

AVIAN INFLUENZA

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Avian influenza (A.I.) is a constant threat to the commercial poultry industries of Pennsylvania, the nation and the world.

A.I. in chickens, turkeys, guinea fowl, ducks, and other migratory waterfowl can range from an infection with no signs of disease to an acute fatal disease.

When one focuses on the commercial poultry industry, that segment of the U.S. industry which has historically been at greatest risk for A.I. has been the turkey industry because of the management practices followed (such as open-range rearing). In the case of commercial chicken/egg production, A.I. has only been a sporadic problem because of confinement rearing practices.

Risk of A.I. in these production sectors is directly related to opportunity for and frequency of exposure to avian influenza virus (AIV) — for example, high for chickens reared turkeys and low for chickens reared in confinement.

AI is caused by type A avian influenza viruses which have two different surface structures composed of hemagglutinin (HA) and neuraminidase (NA), of which there are 14 and 9 subtypes, respectively. In turkeys, A.I. is usually a mild to moderate respiratory or reproductive disease caused by numbers of different HA and NA subtypes, but can be considerably more severe (up to 77 percent mortality) in poults when secondary pathogens (for example, e. coli) are involved. A.I. in chickens can also be caused by several different subtypes of AIV and can be symptomless, mild, or very severe with signs ranging from decreased activity and egg production, respiratory distress, diarrhea, swelling of the face and head, nervous disorders and high mortality.

The most severe form of this disease is called "highly pathogenic A.I. (HPAI)" and has been most frequently associated with H5 and

H7 subtypes of AIV.

AIV may be transmitted directly through contact with infected birds or indirectly through contact with contaminated feed, water, equipment, cages, insects or motor vehicles. Transmission has also been associated with live bird markets, haulers, dealers, and auctions. Humans are also frequently involved in flock-to-flock spread of AIV through movement of contaminated clothing, footwear, or other items.

Only a few documented outbreaks of HPAI have occurred in poultry in the last 20 years. The 1983-84 outbreak of H5N2 in Pennsylvania was the first HPAI in the US since 1929. More recently, HPAI has been reported in Australia (1985, 1992) and England (1991). Currently HPAI outbreaks are in progress in Mexico (H5 subtype) and Pakistan (H7 subtype). Such information confirms that no area of the world is immune to this potentially devastating disease of poultry.

The outbreak of A.I. in Mexico creates some risk for the introduction of HPAI or potentially highly pathogenic A.I. into U.S./Pennsylvania poultry, but this risk is probably considerably smaller than the ongoing threat of AIV introduction presented by wild birds, particularly migratory waterfowl (an important AIV reservoir).

In general, there are four sources of primary AIV infection in domestic poultry: wild birds, other species of domestic poultry, exotic captive birds, and mammals (such as swine). Wild birds, primarily waterfowl, historically have been incriminated in A.I. outbreaks.

Surveillance of waterfowl and shorebirds has demonstrated that a large AIV reservoir does exist in these birds, as antibodies to nearly every AIV subtype have been detected. Although confined poultry are generally at less risk of AIV exposure, it can occur, especially if a pond or other waterfowl habitat is located on the premises.

Another important source of AIV infection for the commercial poultry industry is other species of domestic poultry, especially those

sold at auctions and in live bird markets. AIV exposed domestic birds or environments contaminated by them (e.g., live bird markets) are potential sources of AIV for Pennsylvania's commercial poultry industry. A good example of this threat was the documented H5N2 outbreak in commercial poultry of Pennsylvania in 1985-1986 which was traced back to a New York City live bird market.

Biosecurity and surveillance are key ingredients in the prevention and control of A.I. Good biosecurity practices should reduce the risk of A.I. or other important poultry disease introduction and spread. Although optimal biosecurity practices cannot be followed in all poultry premises, the ideal practices should include:

- "All-in, all-out" poultry management.
- Removal of all organic material followed by the cleaning and disinfection of houses between flocks.
- Prevent poultry from coming in contact with stored equipment or trash.
- Keep other animals, such as pets, wildlife and livestock, out of contact with poultry.
- Maintain locks on poultry houses and gates on farm access roads.
- Clean and disinfect motor vehicles prior to coming to the premises.
- Keep human traffic to a minimum and permit only necessary personnel into poultry houses.
- Require that clean coveralls and disinfected boots be worn by all personnel entering poultry houses.
- Require persons having recent contact with other poultry to shower before entering your poultry houses.
- Thoroughly clean and disinfect any equipment used within a poultry house.

Wild birds, and domestic birds in live bird markets, are ongoing sources of AIV and a potential threat of HPAI for Pennsylvania's large commercial poultry industry. Such a threat demands a constant surveillance program for this important industry.

Pennsylvania's A.I. surveillance program is one of the best in the U.S. and insures poultry producers that A.I. is not circulating undetected in their flocks. Maxi-

mum participation in the program is important if maximum reliability/benefit is to be realized. Therefore, it is very important that the industry submit sick birds to their regional state diagnostic laboratory in a timely fashion and that samples for testing be forwarded to the appropriate laboratories on a regular basis.

Further, the Pennsylvania

Department of Agriculture (PDA) asks that producers of broilers, turkeys, and roasters submit 10 blood samples per flock for AIV antibody testing. Ten eggs per month per house are recommended for commercial layers and mature breeder flocks. PDA also monitors and samples auctions, poultry shows, and live bird markets in Philadelphia for the presence of AIV.

Iowa, Neb. Youth Exhibit Limousin Champions

ENGLEWOOD, Colo. — Youth from seven Midwestern states made for stiff competition at the 1995 Heartland Regional Junior Limousin Show in Council Bluffs, Iowa on June 1-3.

A 984-pound Limousin steer exhibited by Andrea Luedtke, Wisner, Neb. was named grand champion steer by judge Neal Thompson of Springfield, Mo. Reserve champion steer honors went to a 996-pound steer exhibited by Adam Nielson, Arlington, S.D.

Debra Vorthmann, McClelland, Iowa joined the winner's circle with the grand champion bred and owned bull, VORD Donitello 435D. The 9/1/94 bull is sired by YKCC Top Cop 232B.

SLVL Angel Cookie 140D, exhibited by Jamie Straight, Logan, Iowa, won grand champion female after topping Division III. The 1/23/94 female is a daughter of Wulf's Quarterback 4222B. Also from Division III, taking reserve champion female honors was SLVL Senorita, a 2/6/94 daughter of Polled Sonic exhibited by Karen Harrod, Flat Rock, Ind.

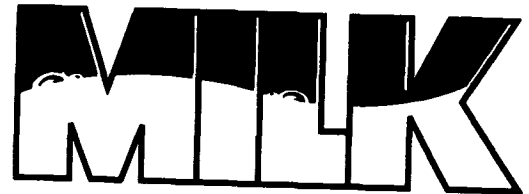
In Division I, Debra Vorthmann exhibited VORD Daniella 425D

to championship honors. The 4/5/94 female is a daughter of YKCC Top Cop 232B. Reserve champion honors in Division I went to C L Gretchen, a 9/12/94 daughter of Wulf's Rambler 8400X exhibited by Billy Biscoe, Cottage Grove, Minn.

Erica Vorthmann, McClelland, Iowa led out the top in Division II with VORT Delight 417D, a 3/21/94 daughter of LKCC Tomahawk's Touchdown. For reserve champion in Division II, judge Thompson selected ROMN Dominique 1D, a 3/28/94 daughter of YKCC Medallion 342Y exhibited by Adam Nielson.

In the showmanship competition, senior champion honors went to Debra Vorthmann while junior champion honors went to Andrea Luedtke.

Outside the show arena, youth participated in public speaking, extemporaneous speaking and sales talk contests to accumulate points, in addition to points earned for showing, for overall sweepstakes awards. Topping the sweepstakes divisions were junior - Megan Rolf, Leroy, Kan.; intermediate - Jamie Straight; and senior - Debra Vorthmann.



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