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News & Comments

Corn Silage: An Alternative Way for Reducing Exposure to *Salmonella enteritidis*

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To extend the reproductive season and enhance the quality of the eggs produced by older hens, molt induction is a useful tool for the economical management of laying flocks. Typical molting programs entail cutting back on light hours and feeding animals less until they lose about 25% or more of their body weight and stop laying eggs. The high prevalence of salmonellosis infections in molted chickens continues to pose a serious health risk since it degrades flock health and is a substantial cause of human foodborne gastroenteritis. The article was published in the September issue of Poultry Science.

The bacterial strain (*Salmonella enteritidis*) utilized in this experiment was acquired from the University of Tabriz's Faculty of Veterinary Medicine in Tabriz, Iran, and was later verified by a biochemical test. "A three-times-transferred overnight culture in trypticase soy broth was used to create the challenge inoculum. No distinction between molted treatments using various techniques was discovered", authors proclaimed. In comparison to all molting treatments, hens in the control FF treatment had considerably larger internal organ weights, including ovary, oviduct, and liver weights, except for the spleen. Short- and medium-chain fatty acids are antibacterial, particularly against Salmonella species, according to research findings. Changes in the expression of salmonella's virulence genes can be used to explain how organic acids affect the suppression of Salmonella invasion. These findings suggested that corn silage might be a different way to molt and have a lower sensitivity to *Salmonella enteritidis*. Numerous research has been done to quantify the changes in organic acids on the surface that occur during the induction of molts. Some of these studies employ organic acids in water to make up for the reduced fermentation that occurs when molts are induced with feed withdrawal. Due to its large quantities of organic acids—even lower than those produced by FF hens—the results indicated that employing corn silage can lower crop pH.

Journal Reference

Ayasi H., *et al.*, 2022. Effect of corn silage and alfalfa meal as alternative induced molt methods to improving Salmonella Enteritidis resistance in laying hens. Poul. Sci., 101: 101984

KEYWORDS

Corn silage, laying hen, molting, *Salmonella enteritidis* resistance