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SOLUTIONS

Feathered Facts

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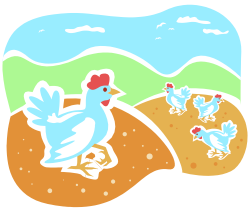

Diseases in Poultry: Good Management is Essential

Everyone has heard the adage that "an ounce of prevention is worth a pound of cure". When it comes to diseases in poultry, this is most certainly the case. There are many disease causing organisms that can affect poultry including bacteria, protozoa, and parasites. Many diseases can be prevented via vaccination and/or good flock management. Prevention of disease is important to keep losses down, prevent decreases in production, and because there are certain diseases that have no cure once they are contracted.

Poultry, like all living organisms, tend to perform better in a clean and disease-free environment. A regular clean-out schedule for the pen or coop area is recommended as many diseases are transmitted via feces. Waterers should be cleaned daily by scrubbing and the use of a chlorine bleach solution. Feeders can be cleaned less often, but should be cleaned when they appear soiled.

There are different types of diseases that can affect a poultry flock, including contagious diseases and hereditary diseases. There are also nutritional deficiencies that can mimic the signs and symptoms of disease. Many of the contagious diseases that affect poultry flocks can be prevented by vaccination. Make sure to check with your chick or pullet provider to make sure that they have vaccinated the birds against these diseases. Other diseases are considered hereditary diseases. These diseases can be prevented in your flock by using stock that is tested to be disease free. Consult with your chick or pullet provider to make sure the parent flock is free of hereditary disease. Finally, since some nutritional deficiencies can exhibit similar signs/symptoms as disease, it is important to feed your flock a balanced ration. Nutritional deficiencies are usually not seen in flocks that are fed balanced diets.

There are drugs and antibiotics that are available to treat certain diseases. However, these drugs only work effectively when given at the recommended dose and for the recommended time period. Random or irregular use of these drugs can result in poor flock health. Drugs and antibiotic use should be used in conjunction with good management. They are not a substitute for it.

Other measures that you can use to help prevent disease in your flock are:

- Provide adequate ventilation during hot weather.
- Use screening or other methods to keep the flock isolated from other birds and animals. Unknown animals can carry disease.
- Segregate different age birds, if possible.
- Limit visitors to your flock area. Disease can be spread via clothing and shoes.
- Quarantine new or replacement birds for 30 days before introduction into the flock.
- Eliminate trash or junk piles near the rearing area. These attract pests and rodents, which can carry disease.
- Always be on the lookout for strange behavior in your flock including changes in respiration, and discharges from the eyes or nasal cavity.

- Please send comments or questions to baker@ifas.ufl.edu
- Archives of past issues can be found here.
- Email announcements of official UF | IFAS poultry programs to baker@ifas.ufl.edu
- UF/IFAS Small Farms Poultry Web Page

Inside this issue:

A UF/IFAS Publication on poultry diseases can be found here.

Diseases of Backyard Poultry Flocks

Newcastle Disease—this disease is a contagious respiratory disease caused by a paramyxovirus.

Symptoms/Transmission: Symptoms include respiratory distress, nasal discharge, depression, decreased appetite, decreased water consumption, and drops in production. Mortality can range from 10% to 80%. Most times, there is also edema in the face coinciding with airway congestion. The incubation period for the virus is 5 to 7 days. During this time, the birds will be contagious and spread the virus via feces, fomites, and through the air.

Prevention/Control: There is no specific treatment Newcastle Disease once it has been contracted. Antibiotics can be administered to prevent secondary infections. Vaccination of the flock, along with good biosecurity and sanitation will aid in prevention of this disease.

Infectious Bronchitis—this disease is caused by a coronavirus.

Symptoms/Transmission: Symptoms include coughing, sneezing, rales, and labored breathing that is accompanied by a watery discharge from the eyes and mouth. This disease is one of the most contagious diseases that affect poultry. Typically, all unimmunized birds will become infected when the virus is introduced. The incubation time is between 17 to 36 hours and the disease will persist for 10 to 14 days. Transmission of this disease can occur via the air over long distances and it can also be spread via any mechanical means.

Prevention/Control: There is no specific treatment for this disease once it is acquired. Antibiotics can be administered for 3 to 5 days to prevent secondary bacterial infections. Vaccination of the flock annually can prevent the disease.

Aspergillosis—this disease is caused primarily by the fungus *Aspergillus fumigatus*, but it can also be caused by other members of the *Aspergillus* genus. These fungi are found almost everywhere in nature and they grow very well at temperatures of 70°F and above. Fungi can also produce spores that are highly resistant to elimination methods.

Symptoms/Transmission: Aspergillosis can take two forms: 1) acute and 2) chronic. Symptoms of the acute form include loss of appetite, gasping, convulsions, and sleepiness. Mortality from this form ranges from 5% to 20%. The acute form occurs primarily in young birds. Symptoms of the chronic form include emaciation, loss of appetite, cyanosis, gasping, and death. The chronic form occurs typically in older birds. The disease is transmitted by inhalation of the fungal spores; therefore, most infections occur because of a contaminated environment.

Prevention/Control: There is no cure for infected birds. Those that are infected should be eradicated. Housing and incubation equipment should be thoroughly cleaned and disinfected before repopulation. Prevention of this disease is attained via good husbandry and sanitation practices.

Example of the dry pox type of Avian Pox (commonly referred to as Fowl Pox). Photo provided by J.J. Giambrone, Auburn University.

Example of malformed eggs from a hen with Newcastle Disease. Photo provided by J.J. Giambrone, Auburn University.

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Diseases of Backyard Poultry Flocks

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Marek's Disease—this disease is a type of avian cancer and is cause by a virus.

Symptoms/Transmission: Tumors can be located in many parts of the body including: the nervous system, liver, spleen, kidneys, pancreas, lungs, muscles, and eyes. Symptoms include unthriftiness, emaciation, blindness, lameness, and paralysis. Marek's Disease usually occurs in chickens between 12 and 25 weeks of age. The virus that causes this disease is transmitted via the air. Birds that become infected and survive the disease are considered carriers and can infect other birds after symptoms have subsided. Marek's Disease is similar to Avian Leucosis, but they are different diseases.

Prevention/Control: There is no treatment for birds infected with the virus. Vaccination is available for this disease and is the only effective means of control.

Botulism—this disease is caused by the ingestion of the toxin produced by the bacterium *Clostridium botulinum*.

Symptoms/Transmission: Flaccid paralysis that begins at the extremities and progresses toward the trunk of the body. The transmission of this disease is caused by the ingestion of the toxin which can be found in decaying plant or animal matter.

Prevention/Control: Improperly stored feed is the typical culprit for causing botulism, although access to decaying material in wet areas can also be the cause. Control should begin by removal of the source of the toxin. Epsom salts in the water system (1 lb. per 1,000 birds) can help alleviate the symptoms. There is a botulinum antitoxin available, but it is expensive. Keep birds away from consistently wet areas that can serve as reservoirs for the organism. Owners whose flocks contract botulism should expect some mortality from the disease.

Fowl Cholera—this disease is caused by the bacterium *Pasturella multocida*.

Symptoms/Transmission: Greenish-yellow diarrhea, fever, increased water consumption, severe drop in egg production, and weight loss are typical symptoms of Fowl Cholera. Transmission is typically from feces but can also be from decaying carcasses and soil. Reservoirs for this bacterium include wild birds, raccoons, opossums, dogs, cats, and pigs.

Prevention/Control: Elimination of potential reservoirs and good sanitation are key to prevention. Vaccination is available for this disease. Treatment of infected birds with antibiotics or other drugs is usually ineffective as mortality increases when the drug treatment stops.

Infectious Coryza—this disease is caused by the bacterium *Hemophilus paragallinarum*. It is considered an acute respiratory infection.

Symptoms/Transmission: Depression, nasal discharge, and sneezing are common symptoms of infection by this bacterium. Birds also exhibit edema of the face and wattles. There may be decreased feed and water consumption. Transmission is typically from bird-to-bird. The bacterium may also be transmitted by contaminated feed or water. Infected birds remain carriers for life.

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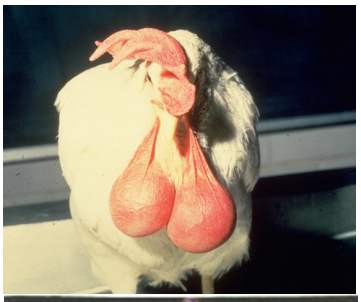
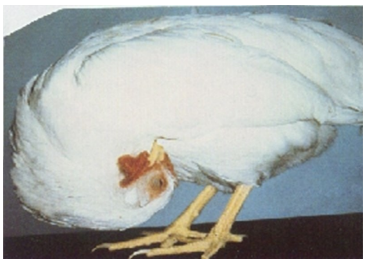
Many poultry diseases have vaccinations available for them.



Swollen wattles associated with Fowl Cholera. Photos provided by J.J. Giambrone, Auburn University.

An example of the flaccid paralysis caused by Botulism (ingestion of the toxin from Clostridium botulinum). Photo provided by J.J. Giambrone, Auburn University.



Example of depression associated with Newcastle Disease. Photo provided by J.J. Giambrone, Auburn University.

USDA/APHIS information on biosecurity for your flock can be found here.

Diseases of Backyard Poultry Flocks

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Infectious Coryza—*continued from page 3*

Prevention/Control: Vaccination for Infectious Coryza is available. Treatment of infected birds can be achieved by antibiotics and sulfa drugs, although sulfa drugs cannot be administered to layers. Since infected birds will remain carriers for life, all new birds introduced into an infected flock should be vaccinated. Another alternative is to depopulate the infected flock, perform a complete cleanout with sanitation and repopulate with vaccinated birds only.

Avian Pox—There are three (3) strains of virus that can cause this disease: 1) fowl pox virus, 2) pigeon pox virus, and 3) canary pox virus. The diseases is commonly referred to as fowl pox no matter the causative agent. All three types of the virus can infect bird species other than the ones that they are named for.

Symptoms/Transmission: There are two types of this disease: 1) **dry pox** and 2) **wet pox**. The dry pox version of the disease will exhibit small, white foci to wart-like nodules on the skin, mainly on the comb, wattles, and ear lobes. These nodules will slough off and form scabs before healing. Wet pox lesions include ulcers in the oral cavity and in the respiratory tract. Overall, the disease will usually run its course in 3 to 5 weeks. Young birds will exhibit decreased levels of development during the disease while layers will see a drop in egg production. All diseased birds, no matter their age, will exhibit decreased appetite because of the difficulty in eating and breathing. The disease can be spread by both direct and indirect contact. The sloughed off scabs will typically contain the virus and it is viable for several months. Mosquitoes are also a vector for the pox viruses. Birds that recover from the disease do not continue to carry the virus.

Prevention/Control: There is no treatment available for birds infected with avian pox. However, the disease is usually slow to spread so vaccination of an infected flock can stop an outbreak. Since mosquitoes are considered to be a vector for this disease, mosquito control will aid in prevention of the disease and should be part of a good management plan for the flock.

Please note that not all diseases that can infect backyard flocks have been discussed. Vaccination for certain diseases should be part of your management plan, along with sanitation and good husbandry practices.

Additional information on poultry diseases can be found here and here.

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