

## News &amp; Comments

**Cold Fogging Resulted in the Greatest Reduction in *M. gallisepticum* Count***Gajendra Sharma*

In multi-age layer flocks, *Mycoplasma* infections are widespread, with *Mycoplasma gallisepticum* being the species that worry commercial egg producers the most. Infection with *Mycoplasma gallisepticum* (MG) typically results in chronic respiratory disease in poultry. This condition is marked by respiratory rales, coughing, nasal discharges, and an acute-to-chronic infectious disease that primarily affects the synovial membranes of joints and tendons sheaths in chickens and turkeys. It spreads horizontally by contaminated feed, water, infectious aerosols in the environment, and human activity on farmlands as well as vertically (trans-ovarian) from infected parents to offspring. In this study, mycoplasmas were isolated, identified, and their effects on the productivity of commercial layer hens and the effectiveness of the most popular disinfectants in preventing mycoplasma growth were determined through various methods.

A floor system with litter that had a density of 7.5-8 m<sup>2</sup> bird G-1 and a ventilation system was employed to accommodate a total of 10,000 chickens. The time difference between light and dark was 16 hrs. From the commercial layer flocks, 600 cloacal and tracheal swab samples were obtained (Triple swabs). Aseptically collected samples were immediately transferred to sterile Petri dishes. Before analysis, data were transformed to log<sub>10</sub> values. The experimental units were distinct plots.

Increased condemnations in the processing plant are a result of *Mycoplasma gallisepticum*'s frequent involvement in the polymicrobial "chronic respiratory illness" of chickens.

It typically has no symptoms in breeders and layers, but it reduces the number of eggs laid per hen throughout the production cycle. The respiratory pathogen *Mycoplasma gallisepticum* is particularly prevalent in laying hen homes. It is clear that after 15 min of contact time, fogging with Micro Sept M (PHMB), Formalin, Virkon'S, Halamid, and Phenol had a greater impact on the studied pathogens *M. gallisepticum* than spraying did. In the presence of organic materials, formaldehyde and phenolic compound were efficient. After placing the litter, the formaldehyde solution should be repeated to fog the chicken homes and equipment. The active components of Polyhexamethylene Biguanide (PHMB), a polymeric cationic antibacterial agent, attach quickly to the bilayer membrane and thereby replace the normally stabilizing Ca<sup>2+</sup>. The polymer's hexamethylene groups are hydrophobic, making them sufficiently rigid and preventing them from penetrating the hydrophobic core of the cell membrane.

The tendency of this interaction to concentrate around any regions of maximal charge density inside



the typically membrane-carrying or integrated proteins is an additional characteristic of this interaction. Cellular leakage and loss of function are the outcomes.

Within a chicken farm, *Mycoplasma gallisepticum* can persist in many reservoirs. The most frequent of these reservoirs are food, water, feathers, faeces, or dust. *M. gallisepticum* infection causes significant financial losses in the poultry industry due to decreased hatchability and egg production, mortalities, decreased day-old chick quality, decreased growth rate, and increased control costs (including site cleaning and depopulation), and increased medication and vaccination costs.

#### JOURNAL REFERENCE

Maged M. Khalil, Nayera M. Alfateeh and Hussein A. Kaoud, 2021. Monitoring the effect of disinfection methods on *Mycoplasma gallisepticum* in commercial layer farms. *Int. J. Poult. Sci.*, 21: 28-37.

#### KEYWORDS

*Mycoplasma gallisepticum*, egg-layer flocks, production performance, commercial poultry farm, mortality

