

More Testing For Avian Influenza Needed, Says Scientist

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LANCASTER (Lancaster Co.)
— Poultry producers are not being as aggressive in testing birds in their flocks for possible avian influenza (AI) virus infection as they should be, according to Dr. Patricia Dunn, of Penn State's veterinary science department, on Thursday at the Lancaster County Poultry Progress Day.

Dunn told the 125 poultry producers and industry representatives who attended the meeting that back in 1985-1986, right after the last severe outbreak of avian influenza in Pennsylvania, the labs were testing more than 15,000 samples a month. Although she made clear that the state is not experiencing an outbreak of clinical avian influenza, still, the numbers being tested are only half of what they were in 1985-1986.

Only one live bird market has tested positive in a virus isolation of the type H5N2, and that flock has been depopulated. Live bird markets pose the greatest risk of infection and spread of the virus, according to Dunn, and of the isolates found, there is no evidence of highly pathogenic strains of the virus in any other flock in the state.

But producers should be concerned and follow the steps outlined by Dunn to prevent their own herds from becoming infected with the virus, which is dangerous because it can easily transform from a harmless to a highly pathogenic form.

Producers should remain on the offensive, said Dunn, to prevent what happened in the state in 1983-1984, when piles of dead birds were the result of a massive infection on many flocks. The more producers know, according to Dunn, the more they can do to prevent possible disease outbreaks in flocks.

The laboratories doing the testing are focusing on the Type A avian influenza virus, which has two projections on the surface of it, H and N. There are 14 types of H and nine types of N that exist, she said. But it is the combination — H5N2 — which caused the problems in the 1983-1984 and 1985-1986 outbreaks.

The highly pathogenic avian influenza (HPAI) type can cause the most damage. It can readily change (mutate) unpredictably. Literally, with "a snap of the finger," Dunn said, it can change to one that is benign, which has no affect on the bird, to one that is deadly.

According to Dunn, of particular concern is the way the virus can spread to birds. The most common way is through wild waterfowl near enough to flocks that are exposed. For the virus that struck in 1983-1984, there was a high correlation between the virus in turkeys on the open range and the closeness to waterfowl and their breeding grounds and migration routes.

Dunn pointed out several ways to identify infected birds. Those with the severe infection have swelling or edema of the face and a darkening of the comb. The birds are lethargic, and the feet swell. There may also be signs of severe nervousness. Eventually, the circulatory system collapses, and the bird dies.

The virus, once shed, can exist in fecal material or any organic matter for days at a time. Dunn said that producers should be concerned that the virus contained in 1 gram of manure (which will fit on the surface of a dime) can infect one million chickens.

There are two methods used to detect infection, according to Dunn. One is serology, or detecting the presence of antibodies as a result of the infection (this is an indirect sign of possible presence of the virus). The other is virus isolate, which provides direct proof the virus is present. The virus isolate uses a blood sample and an AGP test that screens any Type A AI virus. Also, the virus can be recovered from fecal material, litter, and feed material.

Producers should note that the seropositive H5N2 evidence has been limited to less than 10 premises in this region, and those premises are under quarantine. The AI virus has been detected in five New Jersey live bird markets, eight New York live bird markets, and one New Jersey farm. (Dunn noted that one farm was tested ser-

opositive but no virus has been isolated to date. Often times a bird can test positive but has somehow rid itself of evidence of the virus.)

One procedure available for producers, according to the Penn State scientist (who is not affiliated with any regulatory agency), is to contact the Pa. Dept. of Agriculture's Bureau of Animal Industry at (717) 783-9550 for questions on what they should do if they suspect possible infection of the flock. But first, broiler, layer, or turkey producers should consider the following ways to stop the potential spread of the virus:

- Anything that moves, including equipment, vehicles, debris, flies, rodents, or anything that can be carried on egg flats, boxes, dead birds, or other items, including people and their clothes, can carry the virus.

- Eliminate all contact with waterfowl. Also, in a diversified poultry area, limit contact and movement with different bird species (turkeys with broilers, layers with turkeys, etc.)

- Discontinue contact with live bird markets and backyard flocks. Avoid contact with all wild birds.

- Continue to monitor any evidence of the virus in your own flock by having tests sent to the laboratory regularly.

- Practice good biosecurity by controlling the movement of people, poultry, and equipment. Sanitize properly, wear clean clothes and boots, and make sure all equipment and clothing is cleaned and sanitized properly. Scrub all material with disinfectant before using again.

- Continue aggressive monitoring of the flock through the AI surveillance program over the long term. Cooperate with all segments of the industry.

Hot weather tips

While producers may not be thinking about hot weather right now, it is still a good time to be preparing for hot weather management tips for poultry, according to Dr. William Weaver, poultry science department, Penn State.

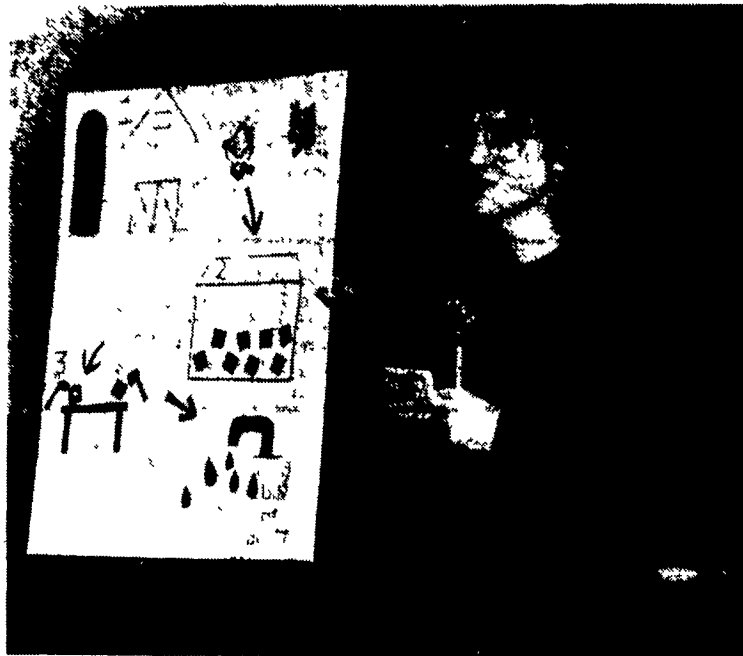
Weaver told the producers that a combination of fogging and tunnel ventilation can work together to help cool birds over the hot summer months.

Weaver examined some of the critical aspects of ensuring proper ventilation for poultry houses. He examined passive ventilation, using curtains, and fan ventilation, which works well to move air across the birds from one side of the house to the other to keep them cool.

Producers should understand that, when the temperature outside is 95 degrees, very seldom is the relative humidity (RH) more than 40 percent, according to Weaver. The higher the temperature, usually lower the RH. If the RH can be lowered, it can affect a drop in temperature enough to keep the birds from dying and keep them eating.

If using a fogger, the rule of thumb is 9 gallons per hour for every 1,000 square feet of coverage. He used an example of a house measuring 42 feet by 10 feet high. A producer would need nine 48-inch fans to maintain a CFM airflow of 400.

Weaver said that the fogger system works well for big birds as a summertime system, but not as well for little birds. Also, there will be bird migration in the house while using the system.



Marilyn Holloway, Lancaster County Outstanding 4-H member, gave her presentation on broilers and barbecues, of which she was honored as fourth place in the nation at the International Livestock Expo in Louisville, Ky. recently.

SE findings

Dr. David Kradel, USDA, presented the latest results of the findings of the salmonella enteritidis (SE) Pilot Project and lessons learned. As of January this year, some things about SE were known:

- SE does not appear to be clearly related to specific management factors.

- The environments of 58 percent of the 66 flocks enrolled have been SE positive.

- To date, about 280,000 eggs have been tested. In environmentally positive houses, positive eggs have been found in 33 percent of the flocks.

- Molting is being examined as a risk factor for egg infection in environmentally positive houses.

- Mice would appear to be a significant risk factor for introduction of SE to a flock. Mice have been SE positive in 78 percent of environmentally positive and 29 percent of environmentally negative houses. Controlling mice is vital to help eliminate SE from the flock.

- The source of SE for a flock may be impossible to determine.

Kradel outlined the future projections for the pilot project, which included a need for a program that would service the needs of a larger number of flocks.

Three labs

Dr. Cy Card, Pennsylvania Animal Health Commission, spoke about the efforts to form an accredited system utilizing the three laboratories in the state — Summerdale, New Bolton Center, and Penn State — and to link them together for common technical and testing support.



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Dr. Mike Hulet, poultry science department at Virginia Tech, explained a variety of ways to remove stress in the grower house and management techniques producers can use now to create a healthier bird.