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G94-1226 Blackhead Disease in Turkeys

Sheila Scheideler

University of Nebraska--Lincoln, spurdum2@unl.edu

Eva Wallner-Pendleton

University of Nebraska--Lincoln

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Blackhead Disease in Turkeys

Blackhead disease is a common and serious illness in turkeys that no available medication can treat. This NebGuide discusses the organisms that cause the disease and prevention strategies.

Eva Wallner-Pendleton, Extension and Diagnostic Poultry Veterinarian
Sheila Scheideler, Extension Poultry Specialist

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Raising small turkey home flocks in the early summer and late fall is extremely popular in Nebraska. Most of these birds are destined for slaughter just before Thanksgiving and are sold for the holiday market. Extension educators and specialists receive many calls concerning sick turkeys in the late summer and early fall months from flock owners concerned about whether their turkeys have Blackhead. Most poultry flock owners have heard of this disease but few really understand the cause or how the illness is spread.

Blackhead, also known as Histomoniasis, is caused by a microscopic, single-celled organism *Histomonas meleagridis*. Although best known as a disease of turkeys, the organism infects other birds as well, including peafowl, pheasants, quail, grouse, partridge, and chickens. Of these, the chicken is most resistant to illness from Blackhead. Hence, chickens can be carriers and can contaminate a premise, but they usually do not get sick. The turkey is probably the most susceptible and becomes severely ill if infected. This is why it is best to raise chickens and turkeys in separate facilities and in separate pens.

The Blackhead organism can infect a host in several ways. Birds that are carriers or sick from Blackhead shed the organism in their droppings. Other birds can accidentally ingest the organism when scratching through contaminated litter, feed, or water.

Outside the host, in its free and unprotected state, this delicate organism does not survive very long. However, there are two other ways the organism can assure its survival, even in severe hot or cold weather. The organism can be ingested by the common earthworm and survive a long time inside them. In periods of especially wet weather, when earth worms are abundant on the ground surface, birds can become infected when eating contaminated worms.

Blackhead organisms can also infect a common internal parasite, called the cecal worm. This worm is very small and rarely causes much harm to the host. Mature cecal worms produce many microscopic

eggs which are shed in the droppings. The Blackhead organism can penetrate and live inside the cecal worm egg. Birds picking up the infected egg also infect themselves with Blackhead. As with many parasite eggs, the cecal worm egg is highly resistant to heat, cold, and most disinfectants. Therefore, a contaminated premise remains contaminated for a long time.

Symptoms of Infected Birds

The signs associated with this illness are not specific. Affected birds develop droppings which often have a yellow color. The skin and muscles may become dark red, hence the term "Blackhead" given to the disease. This, however, is not specific for Blackhead since it may be seen with a wide variety of diseases in birds. The disease develops slowly, with birds often losing much of their breast muscle because they are too sick to eat. The organism causes much damage to the bird's lower intestine and the liver. Sometimes the disease can be diagnosed during processing or slaughter by a trained individual, but frequently, a necropsy by a veterinarian trained in bird diseases is needed. Getting the correct diagnosis is extremely important because several diseases can mimic Blackhead and treatments and prevention of each disease are different.

Prevention is the Best Treatment

Until recently, an effective water medication was available to treat Blackhead in birds. This medication was pulled off the market because of possible health risks to people. A feed additive called nitarsone, known by the trade name of Histostat-50 is still available as a preventative. It is manufactured by A.L. Laboratories, headquartered in Fort Lee, New Jersey. This additive is fed to turkeys, up to five days before market. This is a preventative medication and is not effective in treating flocks already showing clinical illness.

Unfortunately, very few feed mills or feed suppliers in Nebraska carry turkey feed with the additive. Two local suppliers, Five Star Feed in David City and Norfolk Hatchery in Norfolk, can usually supply turkey feed with this additive. There may be others, as well. Check with your local feed supplier.

There is a word of caution concerning Histostat in turkey feeds. This additive is extremely toxic to waterfowl (ducks, geese, etc.). They should not be allowed access to the medicated feed.

Other preventative management measures include regular manure removal from the turkey pens and worming the birds to eliminate the cecal worm load. Alternating pastures and raising birds in areas where birds had not previously been kept is also helpful. Lastly, it is preferable to raise bird species separately.

For more information, please contact Dr. Eva Wallner-Pendleton at 402/472-1434 or Dr. Sheila Scheideler at 402/472-6541.

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