

The information was obtained from a survey of the clinical impressions of practicing veterinarians between August 1st, 2016 and October 31st, 2016 and laboratory data from the Animal Health Laboratory, with input from poultry specialists. It is the intent of this program to advance and protect the health of poultry in Ontario.



Ontario Animal Health Network (OAHN) Poultry Expert Network Quarterly Producer Report

Quarter 4, 2016 (August 01, 2016-October 31, 2016)

Highlights

- Reovirus cases in broilers
- In-lay bacterial septicemia cases in broiler breeders
- *E. coli* infection in layers
- Turkey rhinotracheitis

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Poultry Veterinarian Survey Highlights

Broilers

- Overall in Ontario, increased numbers of **reovirus**-associated lameness cases were again reported for this quarter; however, individual veterinarians reported significantly decreased submissions to their clinics. The clinical presentation of leg deformities, especially splayed legs, slipped tendons and tenosynovitis, continued and in addition, higher numbers of birds were unsuitable for loading at the end of the grow out. Increased culling continued to be the main concern and was highly variable ranging from 2 to 12% with elevated mortality being less of an issue, with flocks composed of non-domestic chicks at higher risk. The number of reovirus-associated lameness cases started to surge in Q2 2016 (Feb 01 -Apr 30 2016) and continued to increase in Q3 and Q4, 2016 (**Appendix 1 A**).

Genotyping results indicate that since Ontario's first exposure to variant reoviruses in 2012, there has been a shift in the genetic composition of the variant reovirus strains with greater divergence and the development of five phylogenetic groups of variants (Variant A, C, D,E and those termed "classic" for they are also sufficiently different from the vaccine). Interestingly, the variant B cluster that represented almost half of viruses detected in 2012 has not been recently detected (**Appendix 1 B**). New viruses show low similarity to vaccine virus strains and historical avian reoviruses. Until the end of 2016, with financial support from OAHN/Disease Surveillance Project, any Ontario broiler samples testing positive for reovirus will continue to be automatically sent for genotyping.

- In addition to the reovirus associated lameness, other lameness including birds with twisted/splaylegs of unknown cause, VVD, or altered gait received multiple notations in the clinical impressions survey.

- As more flocks are raised without antibiotics, an increase in **ccidiosis** and **necrotic enteritis** has been noted, but should subside as producers gain experience in managing these flocks.

- **Early systemic bacterial infections** (<14 d old) with primarily *E. coli* involvement, sometimes mixed with *Staphylococcus aureus* or *Pseudomonas aeruginosa* slightly increased this quarter. The trend in the number of reported early systemic bacterial infections is cyclical; the highest proportions were seen in Q4 2015, then the proportion of infections decreased in Q2, Q3, 2016 and started to surge again in Q4 2016 (**Appendix 1 C**).

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- **Late systemic bacterial infections** continue to be stable.
- A small increase in condemnation issues was noted due to increased cellulitis, which tends to be seasonally driven and is considered to be more of an individual farm issue than an overall industry issue. Acute IBV infections were identified in multiple cases of elevated DOAs.

Broiler-Breeders

- Overall the health status of the Ontario broiler breeder flocks is stable.
- **Early systemic bacterial infections** (<14 d old) in broiler breeders was markedly reduced this quarter.
 - A small number of **lameness of bacterial origin** was reported and the most commonly isolated bacteria were: *Staph aureus*, *E. coli*, and *Enterococcus cecorum*.
 - A small increase in **in-lay bacterial septicemia** with *E. coli* involvement was noted, including a couple of cases of *E. coli* infection associated with overweight birds.
 - Four cases of cystic oviducts were identified over a one week period in September. Producers identified the birds as having waterbellies. IBV different from vaccine strains was identified in two of the cases. The IBV infection likely occurred after birds came into lay. No further cases have been identified.
 - An unusual cluster of **coccidiosis** cases in 2- 4 week old chicks in coccidial vaccinated flocks were observed on farms with no previous cocci issues. One of these flocks went on to develop intestinal intussusceptions.
 - One case of very runted birds in the first week after placement was reported. No findings to suggest a viral enteropathy were identified. A nutritional issue is suspected.
 - Only one case of **White Chick Syndrome** was noted in this quarter again, so the cases have dropped back to the normal rate following the outbreak that spanned Q3 2015 to Q1 2016 inclusive.
 - Occasional **male aggression** has been seen in a few flocks that was corrected with flock management and increased female/male ratios.

Layers

- The health status of layer flocks in Ontario is fairly stable.
- Most of the health problems of layer flocks are a result of the increased **non-cage housing**.
 - *Escherichia coli* infection is becoming an increasing problem, with the severity of clinical signs making this a serious issue. Veterinarians have very few options to treat *E. coli* once an infection occurs, and the morbidity and mortality rates sometime get extreme.
 - **Infectious Bronchitis** started to cycle in the late fall so is not being captured in the clinical impressions survey, and the disease pressure seems high. Characterization of the strains involved is underway. A meeting of the field vets involved in the broiler, breeder and layer industries has been organized for early December as the increase in IBV infections is impacting all sectors.
 - Other industry news: The **code of practice for layers** is complete and will be officially released early in 2017.

Turkeys

- Health status of the Ontario turkey flocks is stable.
- The first Canadian case of **turkey rhinotracheitis** has been diagnosed on an Ontario turkey farm. Turkey rhinotracheitis, an acute respiratory tract infection of turkeys, is caused by **avian metapneumovirus** (aMPV) Type C. In breeder turkeys, the major clinical sign is a mild respiratory infection with a drop in egg production and egg quality. This virus is also associated with swollen head syndrome in broiler chickens.
 - Infection with avian metapneumovirus type C has also been confirmed in wild

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ducks in Ontario. A PCR detection test is now available at the AHL. If flock surveys are being considered, submissions of pooled tracheal/cloacal swabs, 5 birds per pool collected from 30-60 chickens/turkeys is recommended.

- A couple of cases of *Clostridium septicum* associated **gangrenous dermatitis/cellulitis** were reported with one producer experiencing a reoccurrence on a different premise.

- **Histomoniasis/Blackhead** was diagnosed in a commercial flock. This disease is of concern to turkey and chicken layer/broiler breeder commercial and small flock producers as the treatment of choice was removed from the market several years ago. A multipronged approach to treatment is currently being practiced but is not always effective. This disease is of such concern to the international poultry industry that the American Association of Avian Pathologists organized a session to discuss Histomoniasis at their annual 2016 meeting.

- A slight increase of **late systemic bacterial infections** (>14 d old) with mostly *E. coli* involvement was reported.

- The number of **Salmonella** serotypes isolated slightly increased; the most common serotypes were: S. Heidelberg, S. Muenchen, S. Senftenberg, S. Schwarzengrund, S. Mbandaka, S. Albany. Clinical cases with S. Schwarzengrund, S. Heidelberg and S. Muenchen mixed with *E. coli* were also reported.

- A small number of **Fowl Cholera** cases were reported by individual practitioners.

- **Increased aggression and cannibalism** especially in tom turkeys was noted that may be related to increased maturity of the toms as the grow-out periods have been extended. Strategies can be employed in the barns to reduce the impact of this undesirable trait that can also be reduced through genetic selection.

Provincial Condemnation Data

- Dead-on-arrivals were considered to be reasonable over the past quarter despite the high environmental temperatures. Mutilations were higher due to marked variation in size of individual flocks. Salpingitis was also identified in broilers and this condition has historically been associated with IBV. Other common reasons for condemnation in chickens include: cellulitis, contamination, ascites, cyanosis, hepatitis, emaciation, and deep pectoral myopathy.

We thank the following poultry veterinarians who completed the veterinary survey: Dr.

Elizabeth Black, Dr. Peter Gazdzinski, Dr. Shahbaz Ul Haq, Dr. Mike Joyce, Dr. Kathleen Long, Dr. Rachel Ouckama, Dr. Mike Petrik, Dr. Cynthia Philippe, Dr. Joanne Rafuse, Dr. Fernando Salgado-Bierman, Dr. Ben Schlegel, Dr. Chanelle Taylor, Dr. Lloyd Weber, and Dr. Alex Weisz.



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Updates

- The Best Management Practice for Poultry Medicated Feed Withdrawal document has been updated. Practices outlined in this document are intended to help producers effectively meet medicated feed withdrawal requirements.
- The year-long avian pathogenic *Escherichia coli* (APEC) from Ontario broiler and broiler breeder flocks project is ongoing. Thanks to the poultry veterinarians for being so diligent in submitting samples for this project.
- The Small flock disease surveillance project is ongoing, with subsidized testing for a set of post-mortem tests on non-quota flocks. More information can be obtained at: http://www.guelphlabservices.com/AHL/Poultry_Flock_Disease.aspx
- Poultry Health Research Network lectures can be accessed on the PHRN website or on the PHRN YouTube channel: <https://www.youtube.com/user/PoultryHRN>

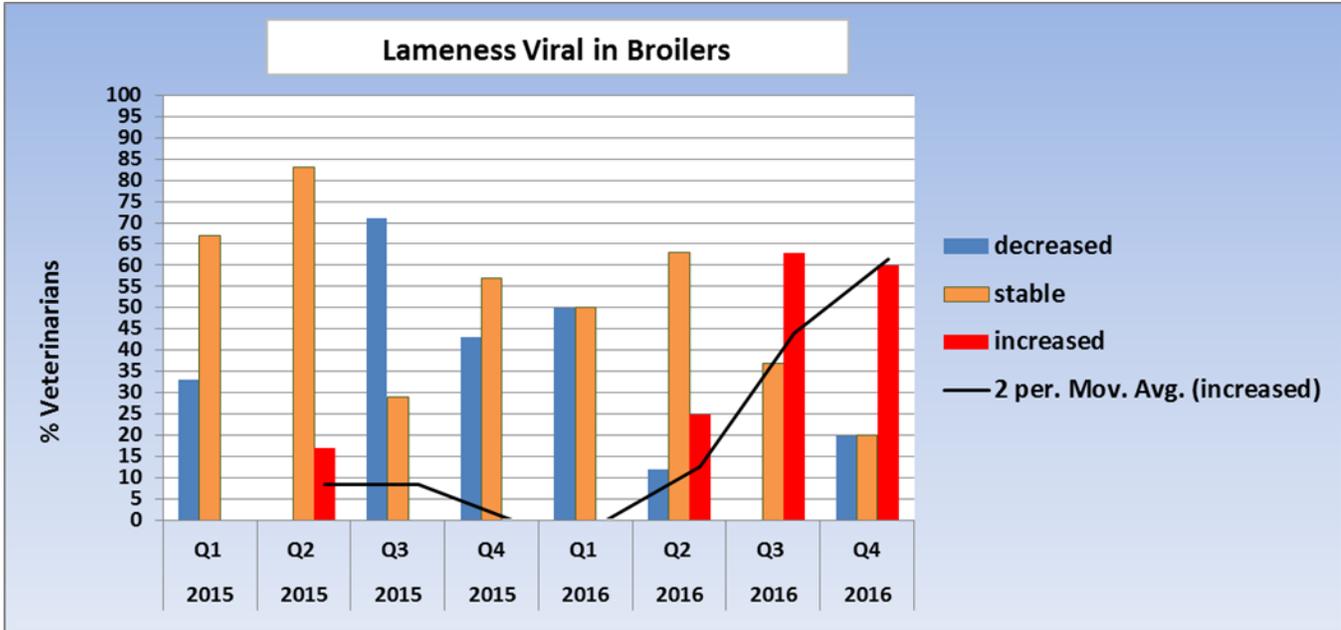
Important Poultry Numbers

OMAFRA AICC hotline		1-877-424-1300	
Animal Health Lab		519-824-4120 x 54530	ahlinfo@uoguelph.ca
Chicken Farmers of Ontario Hotline		1-877-SOS-BYRD	
Feather Board Command Centre		289-776-5984	
CFIA emergency line	Reportable diseases only	1-877-814-2342	



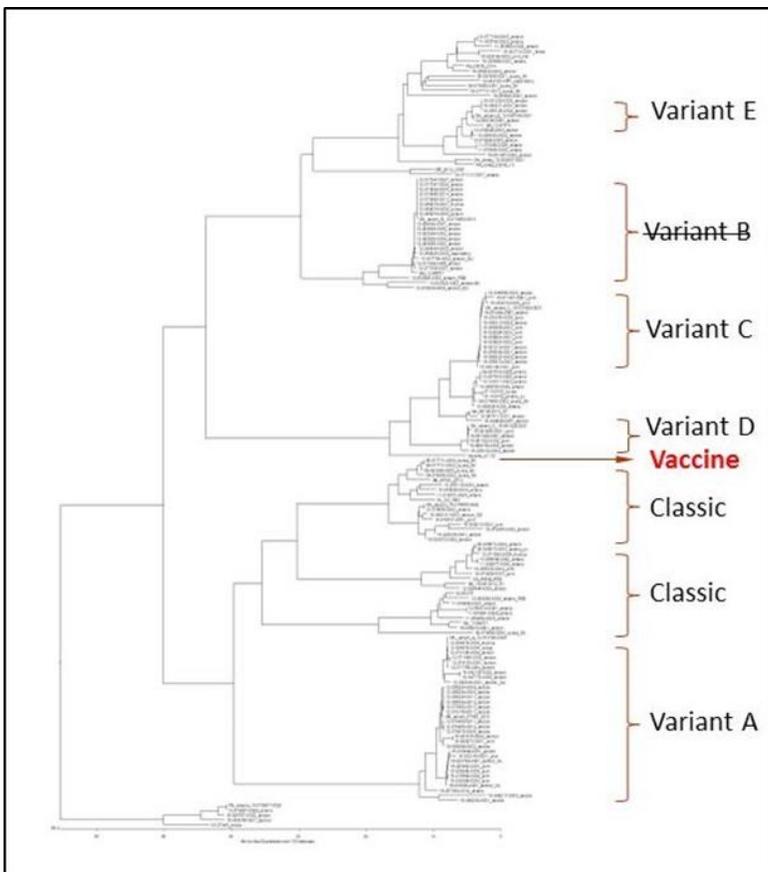
Appendix 1.

A) Trend of reoviral associated lameness in broilers between January 2015 and October 2016 based on the clinical impression survey of Ontario poultry veterinarians. ^{a)}



^{a)} The bars represent the proportion (%) of veterinarians who report the number of cases seen in a quarter as decreased, stable or increased compared to historical expected numbers of cases. The line tracks the “increased” trend over the quarters.

B) Comparison of the predominant 2012 and 2016 strains of reovirus in Ontario broilers



C) Trend of early systemic bacterial infections (<14 d old) in broilers between January 2015 and October 2016 based on the clinical impression survey of Ontario poultry veterinarians.

