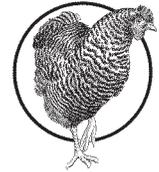




Pullorum Disease and Fowl Typhoid



Salmonella Pullorum or Pullorum Disease (PD) and *Salmonella* Gallinarum or Fowl Typhoid (FT) are caused by sub-species of *Salmonella*, pullorum and gallinarum respectively. Both are economically important diseases of chickens but may infect other birds as well.

PD and FT have been mostly eradicated in the United States, Canada, Japan, Western Europe and Australia. PD and FT are both reportable diseases. If you suspect your flock has either of these diseases, contact your state veterinarian for more information.

Chickens and turkeys are the natural hosts for FT and PD, but naturally occurring outbreaks occur in other birds, both wild and domestic. As a naturally occurring disease, Salmonellosis caused by *S. pullorum* has also been reported in humans.

Transmission

PD and FT are spread by:

- bird-to-bird contact
- hen to egg to chick (recovered hens will pass on the disease to roughly 1/3 of her eggs)
- chick to chick
- cannibalism of infected carcasses
- wound contamination
- fecal contamination of feed, water and litter

Wild birds, mammals and flies are capable of spreading these diseases, proper biosecurity measures will prevent the spread of infective material from house to house and from farm to farm.

Signs

When hatched from infected eggs, chicks and poults will begin to sicken and die soon after hatching. Birds are weak, with poor appetite and stunted growth. They will make shrill chirping and peeping sounds while attempting to eliminate chalky white droppings from their vents. In some cases signs won't appear for 5 to 10 days after hatching, but then will increase for 7 -10 days, with most deaths occurring by the second to third week of life.

Pullorum disease in semi-mature and mature flocks may cause diarrhea, depression, dehydration and low feed intake. Survivors have reduced growth rates, and are under-developed and poorly feathered. Infected flocks have a high rate of carriers at maturity. Infected growing and mature fowl may exhibit little or no signs of disease, especially with pullorum disease.

Signs of an acute outbreak of FT include a sudden drop in feed intake, droopy and depressed birds, ruffled feathers, reduced fertility, and reduced hatch rate, all depending on the severity of infection. Death can occur in as few as 5 days, with 5-10 days being most common. Death may occur with no previous signs.

Morbidity and Mortality

The number of birds infected (morbidity) and the number of birds that die (mortality) varies by age, strain of bird, management, nutritional status, route and dose of exposure, and other disease stresses in the flock. PD in chicks can have up to 100 percent mortality, with the highest losses in the second week of life. FT has a 10 percent to 90 percent infection rate, with morbidity higher than mortality. Some chicks affected with FT recover on their own.

Diagnosis

Diagnosis is made by clinical signs, flock history, post-mortem lesions and mortality. Definitive diagnosis requires isolation and identification of the virus by qualified laboratory personnel. Home blood test kits are available for use; to eliminate carriers, the flock must have 2 negative blood tests at least 21 days apart.

National Poultry Improvement Plan (NPIP)

The NPIP is a cooperative program begun in the 1930s by federal/state governments and industry to coordinate efforts to eliminate PD from poultry flocks and hatcheries. Since then, the NPIP has adapted to changes in the poultry industry.

Years of dedicated effort have led to the eradication of PD from commercial poultry flocks. Outbreaks still occur, reinforcing the need for continued diligence and surveillance. Many states require either a negative Pullorum test within the past 90 days or participation in the NPIP for poultry to legally enter the state or be exhibited at fairs and other public exhibitions. To participate in the NPIP, contact the office of your state veterinarian.

Prevention

To prevent the introduction of PD and FT to your flock:

- Obtain birds and hatching eggs from certified-pullorum-free flocks.
- Don't mix certified flocks with birds of unknown status.
- Clean and sanitize an area before introducing new chicks.
- Keep feed in clean, sanitary conditions to eliminate contamination.
- Practice sound biosecurity to prevent introduction of disease.

Treatment

Treatment of Salmonella Pullorum and Salmonella Gallinarum is neither feasible nor desirable. Eradication is the preferred method of control, as recovered birds have a tendency to become carriers.

For more fact sheets in the small flock poultry management series return to:

<http://extension.unh.edu/Agric/AGDLEP.htm>

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