Mycoplasma Gallisepticum

NPIP Classifications
- **U.S. M. Gallisepticum Clean**: Available to all types of poultry except Ostrich, Emu, Rhea, Cassowary and Part 146 Subpart B Commercial Egg Laying Flocks
- **U.S. M. Gallisepticum Clean State**
- **U.S. M. Gallisepticum Clean Started Poultry**: Available to Multiplier Egg and Meat-type Chicken Flocks
- **U.S. M. Gallisepticum Monitored**: Available to Multiplier Meat-type Chicken Flocks

Etiology
*Mycoplasma gallisepticum* causes chronic respiratory disease (CRD) of chickens and infectious sinusitis in turkeys. Mycoplasma bacteria do not have a cell wall and are quite small in size.

Species Affected and Zoonotic Potential
*M. gallisepticum* primarily occurs in chickens and turkeys, with turkeys more severely affected. The disease has also been isolated from naturally occurring infections in pheasants, chukar partridges and peafowl. The disease has been confirmed in house finches and songbirds in the Eastern U.S. and Canada. *M. gallisepticum* infections are limited to avian hosts and the disease is not of public health significance.

Geographic Distribution
*M. gallisepticum* is present in commercial chickens and turkeys worldwide. In the United States, the incidence of the disease has greatly decreased due to the control programs implemented through the NPIP. The NPIP has been particularly effective controlling the disease in primary and multiplier flocks, however, outbreaks continue in meat flocks and the disease is endemic in some multiple age commercial laying flocks.

Transmission
Horizontal transmission of the disease can easily occur through droplets and aerosol contact with the conjunctiva or upper respiratory tract of susceptible birds. Vertical transmission through the eggs of naturally infected hens is of particular concern for multiplier and breeder flocks.

Clinical Signs
Chickens may exhibit nasal discharge, tracheal rales, conjunctivitis, reduced feed consumption, and lowered egg production. The disease in chickens is often referred to as chronic respiratory disease (CRD). Morbidity is typically quite high. Turkeys are typically more severely affected than chickens and show sinusitis, respiratory distress, and depression. Morbidity is typically very high in both chickens and turkeys. Carcass condemnations due to air sacculitis can be very high resulting in significant economic losses in addition to those associated with lowered egg production or feed efficiency.

Prevention and Control
Because *M. gallisepticum* can be transmitted vertically through eggs, any control measure must involve starting with stocks known to be free of the infection and then employing good biosecurity practices to prevent the introduction of the disease. In the U.S. the *M. gallisepticum* control programs established by the NPIP have been successfully used in breeder and multiplier flocks. In other types of flocks, control of *M. gallisepticum* remains challenging due to a variety of factors including the use of multiple age facilities, increased population densities, and increased concentration of poultry operations. Antimicrobial therapy and vaccination may be appropriate in some situations to reduce morbidity and mortality.

Diagnosis
Definitive diagnosis of *M. gallisepticum* is based on isolation and/or identification of the organism. Serology is useful for monitoring flocks in disease control programs. A positive serologic test accompanied by a history and signs consistent with MG is sufficient for a presumptive diagnosis of the disease pending isolation and/or identification of the organism.

Testing Requirements
U.S. M. Gallisepticum Clean classification (except for those raising ratites) involves blood testing a sample of birds at 90 day intervals. Alternatively, a 30 day interval can be used with cull chick or egg yolk testing.

Egg and meat-type multiplier flocks may have their started poultry labeled as U.S. M. Gallisepticum Clean Started Poultry if their Multiplier and Primary flocks are classified as U.S. M. Gallisepticum Clean, and they meet specific sanitation and isolation rules.

U.S. M. Gallisepticum Monitored classification for meat-type chicken producers has less stringent testing requirements.
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Approved Tests
A variety of approved tests (serum plate agglutination, tube agglutination, hemagglutination inhibition, microhemagglutination inhibition, enzyme-labeled immunosorbent assay, and polymerase chain reaction (PCR) or a combination of two or more of these) may be used by authorized laboratories when testing blood samples for *M. gallisepticum*.

Reference