

# Recognizing and Preventing Avian Pox in Small Flocks

Avian Pox, sometimes referred to as Fowl Pox, often causes problems in exhibition, backyard and hobby poultry flocks. The pox virus is also capable of causing disease in almost any avian species including pigeons, wild birds, turkeys, ducks, quail, pheasant and all breeds of chickens. Infected birds exhibit poor growth, reduced egg production and weight loss. Pox can cause death in severely infected birds. While this disease was first reported in birds as early as the 17th century, it still remains a problem in many parts of the world today.

## What is Avian Pox?

Avian pox is a viral disease that can occur in two forms: dry or skin (cutaneous) and the wet (or diphtheritic) form. Mortality is usually low (1%-5%), however, severe cases of wet pox can result in much higher mortality.

The dry form of avian pox causes lesions (Figures 1-4) on areas of the head, legs and body that contain no feathers. These lesions start as small blisters that become yellowish as they grow. The lesions then progress into wart-like nodules and later become dry scabs. At times, generalized lesions on the feathered skin may also be seen.

Wet pox causes throat and upper respiratory tract lesions (Figure 5) that usually begin as white

nodules and may become large patches that appear as yellow cheesy masses or growths. These growths can become severe enough to interfere with eating, drinking and breathing. The wet form of pox, when severe enough, is likely to cause death in infected avian species. Both forms of the disease can be observed in a flock, and occasionally a bird can be infected with both forms. Birds infected with either form of the disease will usually have a depressed appetite, some weight loss, and a drop in egg

**Figure 1. Pox lesions on a turkey become yellowish as they grow**



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production. Infected young birds may have slower growth and poor feed conversion. Birds infected with the dry form usually recover in 2 to 4 weeks,

but it can take several weeks to months for a flock to recover since the disease can spread slowly through the flock.

**Figure 2. Dry form of avian pox causes lesions on areas of head, legs and body that contain no feathers**



### **Avian Pox Usually Spreads Slowly**

The spread of Avian Pox throughout a flock is usually slow. The disease is spread by mosquitoes and scabs from infected birds. Mosquitoes (*Culex* and *Aedes* species) can harbor the virus for more than a month after feeding on an infected bird. Following feeding on infected birds, the mosquito is capable of mechanically transmitting the virus to every uninfected bird on which she feeds.

The avian pox virus is highly resistant in the dry scabs on recovering birds and may be easily transmitted to uninfected birds. Uninfected birds can be infected from the scabs by the virus entering through skin abrasions and cuts. The virus is present in the dried scabs, feathers, and skin dander which can be carried on the hands and clothing of individuals to non-infected birds. Birds of all ages are susceptible to pox, and the disease may occur at

any time of the year. However, fully recovered birds do not remain carriers.

### **Controlling Avian Pox**

Since no satisfactory treatment exists for avian pox, it is best to prevent the disease by vaccination. Several pox vaccines are available for use in backyard and commercial flocks. A wing-stick method of vaccination using a two-needle applicator usually is used in chickens and pigeons. Turkeys are most often vaccinated by thigh-stick; this method may also be used in pigeons. Birds can be vaccinated for pox at any age if necessary; however, the recommendations listed on the vaccine should be followed as to age and route of administration. Vaccinated birds should be examined for “vaccination takes” 7 to 10 days after the vaccine is administered. A vaccination take is an area of swelling and scab formation at the injection site. Satisfactory vaccination in a flock is indicated by a large number of birds having vaccination takes.

**Figure 3. Birds infected with Avian Pox will usually have depressed appetite, weight loss and drop in egg production**



The vaccine is available from numerous companies listed on the Internet. A vaccination program that routinely includes pox will help prevent the

problems associated with disease and make the hobby of keeping backyard flocks more enjoyable. Additionally, as avian pox is a slow-spreading disease, vaccination can be useful in limiting the spread of the infection if it is administered to birds when 20% or less have lesions.

**Is Avian Pox a Risk for Humans?**

There is no risk to humans or other mammals from the avian pox virus.

**If You Think Your Flock has Avian Pox...**

Call the Maryland Department of Agriculture (MDA) at [410-841-5810](tel:410-841-5810) for assistance, risk assessment or possible testing. If you have an unusually high level of mortality on your farm, those dead birds or live birds that show the same symptoms, may be submitted for necropsy to a regional MDA Animal Health Diagnostic Laboratory. Call ahead for submission requirements and further instructions at the numbers provided below:

**MDA Regional Animal Health Office/Diagnostic Laboratories**

<u>Region</u>	<u>Facility</u>	<u>Phone</u>
Western Shore	Frederick Lab	301-600-1548
Eastern Shore	Salisbury Lab	410-543-6610

**Figure 4. Pox lesions can occur on feathered areas of a chicken**



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**Figure 5. Wet pox causes throat and upper respiratory tract lesions**



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