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Control of Fowl Cholera

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WHAT IS FOWL CHOLERA

Fowl cholera (FC) is an infectious, highly contagious disease of domestic birds. It affects turkeys, chickens, ducks, geese, and others.

It is caused by a bacterium, *Pasteurella multocida*, which enters the body through the respiratory tract, drinking water, contaminated feed, or wounds. Birds may be affected at any age, but FC is most prevalent in birds 12 to 18 weeks old up to market. Mortality may run as high as 40%, specially in susceptible flocks.

The causative organism is spread by wild animals or birds. Carrier or sick birds spread it within a flock through contamination of feed and waterers by discharge of mucous from birds' mouth. Drop-pings and diseased carcasses are sources of infection also. *Pasteurella multocida* is known to live in decaying carcasses for at least three months.

Apparently wildlife is the main reservoir of the infection and many outbreaks are preceeded by predator attacks of flocks on range. The causative organism is often carried from farm to farm by contaminated equipment, trucks, clothing and footwear.

The organism is not known to be carried through the egg. However, birds which recover from the disease may become carriers and able to infect other birds. Whenever economically feasible, an infected or recovered flock should be disposed of and no bird should be kept for breeding purposes.

WHAT ARE THE SYMPTOMS OF FC

Most outbreaks start with the acute death of well fleshed birds. As the disease spreads one observes increased thirst, loss of appetite, fever, and listlessness. The head may be dark to purple. Greenish/yellow, watery diarrhea is often present.

Chronic forms of FC are characterized by lameness, swollen heads, mouth bleeding, twisted necks or heads bent backwards. Chronically ill birds usually die from dehydration and/or starvation.

Post mortem examination may not show any lesions in birds which die suddenly, but the majority of birds dying from FC show typical lesions in the liver. It is enlarged, pale, streaked, brittle and may have a speckled appearance due to numerous small abscesses. The spleen and heart appear swollen, and the heart sac may be thickened and covered with a creamy film.

A positive diagnosis is best achieved through laboratory examinations.

TREATMENT OF FC

Early diagnosis and treatment are a must. Sulfa drugs - particularly sulfaquinoxaline - are usually effective in reducing mortality if given in the early stages. Sometimes it may be necessary to simultaneously use sulfas in the water and antibiotics in the feed to achieve control. If birds are off feed and water an injectable antibiotic may be needed.

In early stages of an outbreak, or after outbreaks are controlled by medication, a live oral vaccine may be used in efforts to reduce problems over a longer period. Heavily exposed flocks should be revaccinated every four to eight weeks.

Regardless how effective, treatment only suppresses the disease. FC will likely reappear if birds are kept for an extended period and repeat treatments may be necessary.

Do not overlook the drug "withdrawal" period before market in sending birds to slaughter (Refer to N.D. Coop. Ext. Circular V-637: DRUG USE GUIDE - POULTRY).

PREVENTION OF FC

Successful prevention of FC results from two elements: (1) vaccination, and (2) preventive management.

(1) **Vaccination:** Only flocks in good health benefit from preventive vaccination. Vaccines are administered singly or in combination; oral vaccines are administered via the drinking water. Oral vaccines require withholding all medications for three days before vaccination, with the exception of furazolidone in the feed which does not interfere with the vaccine.

The timely administration of vaccines is paramount and at least two doses four to six weeks apart are needed. Regardless of vaccine used, one must adhere to the manufacturer's recommendations if positive results are expected.

(2) **Preventive management:** A number of preventive measures are effective in reducing the number of FC outbreaks. These include:

- **Control predators.** Raccoons, foxes and other animals are major suspects in spreading the disease. The control program should be in operation well before moving birds to range.
- **Isolate flocks.** Keep visitors out of poultry houses and off ranges. Prevent feed trucks from driving on range. Keep healthy and sick flocks separated.
- **Rotate ranges.** Move flock and range equipment at least every two weeks. Keep flock size to 5,000 birds or less. Don't crowd birds on range. Fence birds out of stagnant pools or swamp areas. Semi-confinement fences should be built to discourage predators.
- **Dispose of dead birds.** Pick up dead birds; use disposal pit, incinerator or other approved methods.
- **Watch for stress conditions.** Most cholera outbreaks occur during hot weather. Other stress conditions may also trigger infections. Avoid handling or moving birds when weather is extremely hot.
- **Confinement rearing.** Few cases of fowl cholera have been reported in birds raised in complete confinement. This leads many to believe that predators and stresses on range are the main factors in triggering cholera outbreaks. Growers who have been persistently plagued with cholera problems may want to consider moving to confinement system. Sparrows and rodents are prime suspects in the spread of the disease to confined flocks; "sparrow-proof" buildings and control rodents.