

Bronchitis, Bacteria Linked To Poultry Deaths

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MANHEIM (Lancaster Co.) — Penn State researchers are studying the link between variant strains of infectious bronchitis and an increase in pullet deaths from E. coli infections on several large layer operations.

At a recent poultry management and health seminar at Kreider's Restaurant, Dr. Eva Wallner-Pendleton outlined the findings her colleague, Huaguang Lu, has made since the investigation began in September at Penn State's Animal Diagnostic Laboratory in University Park.

Included in the study are several out-of-state, multiple-age layer premises that were hit by the E. coli infection, which causes a "sharp increase in mortality" at 19-20 weeks of age — right around the time the birds start laying.

Infectious bronchitis virus (IBV) strains were isolated from most of the layer houses that submitted samples for testing. Although the flocks had been vaccinated for IBV as pullets, the vaccines were apparently no longer helpful in these cases.

In order to help isolate IBV from the layer houses, the researchers used "sentinel birds" (6-week-old pullets not vaccinated for IBV). To identify the IBV strains, Penn State used gene sequencing technology, which has recently become available for the first time in Pennsylvania. The results point to continuously changing IBV strains as the culprit on larger multiple-age farms,

especially in layers, according to Wallner-Pendleton.

She said that IBV causes damage to the trachea, which allows the E. coli bacteria to invade and eventually weaken and/or kill the poultry.

Infected birds suffer from septicemia, a poisonous invasion of their system by the bacteria.

The E. coli strain discovered in the dead birds is not E. coli type



Eva Wallner-Pendleton describes her research on the link between E. coli infections and the occurrence of infectious bronchitis strains on layer operations.

0157:H7, the strain that has caused a number of foodborne illnesses in recent years, Wallner-Pendleton said.

Many treatments were used to try and control the infections — with declining success, Pendleton

said.

After being housed at 16 weeks of age, affected flocks experienced a growing mortality rate, often with bird losses of 1 percent or more per week for a period of several weeks.

The result is the loss of peak egg production, plus the cost of raising pullets to laying age only to have them die.

Wallner-Pendleton said that studying the problem is "time-consuming, thoroughly laborious, and expensive," but that she and her colleagues are making progress.

"This is the first time we've taken a case like this into the detail we have," she said. "We've got some work to do, but this is more than we've ever done before."

The study indicates that IBV strains are mixing and causing new strains through mutations. In order to fight the problem, poultry producers may have to update their vaccination programs more frequently, Pendleton said. The research is still in progress, and final results will not be known until updated vaccines are tried on farms.

Dr. Greg Martin, Penn State poultry agent, urged producers who notice increased mortality or any sign of disease to submit birds to one of three laboratories in the state for testing. Labs are located in Harrisburg, State College, and at New Bolton Center, Kennett Square.

"The sooner you get on it, the better," Martin said



Japanese guests joining a recent Penn State poultry seminar are, from left, Dr. Hisaya Tobioka, Toshiaki Sumimoto, M. Niidome, Natsuki Niidome, and T. Iwanaga.

of heading off losses caused by health problems.

Call Penn State poultry extension at (814) 865-5573 for more information on poultry health issues.

About 20 people attended the poultry health seminar, which is offered on a regular basis by Penn State Cooperative Extension/Department of Poultry Science.

Five Japanese guests were on hand at the seminar — Dr. Hisaya Tobioka, professor of animal science at Kyushu Tokai University; Toshiaki Sumimoto, spokesman; and M. Niidome, Natsuki Niidome, and T. Iwanaga, representing a Georgia-based company that produces electron emitters designed to reduce stress on poultry.

Funds Available To Farmers For Grazing

CARLISLE (Cumberland Co.) — The South Central Chapter of Project Grass received a Growing Greener Grant in 2003 to assist producers in Cumberland County and surrounding counties. These funds may be used for any best management practice that implements or complements a rotation grazing system. A few of the practices that are eligible for cost share include, but are

not limited to, interior and exterior fencing, watering system, crossing, alleyway stabilization, and many more.

The funding is 75 percent cost share with a 25 percent landowner match. All livestock producers are eligible to apply for this cost share program (equine, beef, exotic, sheep, etc.) regardless of operation size.

Project Grass is a cooperative effort by local farmers and county conservation districts, with assistance from the United State Department of Agriculture agencies to improve agriculture productivity throughout Pennsylvania counties.



Project Grass Objectives are as follows:

- Enhance Pennsylvania agricultural through better utilization of grasslands.
- Improve the economic position of Pennsylvania farmers, particularly farmers working small farms.
- Increase the amount of livestock production in the Commonwealth to increase energy efficiency and develop im-

proved marketing capabilities for hay and livestock.

- Achieve better utilization of land and water resources for improved environmental quality.

For more information on Project Grass or the various cost share programs available to assist livestock producers, please contact the Cumberland County Conservation District by telephone at (717) 240-7812.

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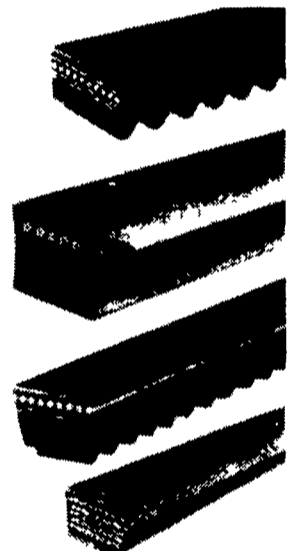
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