

THE CHICK PAPERS

Georgia Poultry Laboratory Network's Monthly Newsletter



Understanding Avian Metapneumovirus (aMPV) in Poultry Flocks

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THE VIRUS

- The RNA virus is enveloped and has 4 subtypes: A, B, C and D. The subtype C has been detected in wild birds in the USA and was the causative agent of previous outbreaks in poultry over the last 2 or 3 decades in the USA.
- Survival of the virus is prolonged in cooler environmental conditions (i.e. longer viability at 4°C than at 37°C). The virus is sensitive to a wide range of disinfectants.
- Migratory wild birds and pigeons are reservoirs for the virus.

THE DISEASE

- The disease caused by Avian Metapneumovirus (aMPV) is also referred to as Turkey Rhinotracheitis (TRT), Avian Rhinotracheitis (ART) infection of turkeys, Swollen Head Syndrome (SHS) in chickens, or generally called Avian Pneumovirus (APV).
- Once exposed to the virus, birds may present clinical signs shortly after 3-5 days. The virus is reported to be rapidly cleared from the birds diminishing the capacity of detection. The virus is difficult to detect once bacterial infections settle in.
- Transmission is from contact with nasal discharge from the birds themselves or on fomites. Airborne transmission is possible. The virus is not known to be vertically transmitted.
- BREEDERS AND LAYERS: Egg production drop, elevated mortality, respiratory signs (snicks, head shaking, difficulty breathing), swollen heads, closed eyes, neurological signs such as stargazing (Figure A), head shaking, and head held down. Bacterial infection in the ears and meninges are responsible for the neurological signs.
- BROILERS: Depression, swollen heads (Figure B), decreased feed and water consumption. The affected birds have significant secondary infections due mostly to *E. coli*. Condemnations are likely to increase in broilers.
- Differential diagnoses include AI, NDV, LT, Mycoplasma, Fowl Cholera and Infectious Coryza.



BIOSECURITY & MANAGEMENT OF THE FLOCK

- It is recommended to have strengthened biosecurity measures on the farm, especially the line of separation and visitor control.
- When bringing samples to the lab, avoid bringing live birds to the lab. Instead, bring swabs, heads, or birds euthanized at the farm that are triple bagged and disinfected on the outside.
- The flock may need treatment for the control of the bacterial complications resulting from aMPV.
- Vaccines have been used to control this disease and may soon be available in the USA.

For information on aMPV sampling and diagnostics, see the full PDF on our Disease Resources webpage ([Click Here](#)).



After attending a biosecurity workshop hosted by GDA, Fort Valley State University faculty enjoyed a quick tour of the lab before heading back home.



The NPIP national office along with visitors from Iowa State visited the lab in early February.

LEFT: Chris Coles (far right) with Ceva brought his boss, Kobus Van Heerdan, to tour the lab on a recent visit.