

Control avian pox in turkeys with good vaccination program

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Avian pox affects most species of birds including turkeys. The disease, which is viral in origin, is characterized by development of nodular lesions which can occur on the skin, in the respiratory tract and on surfaces of the mouth, esophagus and the cloaca. Lesions occurring on mucous membranes often are referred to as "wet pox," while those that occur on the skin surface are commonly called "dry pox," because they are more scab-like and crusty in appearance. Although, the disease generally is slow spreading, a large portion of a turkey flock eventually may be affected. Of the two forms, wet pox by far is the most serious, because the pox lesions can cause significant damage to the respiratory tract and block air passages. Dry pox generally is associated with lower mortality.

Transmission of the pox virus occurs when cuts and scratches on the skin or mucous membranes of the eyes or respiratory tract are contaminated by dust or dander which contain the pox virus. Unfortunately, the pox virus is highly resistant to desiccation and other environmental conditions, as well as disinfectants. The virus can remain viable for months to years, particularly if protected by dried scabs or dander, which have been shed from infected birds, as they heal. Dust particles in the air can be a significant source of the virus in turkey houses, as well as insects which serve as a mechanical vector for the virus. Biting insects such as mosquitoes are particularly important, because a mosquito seeking a blood meal can infect a significant number of subsequent birds by carrying the virus from an infected bird to birds in previously unaffected portions of the house. Farm workers also can inadvertently spread the disease on hands and clothing. Previously affected houses should be thoroughly cleaned after all litter is removed and disposed of, off the farm. Thorough washing with plenty of detergent and

high pressure washers will do much to remove remaining viruses.

Turkeys begin to show lesions within 10 days of being infected. If the disease is limited to the skin, small pimple like pustules first appear, followed by the characteristic crusty nodular scab-like lesions, which occur on un-feathered portions of the skin, such as the comb and wattles. Mortality generally remains low, if the virus is mild, although the performance of birds may be affected because sick birds frequently become anorexic. More virulent viruses produce a more significant effect on bird performance and may cause significant mortality.

Birds affected by the wet form of pox generally exhibit more severe signs. Pox lesions in the mouth, esophagus or trachea can cause mild to severe respiratory distress, depending on their size and location. Severely affected birds gasp for air and frequently die if they are excited. Birds with lesions located in the eyes may be permanently blinded.

It is important to realize that birds may be affected simultaneously by both forms of the disease. Several birds exhibiting lesions should be examined by necropsy to determine what form is present. Clothing and equipment used in the examination, (knives, scissors, etc.) should be thoroughly washed, or better yet, sterilized. The equipment never should be carried into other houses, as this might carry virus into uninfected areas of the farm.

Prevention of avian pox is particularly critical, considering the persistent nature of the virus. Although general hygiene and insect control are key components of a comprehensive prevention program, complete success is largely dependent on a good vaccination program. Keep areas around turkey houses mowed and clear of debris which might provide hiding places for mosquitoes. Do not allow water to collect in areas where mosquitoes might breed. Abatement programs may be necessary in areas with large mosquito populations.



Typical crusty, scabby nodular lesions seen on the head of a turkey infected with the avian pox virus. Notice the lesions around the mouth that can interfere with eating, causing the bird to lose weight.



Close-up of a typical dry pox lesion which generally appears 10 or more days after a turkey is infected with the avian pox virus. Such a lesion may be the result of an insect bite or a scratch contaminated by the virus.

Dust and dander which might contaminate eyes or other mucosal surfaces should be minimized with proper litter management.

There are two basic types of pox vaccines, including "fowl pox" and "pigeon pox," named according to their origin. Both types are live, commercially available vaccines which always should be used with extreme caution, because both are capable of causing outright disease, if mishandled. Manufacturers' directions should be implicitly adhered to, including timing and method of application. Typically turkeys are vaccinated with the fowl pox variety at 2-3 months of age, while breeders must be revaccinated at regular intervals to maintain full immunity. Turkeys receiving pigeon pox virus can be vaccinated at day of age, although the more typical program begins at two months of age. Re-vaccination frequently is warranted for turkeys which have received the pigeon pox vaccine.

Vaccination with either program is particularly advisable when turkeys are grown during times of insect activity. In seasonal areas, where cold weather is experienced, spring and summer vaccination may be sufficient. Warmer areas with active insects in winter months may require a year-round vaccination program. Fowl pox origin vaccines should be utilized whenever the highest level of immunity development is mandated, such as on farms which recently have experienced a pox outbreak.

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MPF Convention meets in St. Paul in March

Construction of the new convention center at RiverCentre in St. Paul, Minnesota — host to the 1998 Midwest Poultry Federation (MPF) Convention — is on time and on schedule.

The 1998 MPF Convention will be held March 18-19, with the second annual pre-show nutrition symposium planned for March 17. Along with the new convention facilities, attendees can look forward to eight top-notch educational workshops that will cover nearly all aspects of the poultry industry. MPF education program director, Sheila Scheideler, and her committees are hard at work lining up speakers for the various workshops. Included this year is a new workshop for egg processing, as well as a joint turkey growing/turkey processing workshop that will focus on the effects of HACCP.

All workshops will fit nicely into the convention center at RiverCentre. Many of the meeting rooms overlook the Mississippi River, and attendees will count themselves among the first groups to use the new facilities.

The RiverCentre is slated for completion in January 1998. When the MPF comes to town in March, the RiverCentre staff will be ready and willing to show off its gorgeous new space, said Jodi Day, MPF executive director.

Attendees also will like the affordability of St. Paul. The MPF is working with four hotels so attendees staying overnight will find just the right hotel to fit their individual needs. With plenty of restaurants and free or inexpensive attractions near RiverCentre, attendees will be able to take in the sights and sounds of St. Paul without breaking their pocketbooks.

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