

THE CHICK PAPERS

Georgia Poultry Laboratory Network's Monthly Newsletter



Avian Influenza Testing of 750 Pooled Swabs Samples Tested in One Day: A Triumphant Story

by Len Chappell and Stephanie Forrester

Springtime and its amazing beauty of trees putting on leaves and flowers blooming is a very special time of the year, but it also is the beginning of waterfowl migration from South to North America as the northern states start to warm up. Migratory waterfowl can host and shed avian influenza (AI) that can infect and devastate commercial and backyard poultry operations. Georgia must always be vigilant with aggressive active surveillance for AI, and if a case is found, activate a very detailed and well-rehearsed State Response. Testing is a tremendous part of the overall Georgia AI Plan. GPLN and affiliated labs may be required to test hundreds of pools in a single day given the worst-case scenario of an AI detection in the northeast area of Georgia. We wanted to verify that our lab could meet that anticipated volume of pooled samples (representing thousands of birds).

In February (prior to waterfowl migration), the lab activated a mock AI event that would require testing of 750 pools of bird swabs. The Athens and Tifton Veterinary Diagnostic Laboratories also participated in the exercise with 100 samples each. GPLN successfully completed the 750 sample exercise in short of nine hours on that very busy day! Dr. Cobb monitored the testing results live using the GPLN portal. Lessons learned were recorded throughout the day, and topics were later discussed in round table discussions. Changes were made to existing protocols, and improvements were added to help us with any future processing and testing of large volume AI samples. Some changes that we made were:

- 1) Backyard AI submission forms were changed to better accommodate the species tested and number of birds in a pool of backyard flocks.
- 2) Increasing the number of thermocyclers from three to four helped to expedite the PCR amplification steps, which positively affected the throughput of sample testing. It reduced the completion time of the 750 samples by more than one hour.
- 3) We adapted the NVSL and NAHLN terminology for reporting positive and negative AI results. This gave us consistency with these federal laboratories and our lab.
- 4) Development of an excel task spreadsheet that indicated specific duties of the 6 certified PCR:AI technicians for the entire day of testing. All technicians knew in advance what their role was in each set of samples that were received in the Virology Lab that day. This strategy avoided excessive fatigue with any single manipulation.
- 5) The number of technicians needed to process samples in the Receiving Department will need to be increased from two to three technicians. This additional person could reduce the time to process 100 pooled samples by 10 – 15 minutes.

Many thanks to Dr. Cobb (GDA), Dr. Stan Crane (GDA), Dr. Susan Sanchez (Athens Diagnostic Lab), Dr. Hemant Naikare (Tifton Diagnostic Lab), and the entire GPLN Team for completion of this AI exercise with overwhelming success.

TOURS, VISITORS, & COMMUNITY OUTREACH

- MARCH 6: UNIVERSITY OF NORTH GEORGIA
- MARCH 11: CRESSWIND TRAVEL CLUB
- MARCH 11: UGA COLLEGE OF AGRICULTURE & ENVIRONMENTAL SCIENCE.
- MARCH 14: BOEHRINGER-INGELHEIM (LATIN-AMERICA)
- MARCH 24-APRIL 22: EMILY PITTMAN OF THE UNIVERSITY OF PENNSYLVANIA, SCHOOL OF VETERINARY MEDICINE

OTHER ACTIVITIES

- MARCH 27TH: 2019 DEEP SOUTH POULTRY CONFERENCE



The University of North Georgia Poultry Science class toured the lab.



A group of students from The University of Georgia College of Agriculture and Environmental Sciences toured the lab.



The Crosswind Taste of Gainesville group stopped by for a tour.



Dr. Waltman and Bethany Coggin processing the AI samples during the 750 sample exercise.



Health Wessels, Ken Semon, and Chris Dyer with Cobb-Vantress toured the lab.



Our Latin-American visitors with Boehringer-Ingelheim toured the lab.



Emily Pittman after a necropsy session.