

The information was obtained from a survey of the clinical impressions of practicing veterinarians between Nov 1st, 2018 to Jan 31th, 2019, 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

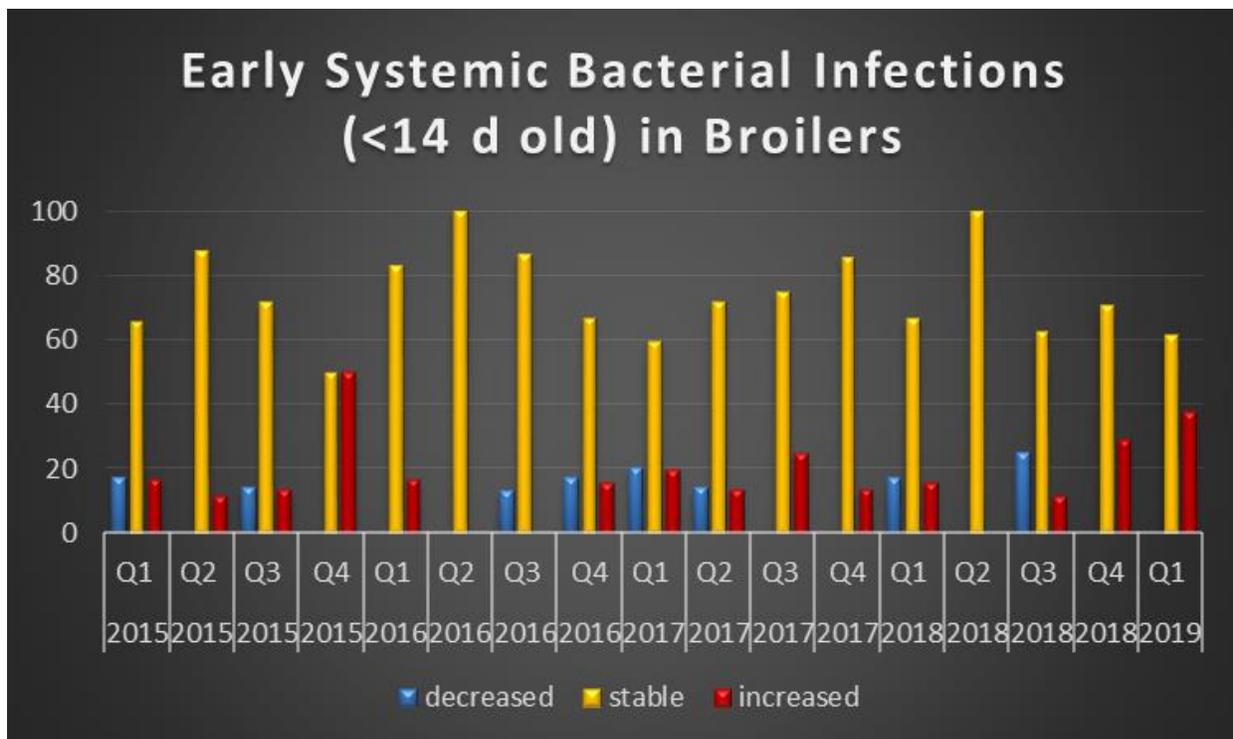
Quarter 1, 2019 (November 1st, 2018 - January 31th, 2019)

Poultry Veterinarian Survey Highlights

Broilers

- Several field practitioners reported an increase in **early systemic bacterial infections** (<14 d old) (Fig A) associated with mortality this quarter resulting from the cold and variable weather. *Escherichia coli* was commonly identified, although it was occasionally mixed with *Pseudomonas aeruginosa* or *Enterococcus cecorum*.
Other causes of early mortality included dehydration, starveout, and failure to start, particularly if of young breeder flock origin.

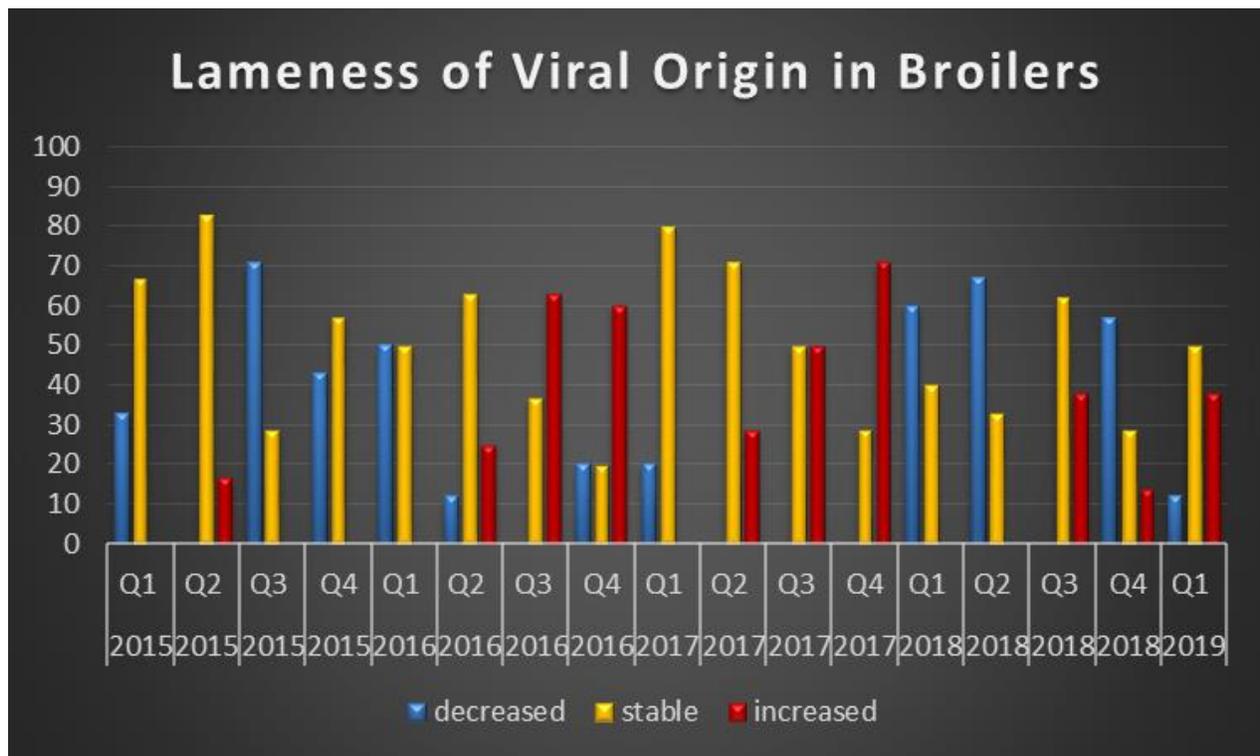
Fig A) Trend of early systemic bacterial infections in broilers between January 2015 and January 2019 based on the clinical impression survey of Ontario poultry veterinarians. ^{a)}



^{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.

- **Late systemic bacterial infections** (>14 d old) were stable. *Escherichia coli*, occasionally together with *Enterococcus cecorum* were detected in most of these cases, and a few cases had elevated infectious bronchitis virus titers.
- **Lameness of viral origin** caused by reovirus was stable to increased this quarter (Q1 2019) (Fig B) compared to the previous quarter (Q4 2018). In November and December 2018, lower numbers of cases were reported and a significant increase was observed in January, 2019. Reovirus variants A, E, D, Ontario classic, Alberta, and untypable groups were reported from the affected flocks. Vaccination of the Ontario broiler breeder flocks with autogenous reovirus variant D strain started in July 2018 and the placement of the first broiler chicks from these flocks started in early October 2018. Currently, about 25-30 % of total chick volume in Ontario originates from the vaccinated flocks.

Fig B) Trend of reoviral-associated lameness in broilers between January 2015 and January 2019 based on the clinical impression survey of Ontario poultry veterinarians

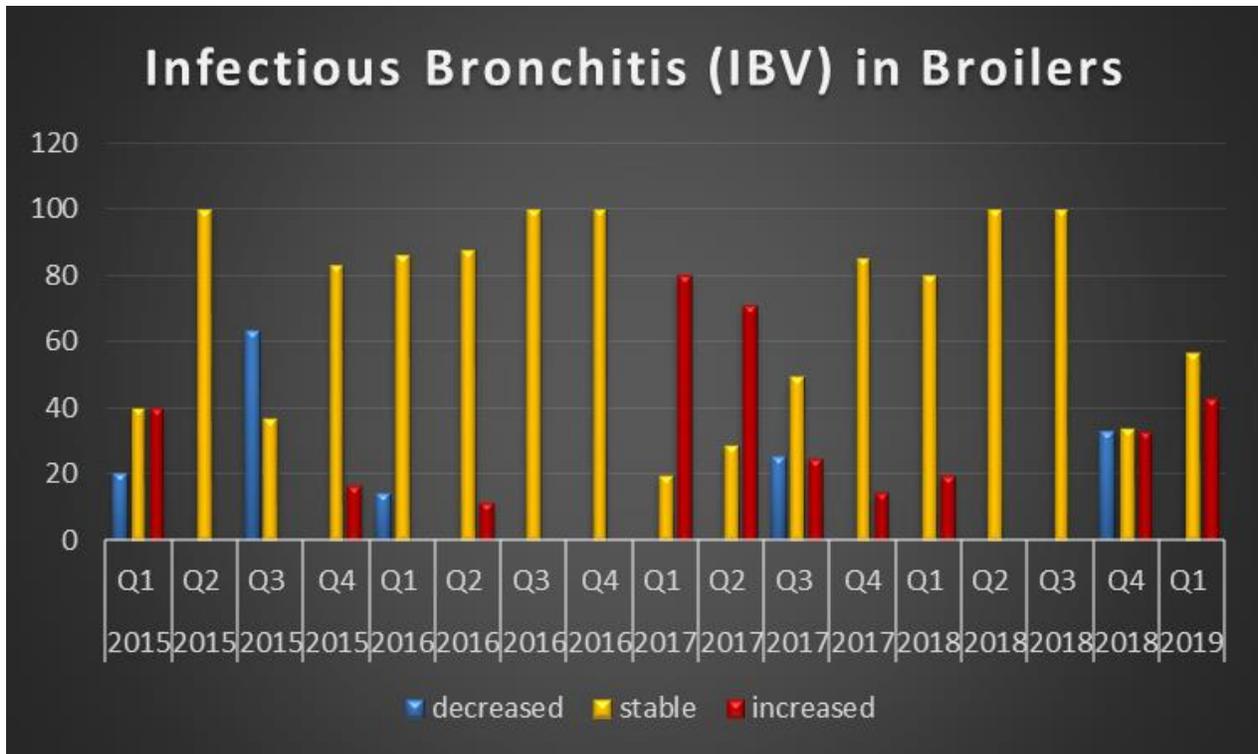


- Two practitioners reported slight increases in **lameness of nutritional origin**. Several cases of **ricketts** were reported, and both Vitamin D deficiency and low Ca/Phos were suspected as causes.
- **Lameness of bacterial origin** was stable in this quarter. Practitioners reported femoral head necrosis in some of the affected flocks. The majority had *E. coli* or *Enterococcus cecorum* involvement, with fewer mixed infections with *E. cecorum* and *E. coli*.
- **Coccidiosis** and **necrotic enteritis** were stable this quarter. A few cases were reported primarily from RWA flocks.
- Over the previous quarters (Q1, Q2 and Q3, Q4 2018), **inclusion body hepatitis (IBH)** cases reported by poultry veterinarians were higher. In this quarter, most of the practitioners reported stable to decreased cases with mostly individual birds affected in contrast with the previous quarters where it was part of an occasional generalized flock issue. The number of cases identified by the Animal Health Lab took another stepwise reduction from Q 4 2018. Serotypes FAdVD and FAdVE were the most

commonly detected in 2018. Domestic breeder flock vaccination with reformulated autogenous vaccine containing serotype 8 and 11 strains of fowl adenovirus began in August 2018.

- A slight increase in **IBV infections** was seen this quarter (Fig C). Primarily higher serological findings with no significant clinical signs or losses were observed as part of an occasional generalized flock issue. Small increases in DOA or allocations that were not met on these loads were reported. Some other flocks reported seeing decreased feed consumption and increased mortality over a few days and then flocks returned to normal. Flocks were positive for IBV, and the DMV strain is suspected. AHL data also reports cases of IBV infections positive for the DMV strain during this quarter.

Fig C. Trend of infectious bronchitis cases in broilers between January 2015 and January 2019 based on the clinical impression survey of Ontario poultry veterinarians



- A few serological **infectious bursal disease virus (IBDV)** positive flocks with no clinical signs were reported by practitioners.
- Runting and stunting syndrome continues to be seen at consistently low levels in Ontario broilers. Cystic enteropathy associated with astrovirus infection is one cause of runting-stunting in broiler flocks.
- **Condemnation** issues remained stable. Cellulitis was reported as the main reason for condemnation.

Broiler-Breeders

- **Early bacterial infections (<14 d old)** decreased this quarter. A few cases, primarily in males, were reported. Most commonly, *E. coli* was isolated with only occasional cases where a mixture of bacteria including *E. coli* and/or *P. aeruginosa* were isolated. A few cases of early mortality due to dehydration/starve-out were noted by practitioners.

- Intestinal intussusceptions are occasionally seen, and typically affected flocks are 9-11 weeks of age. This quarter, based on AHL lab data, most of the affected flocks were 8-9 weeks of age and one flock was very young at 4.5 weeks of age.
- Necrotic enteritis and coccidiosis remains stable but one flock of males at 22-24 weeks of age experienced an *E. tenella* outbreak, which is unusual.
- **Bacterial lameness** cases became stable this quarter. Arthritis and tenosynovitis with *Staphylococcus aureus* alone or mixed with *E. coli* was noted in early production flocks. In this quarter, the trend has changed with pododermatitis (bumblefoot) reported in younger flocks.
- **Developmental lameness** cases were stable. A few males with curled toes were reported.
- Cases of **in-lay bacterial septicemia** were stable this quarter. Cases were diagnosed in flocks at peak, or late with internal lay/yolk peritonitis. Mostly *E. coli*, sometimes *E. cecorum* as well, were reported from these cases.
- **IBV infections** became stable this quarter. One case with the California strain resulted in birds slow coming into production. One case related to DMV strain with mild increase in mortality was reported in a 37 week-old flock. Cystic oviducts continue to be seen occasionally and have been associated with multiple variant strains of IBV including California, Wolgemuth, and DMV.
- **Disease-related hatchability issues** remained stable. Low numbers of white chick syndrome cases continue to be seen and in one case, the drop in hatchability (5% drop) was small.
- One case of **cutaneous fowl pox** was reported by a practitioner.
- Low percentage of **Salmonella isolations** on routine environmental monitoring were noted. *Salmonella* Kentucky, *S. Heidelberg*, *S. Kiambu*, and *S. Livingstone* were the most commonly reported serovars.
- One case of *Mycoplasma synoviae* was reported from a breeder flock.
- **Male aggression** has been continuously seen in breeder flocks, and was successfully managed with proper male to female ratio. On occasion, aggression was detected in a few flocks coming into lay.

Layers

- The most significant issue challenging the layer industry is the lack of approved antibiotics for laying hens. Several initiatives are underway to attempt to deal with this issue.
- The disease pressure on laying hens has been low this quarter.
- **Infection bronchitis** cases remained stable. The DMV strain is still the predominant strain in layer flocks. The impact on the flocks is much reduced in comparison with previous years with small transient drops in production and no reports of false layers.
- **Bacterial peritonitis / salpingitis / peritonitis** due to *E. coli* remained stable.
- Some behavioural problems (**hysteria**) were reported in birds kept on floor or aviary systems.
- One case of atypical **mycotic pneumonia** associated with *Aspergillus oryzae* was identified in a young layer flock. This condition is more commonly seen at low levels in young broiler breeder flocks.
- **Focal duodenal necrosis (FDN)** continues to be seen at low levels. **Coccidiosis and necrotic enteritis** are well controlled.

Turkeys

- **Early (<14 d old) and late systemic bacterial infections (>14 d old)** remained stable. Mainly *E. coli* was the predominant bacteria in the early systemic bacterial infections. One case of *Trueperella pyogenes* causing bacterial septicemia in older birds was reported. Other causes of early mortality included dehydration and flip overs.

- Increased numbers of **Salmonella** isolations in turkeys were reported. The most common serotypes were: *S. Uganda*, *S. Senftenberg*, *S. Schwarzengrund*, *S. Livingstone*, and *S. Heidelberg*.
- A small increase in **Erysipelas** was reported by a couple of the practitioners and **ORT** continues to be occasionally reported as well.
- **Necrotic enteritis and coccidiosis** were stable.
- Increased incidence of **roundheart** was reported by one practitioner.
- Leg issues noted in turkeys include tendon rupture, mixed inflammatory tenosynovitis, tibial dyschondroplasia, and long bone deformity.
- **Clostridial dermatitis** continues to occasionally recur on the same farms.
- **Aggression and cannibalism** have been seen in flocks where beak treatment was not done correctly.

We thank the following poultry veterinarians who completed the veterinary survey: Dr. Elizabeth Black, Dr. Peter Gazdzinski, Dr. Shahbaz Ul Haq, Dr. Genevieve Huard, Dr. Mike Joyce, Dr. Anastasia Novy, Dr. Rachel Ouckama, Dr. Mike Petrik, Dr. Cynthia Philippe, Dr. Joanne Rafuse, Dr. Fernando Salgado-Bierman, Dr. Kathleen Sary, Dr. Ben Schlegel, Dr. Lloyd Weber, Dr. Alex Weisz, and Dr. Jessalyn Walkey.

Updates

- **Antimicrobial Prescription Changes.** As of December 1, 2018, antimicrobials are not sold at livestock medicine outlets in Canada. This means that all poultry producers will need to have a veterinarian-client-patient relationship (VCPR) as a prescription will be required to obtain antimicrobials.
The Canadian Animal Health Institute developed a poster that lists all medically important antimicrobials requiring a veterinary prescription as of December 1, 2018. You can access it at: [https://www.cahi-icsa.ca/uploads/userfiles/files/CAHI_MIA_Poster_Feb27_2018_website%20ENG\(2\).pdf](https://www.cahi-icsa.ca/uploads/userfiles/files/CAHI_MIA_Poster_Feb27_2018_website%20ENG(2).pdf)
- Upcoming **Poultry Industry Council events:** National Poultry Show Educational Stage April 3 & 4, 2019; PIC's Research Day May 1, 2019.
- **Poultry Health Research Network** lectures can be accessed on the PHRN website or on the PHRN YouTube channel: <https://www.youtube.com/user/PoultryHRN>



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