

Fowl Pox in the Fraser Valley

Introduction

Fowl Pox is a virus disease of poultry that occurs only occasionally in the Fraser Valley of British Columbia, Canada. Because of its sporadic nature and ability to easily be carried from flock to flock, it is important that producers remain vigilant in watching for its re-emergence.

Fowl Pox is generally seen in layer birds, but can affect turkeys, breeders, and, in severe circumstances, broilers. The pathogenicity of Poxviruses tends to vary with the species of bird infected. For example, the virus isolated from a pigeon may not seriously affect a chicken. Nevertheless, viruses from wild birds can be a potential source of infection for commercial poultry flocks.

Fowl pox is a slow-moving disease that tends to roll through a flock as the virus moves from bird to bird. The virus is transmitted from one bird to the next directly, through pecking or other physical contact. It can, however, also be carried indirectly by a variety of vectors, including flies and mosquitoes, equipment contaminated from an infected flock, or people who visit a farm after being on a contaminated premise.

Poxvirus is very hardy, and can survive exposure to many chemicals. It is known to survive in dried scabs for months or even years. Because of this trait, carryover from one flock to the next is an important means of transmission.

The Disease

There are two common forms of Fowl Pox, referred to as the "dry" and "wet" forms. When the virus is transmitted from one bird to another through direct contact, such as pecking, or through mosquito bites, the resulting clinical expression is the dry form of the disease. In the dry form, Fowl Pox is characterized by the presence of specific lesions on the skin. These vary from raised, reddened lesions through a pustular form to a dry, scabbed lesion. The clinical effect on the flock with this form of the disease is minimal, but feed consumption and production can be slightly lowered.

When the virus is transmitted by flies, which are attracted to wet surfaces such as the eye, or by aerosol, the wet form can result. In the wet form, the lesions are seen on mucosal surfaces, such as the conjunctiva of the eye, nasal passages, oral and pharyngeal mucosal, and the mucosal of the trachea. The wet form is more severe clinically, causing interference with eating or breathing and resulting in death due to asphyxiation when the trachea is affected.

Treatment

There is no specific treatment for Fowl Pox. Affected birds should be culled if they are ill. If caught early in its course, the rest of the flock can be vaccinated in the face of the disease. Because Fowl Pox slowly rolls through the flock, vaccination will provide immunity for many birds before the virus reaches them. It is important, however, that the diagnosis be confirmed through laboratory tests such as histology or virus identification, before vaccination is done.

The best "treatment" for Fowl Pox, however, is avoidance.

Prevention of Fowl Pox

Biosecurity is by far the best method for avoiding Fowl Pox in a flock. By strictly following various biosecurity rules, the probability of infection of a flock with this virus will be significantly reduced. The following points present some steps that can be taken to keep the Poxvirus out:

- Do not accept birds that have been raised on another farm.
- Do not allow any visitors into the barn. If it is necessary for visitors to enter a barn, make sure that they wash their hands thoroughly with a disinfecting soap and wear clean coveralls, disposable boots, and a disposable head cover.
- If "authorized" personnel have infected and non-infected flocks that they must attend to, they should start the day working with the non-infected flocks and then move to the infected flocks. A complete change of clothing should be worn between barns. Workers should shower before re-entering the non-infected flock.
- Maintain strict insect control programs.
- Make sure all openings are screened to prevent entry of wild birds. If possible, use a fine mesh to prevent entry of flying insects.
- Any vehicles that have been on other farms should be kept as far away as possible from the barns.

If a flock is at high risk of being infected, vaccination can be done. This step should be taken only if there is an infected barn on the farm, or a flock has been infected, or a neighbouring farm has been diagnosed with Fowl Pox.

Conclusion

Fowl Pox is an important disease of poultry that appears only sporadically in the Fraser Valley. All producers should be vigilant for this disease, and be quick to take appropriate steps if it is suspected. A veterinarian should examine the flock and appropriate samples should be taken. If Fowl Pox is diagnosed, an action plan should be made with the advice of the attending veterinarian, and the steps carefully followed.

Acknowledgements:

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