

Recognizing and Preventing *Mycoplasma gallisepticum* (MG) Infection in Poultry

Mycoplasma gallisepticum (MG) is a bacteria-like organism that causes respiratory disease primarily in chickens and turkeys but it can also infect gamebirds, pigeons, ducks, geese, peafowl and wild birds. MG infection in chickens is also known as Chronic Respiratory Disease (CRD).

Is it MG? What to Look For

MG usually causes only mild clinical signs and lesions in chickens. Symptoms of MG include coughing, sneezing, rales, difficulty breathing, nasal discharge and foamy eyes (figures 1 and 2). MG also can reduce growth rate and egg production.

However, MG can be more severe when infected chickens also have other diseases such as infectious bronchitis, Newcastle disease, and *E. coli*, especially if there are high levels of dust ammonia in the poultry house.

While mortality from MG tends to be low in adult birds, it can be as high as 30% in chickens that are infected with other respiratory viruses or *E. coli*. Birds that recover may still be infectious (carriers) of MG, and may show no signs of disease until stressed.

Figures 1 and 2. Chickens Infected with MG Have Nasal and Eye Discharges



How is MG Spread?

MG is a very fragile organism that can only survive a few days without a host but infected poultry can transmit the disease to their offspring through eggs as well as by natural breeding with an infected mate. Sick or recovered poultry and wild birds also can spread MG through their bodily secretions.

(nasal and eye discharges, fecal matter) to other birds.

Poultry auctions, swap meets, shows and other events with poultry of uncertain disease status also have been associated with MG outbreaks. Egg flats, cages, coops, tools, and equipment that are contaminated with droppings and respiratory secretions from MG-infected birds can also spread the disease to clean flocks.

People that work with other live birds can also bring back MG to their poultry operations on their person, clothing, footwear and equipment. People can harbor MG inside their noses for days.

Healthy Chicks and Biosecurity are Keys to Manage MG

The best way to control MG is to start your flock with birds that are disease free and then practice good biosecurity to keep MG out. Start with chicks from known MG-free flocks. Avoid buying adult birds with unknown MG status (adult birds can be carriers of many different diseases).

Minimize contact with other flocks, if possible. If not, make sure you change your clothing and footwear after visiting other birds before you get close to your birds.

Vaccinate prospective show birds or valuable breeders annually, at least one month prior to the first scheduled show or onset of lay. Be sure to check state regulations if you use a live MG vaccine. Quarantine new additions to the flock or show birds immediately after a show for at least 4 weeks before mixing them with the entire flock. Keeping rodents and wild birds away from your flock is also important in preventing MG infection.

Serious breeders and aficionados with valuable genetic lines of birds use several techniques to salvage progeny from infected breeders, including

dipping hatching eggs in an antibiotic cold-water bath subsequent MG testing, and strict culling of infected offspring.

How do You Treat MG?

Birds that are infected with MG remain carriers of the disease throughout their lives. Some antibiotics such as Tylosin or tetracyclines, fluoroquinolones (available by prescription through a licensed veterinarian) can reduce clinical symptoms but will not completely eliminate MG. More importantly, some antibiotics cannot be used for birds raised for meat and eggs. Even if birds have been treated with antibiotics, they can still spread MG to other birds. Harvesting (or culling??) meat birds may be better than treating them because treatment can be expensive.

Weigh the costs and benefits of maintaining a flock with MG (which may require the continuous use of antibiotics) or depopulating the infected flocks followed by thoroughly cleaning and disinfecting the facilities and equipment and starting fresh with an MG-free flock. Practice strict biosecurity to keep your flock MG-free.

Is MG a Risk for Humans?

MG does not make people sick and eating eggs from infected birds will not hurt you. Do not use eggs from birds that have been treated with antibiotics.

If You Think Your Flock has MG...

Call the Maryland Department of Agriculture (MDA) at 410-841-5810 for assistance, risk assessment or possible testing. Or call your respective State's Department of Agriculture State Veterinarian's office or diagnostic lab. If you have an unusually high level of mortality on your farm, the dead birds or live birds that show the same symptoms, may be

submitted for necropsy to a regional MDA Animal Health Diagnostic Laboratory.

Call ahead for submission requirements and further instructions at the numbers provided below:

MDA Regional Animal Health Office/Diagnostic Laboratories



<u>Region</u>	<u>Facility</u>	<u>Phone</u>
Western Shore	Frederick Lab	301-600-1548
Eastern Shore	Salisbury Lab	410-543-6610

If you live in Delaware, contact the University of Delaware Lasher Laboratory located in Georgetown at 302-856-7303.

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