Fowl Pox in Backyard Flocks

In recent years, there has been a huge upsurge of interest in maintaining small backyard poultry flocks across Mississippi. These birds may be kept for hobby, entertainment, show, 4-H/FFA youth projects, food, or other reasons. Even though flock owners diligently care for and have much interest in keeping their birds safe, the health status of the flock is often overlooked. Several diseases that can easily be vaccinated against need to be considered in any flock health management program. One such disease is fowl pox.

Fowl Pox

Fowl pox, also known as avian pox, can often cause problems in backyard, hobby, and show birds. The pox virus has the ability to cause disease in almost any avian species, including wild birds, turkeys, pigeons, pheasants, quail, ducks, and all breeds of chickens. Fowl pox can cause death in severely infected birds, but, more often, the disease causes weight loss, poor growth, and reduced egg production. The disease was first reported in birds as early as the 17th century and remains a problem in many parts of the world today.

Fowl pox is a slow-spreading viral disease of chickens characterized by lesions on the unfeathered skin areas (dry pox) (Figure 1) and/or on the mucous membranes of the oral cavity, larynx, and trachea (wet pox) (Figure 2). Mortality is usually low (1 to 5 percent); however, depending on the severity, cases of wet pox can have much higher mortality rates.

The disease is caused by the avian pox virus, which is classified as at least three different strains or types, including the fowl pox virus (FPV) that affects chickens and turkeys; pigeon pox virus (PPV) that occurs in pigeons; and canary pox virus (CPV) that affects many different species of wild birds. Each viral strain can cause disease only within certain species of birds. For example, chickens are not affected by PPV and wild birds are not affected by FPV.

Two Forms: Wet and Dry

Two different forms of fowl pox can occur in chickens—classified as a “dry” (skin or cutaneous) form and a “wet” (diphtheritic) form. The cutaneous or dry form is the most common. It causes lesions on areas of the head, legs, and body that do not have feathers. The lesions begin as small blisters and then progress into wart-like growths on the skin of any unfeathered area (face, comb, wattles, eyelids, feet, and legs). In the beginning, these wart-like growths appear as small, yellow bumps; they gradually increase in size over time. Pox lesions will often change

![Figure 1](image1.png) Figure 1. The dry form of fowl pox causes lesions on unfeathered parts of the body.

![Figure 2](image2.png) Figure 2. The wet form of fowl pox causes lesions in the throat and upper respiratory tract.

Photos by permission and courtesy of American Association of Avian Pathologists (AAAP).
color as they grow larger, eventually turning into dark brown, roughened, dry scabs. The scabs usually last about 2 to 4 weeks and then loosen and drop off on their own. The skin underneath looks like smooth scar tissue. The scabs that drop off contain the pox-virus and are highly infectious to other birds in the flock.

Cases near the eye can be especially bothersome. When pox lesions develop near the chicken’s eyes, early signs may be mild redness and irritation; this quickly progresses to swelling of the eyelid and ulcerative lesions near the edges of the eyelid. Often, as a result of discharge or scab formation, the eyelids may become sealed shut until the scab falls off.

**Wet pox is usually associated with cases of higher mortality.** Wet pox causes throat and respiratory tract lesions that often begin as small, white nodules that may develop into large patches that look like yellow, cheesy masses or growths. These growths may become severe enough to interfere with eating, drinking, and breathing. Severe cases of wet pox will likely result in death of the affected birds. A flock can be infected with both forms of the disease at the same time, and, on occasion, an individual bird may be infected with both forms. Infection with either form will generally cause depressed appetite, weight loss, and a drop in egg production. Individual birds infected with dry pox usually recover in 2 to 4 weeks, but it may take several weeks or months for the entire flock to recover because the fowl pox virus spreads slowly throughout the flock.

**Transmission**

Fowl pox is transmitted to flocks primarily through biting mosquitoes (Culex and Aedes species), or new birds introduced to your flock may be latent carriers of the disease. A mosquito that has fed on an infected bird is able to keep the virus in her salivary glands for up to 8 weeks. When she bites another chicken, she can transmit the pox-virus to that bird. In fact, after feeding on an infected bird, the mosquito can transmit the virus to every uninfected bird on which she feeds.

Once one flock member has become infected, that chicken is capable of transmitting the virus to other flock members through scratches or broken skin and mucous membranes (generally associated with fighting, pecking, or scratching each other) or dried pox scabs. The fowl pox

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