Fowl Pox in Poultry

Avian Pox is a common viral disease of poultry, as well as in pet and wild birds. Avian pox viruses include: fowl pox, turkey pox, pigeon pox, quail pox, peacock pox, crow pox, starling pox, canary pox, junco pox, mynah pox, psittacines pox, penguin pox, alala pox, apapane pox, and condor pox.

In poultry, Pox virus is a slow-moving disease through a flock and is primarily spread by infected biting insects (such as mosquitoes, midges, etc.), but can also be spread between birds through fighting or pecking each other through the Pox virus-loaded scabs located on their face. Mild Pox virus strains will cause the “dry” cutaneous form (see skin scabs on the head and combs). More virulent Pox virus strains can cause both “dry” cutaneous and “wet” diphtheritic lesions in the mouth, esophagus, and trachea. Wet Pox will cause a higher death rate in the flock, since the virus lesions can build up and block off the trachea causing the birds to suffocate.

There is no treatment for Pox virus infection since it is a virus. You can only prevent it with vaccination. The birds may also get secondary bacterial infections (pus inside their eyelids and sinuses). Since Pox virus is a “slow-moving” disease, you can vaccinate the flock in the face of an outbreak to try to protect those birds that had not yet been exposed to the field virus. As with any vaccine, follow the label instructions completely – you have to use the vaccine within 1-2 hours of opening the vial, vaccinate all the birds, and throw away any unused amount of vaccine – you cannot save any unused vaccine in the fridge for later use. Vaccinate the birds who are not showing the Pox infection (scabs), since the infected birds with the skin lesions are already naturally inoculated and you don’t want to double dose the bird with wild virus and vaccine virus. Poultry vaccinated with any type of live virus vaccine should not attend shows, fairs or other places where poultry co-mingle together until at least 1 month after the birds had been vaccinated.

Fowl Pox vaccination in chickens: Fowl Pox vaccine is applied by the wing web method (using a small forked applicator) to 4-week old chickens and to pullets about 1-2 months prior to egg production, and then boosted annually prior to egg laying the next year. There is a young bird fowl Pox vaccine that can be given to chicks. Young birds in heavily infected Pox areas may need an additional booster in 8 weeks because of interference from maternal antibodies that might be present up to 3 weeks of age in chicks if the hen had been vaccinated with Pox.

Fowl Pox vaccination in turkeys: give vaccine initially to poults at 2-3 months of age. Since the wing web vaccination may create “dry” cutaneous pox lesions on the turkey’s head (because turkeys sleep with their head under their wing) you can give the vaccine midway on the thigh. For turkeys breeders, revaccinate the birds 1-2 months prior to egg laying and boost annually prior to egg laying and when the biting insects come out.

For quail, you will need to use Quail Pox vaccine, as that is the most likely strain of Pox they get. There is no cross-protection between the different Pox vaccines (Fowl Pox, Quail Pox, Pigeon Pox vaccine, etc.), so quail vaccinated with Quail Pox vaccine will not be protected against Fowl Pox field viruses. (yes it is complex!)

The Pox disease or vaccine may cause laying hens in production to stop laying eggs temporarily – they will eventually recover in 2-3 weeks.

Pox virus in poultry is not a concern for people eating the meat or eggs. Human chickenpox (cause by varicella zoster virus) is a different type of virus and not related to avian Pox viruses.

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