Georgia Poultry Laboratory Network

The Chick Papers

A Monthly Newsletter from the Georgia Poultry Laboratory

June 2016

Two Tests For One Diagnosis

When GPLN reports a flock to be positive for Mycoplasma, it is usually based on two positive tests. Here is how this works: On blood samples, our commercial test kits look for antibodies against Mycoplasma synoviae (MS) and Mycoplasma gallisepticum (MG). Because this is a very sensitive test, there are sometimes false positives (up to 10%). If there are reactors (samples over the positive cut-off), the positive samples are tested on HI (hemagglutination inhibition), which is a more specific test. The HI test helps confirm whether the ELISA reactors are real.

The cutoff titer values for HI tests are included in the table below.

	Titer Values					
Test	**0**	**20**	**40**	**80**	**160**	**320**
HI: MS	Negative	**Suspect**	**Positive**	**Positive**	**Positive**	**Positive**
HI: MG	Negative	Negative	**Suspect**	**Positive**	**Positive**	**Positive**

If the HI result is suspect or positive, it is considered the first positive test. We need a second positive test for a diagnosis.

For a confirmation of Mycoplasma positive status, the second test can be either another positive serological test on a separate sampling, or a positive PCR test. Suspect or positive flocks on serology are sampled for PCR with tracheal or choanal cleft swabs at the rate of 30 birds per house, with all houses on the farm tested. If for some reason it is not possible to swab the birds, another blood sampling can also be used as a second test.

Instead of using serology, if the birds were first swabbed for PCR (as it is when moving birds) and the PCR is positive, we confirm using either positive serology or another PCR test on a different sampling.

This system helps eliminate any errors due to sampling, transportation, labeling, submission, testing or reporting, and assures that every Mycoplasma diagnosis is accurate. It is extremely rare that we get a discrepancy between the two tests used, but it can happen. In that case, a third sampling would be used to settle the discrepancy.

In summary, the combinations of positive tests can be as follows:

First test	Second test	Mycoplasma Result
ELISA, HI +	**ELISA, HI + (separate sampling)**	**Positive flock**
ELISA, HI +	**PCR + (sampled the same day or separate days)**	**Positive flock**
PCR +	**PCR + (separate sampling)**	**Positive flock**

Tours and Visitors

- June 7: Columbia Farms intern tour and visit
- June 8: Merial tour and visit
- June 10: Professor Jessi Shrout from Brenau University
- June 23: Nick Chaplinski from SEPRL
- June 29: Mike Foutsop from USDA toured the lab
- June 30: MAM students tour and visit

Left: Dr. Louise Dufour-Zavala, Mike Foutsop and Len Chappell

Above: Dr. Luis Gomez, Dr. Louise Dufour-Zavala, Dr. Luis Gomez Sr. and Len Chappell

Model Update

The Poultry Diorama is starting to take shape. We have been in the planning stages for the last couple of months. We have started to place structures to get an idea of where and how the train tracks and roads will work with the model. Hopefully we will start to lay out track roadbed next week. The plan right now is to have a divider to separate the model and allow us more table area to tell our story. The divider will also allow us to have a backdrop on each side of the model to enhance the scenery. Come by, take a look at the model and tell us what you think!

Left: Our newest acquisition for the model: The Big Chicken. What would a poultry industry model be without this famous Marietta landmark?

Above: Consultants Dave Bennett and Bob Wheeler met with Freddie Smith to discuss the poultry industry model.