens in order to promote humane treatment of those hens and to reduce further the risk of salmonella infection

There are many *Salmonella* serotypes that have been found in adult commercial chickens, including laying hens. All *Salmonella* serotypes of public health concern (which can result in human disease) are non-host adapted *Salmonella* serovars within the species *Salmonella enterica* subspecies *enterica*.^{1,2,3} These serovars colonize commercial chickens, including laying hens, but do not produce infection or disease in the chicken host. There is only one serovar of *Salmonella* that infects and produces disease in chickens (host-adapted), but not in humans: *Salmonella enterica* subspecies *enterica*, with two biovars, Pullorum and Gallinarum.⁴

The occurrence and prevalence of non-host adapted serotypes in laying hens depends on many different factors, including access to contaminated water, feed, environmental exposure, etc.⁶ Although stress may exacerbate the carriage states of some chickens, the presence or absence of stress in adult commercial chickens is not the only factor correlated to the presence or prevalence of non-host adapted *Salmonella* serovars.⁷ In other words, non-stressed chickens may be colonized and carry a large number of these *Salmonella* bacteria, while stressed chickens may be free of colonization.

The most important serovar transmitted by eggs in the USA is *Salmonella enteritidis*.⁵ The epidemiology of transmission is very complex, and adult chickens can be colonized through either vertical (via the ovary) or horizontal transmission routes. However, there are many well-known practices that reduce the chances of colonization of adult chickens. Examples of these practices include vaccination of parent stock, reduced environmental exposure and increased biosecurity measures. The degree of confinement or floor rearing has not been shown to reduce colonization rates.^{8,9,10,11}

References

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