

The information was obtained from a survey of the clinical impressions of practicing veterinarians between Aug 1<sup>st</sup> to Oct 31<sup>th</sup>, 2018, 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

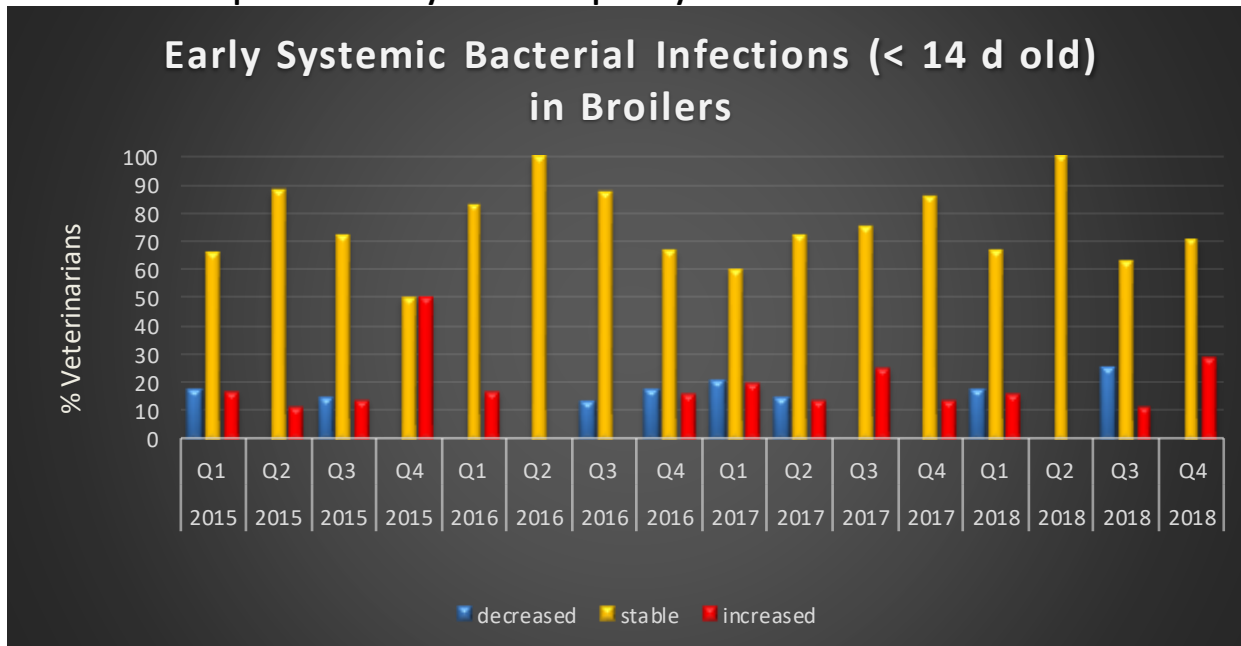
Quarter 4, 2018 (Aug 1<sup>st</sup> - Oct 31<sup>th</sup>, 2018)

### Poultry Veterinarian Survey Highlights

#### Broilers

- **Early systemic bacterial infections (<14 d old)** (Fig A) are slightly increased and at a higher level than last year and are not always associated with higher mortality. Mostly *E.coli* and only occasionally mixed with *Pseudomonas aeruginosa* or *Enterococcus cecorum* were identified. One young flock had a mixed infection of *E. coli* and two group D Salmonellae including *S. Enteritidis*. Other causes of early mortality included dehydration, starve-out and failure to start.

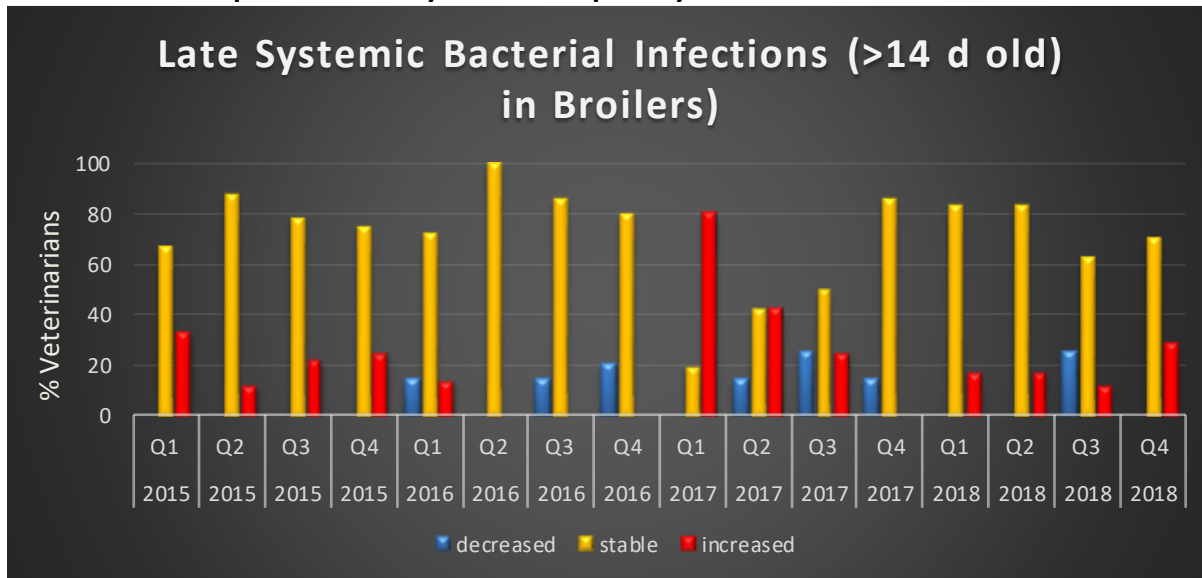
Fig A) Trend of early systemic bacterial infections in broilers between January 2015 and October 2018 based on the clinical impression survey of Ontario poultry veterinarians <sup>a)</sup>



<sup>a)</sup> 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 **late systemic bacterial infections (>14 d old)** are also slightly increased (Fig B) Mostly *E. coli* and occasionally together with *Enterococcus cecorum* were detected in these cases.

**Fig B) Trend of late systemic bacterial infections in broilers between January 2015 and October 2018 based on the clinical impression survey of Ontario poultry veterinarians**



- An increase in **ccidiosis** and **necrotic enteritis** were reported primarily from RWA or organic flocks.
- **Lameness of viral origin** caused by reovirus has decreased this quarter (Q4 2018) (Fig C) compared to the previous quarter (Q3 2018). In this quarter there were no Group D variants reported, but other Groups such as A, E and H were reported. Overall in 2018, variant D was the most commonly reported, followed by variant H and A (Fig. D).  
Autogenous reovirus variant D strain vaccination of the Ontario broiler breeder flocks started in August and the placement of the first broiler chicks from these flocks has already begun on Ontario farms.

**Fig C) Trend of reoviral-associated lameness in broilers between January 2015 and October 2018 based on the clinical impression survey of Ontario poultry veterinarians <sup>a)</sup>**

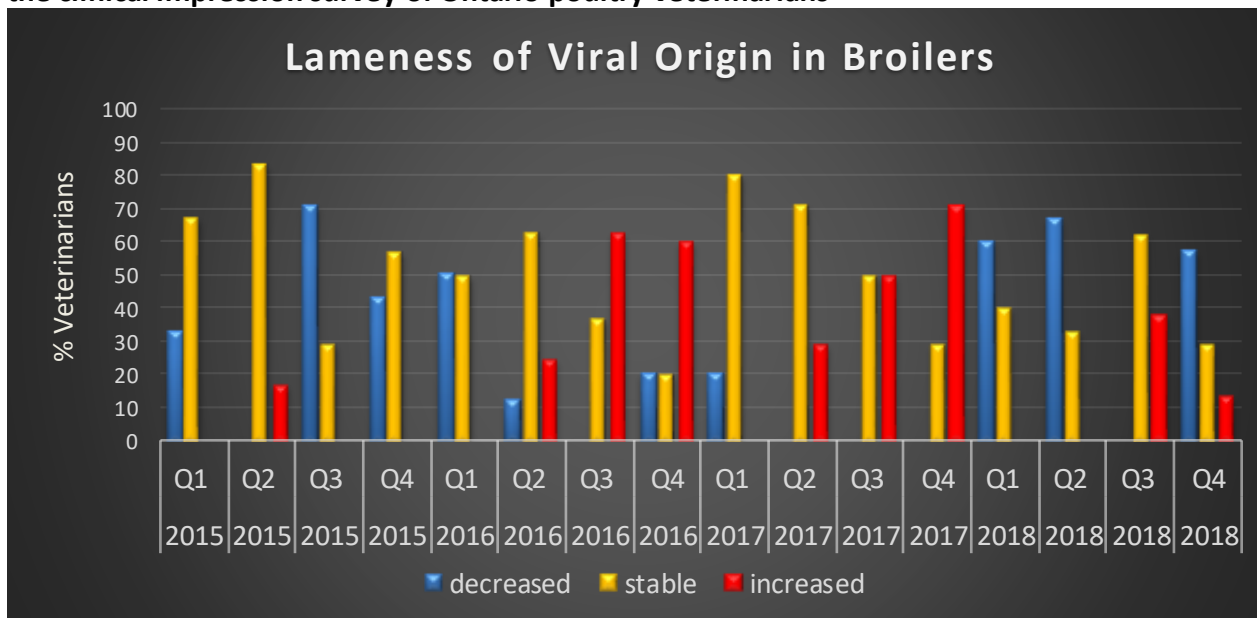
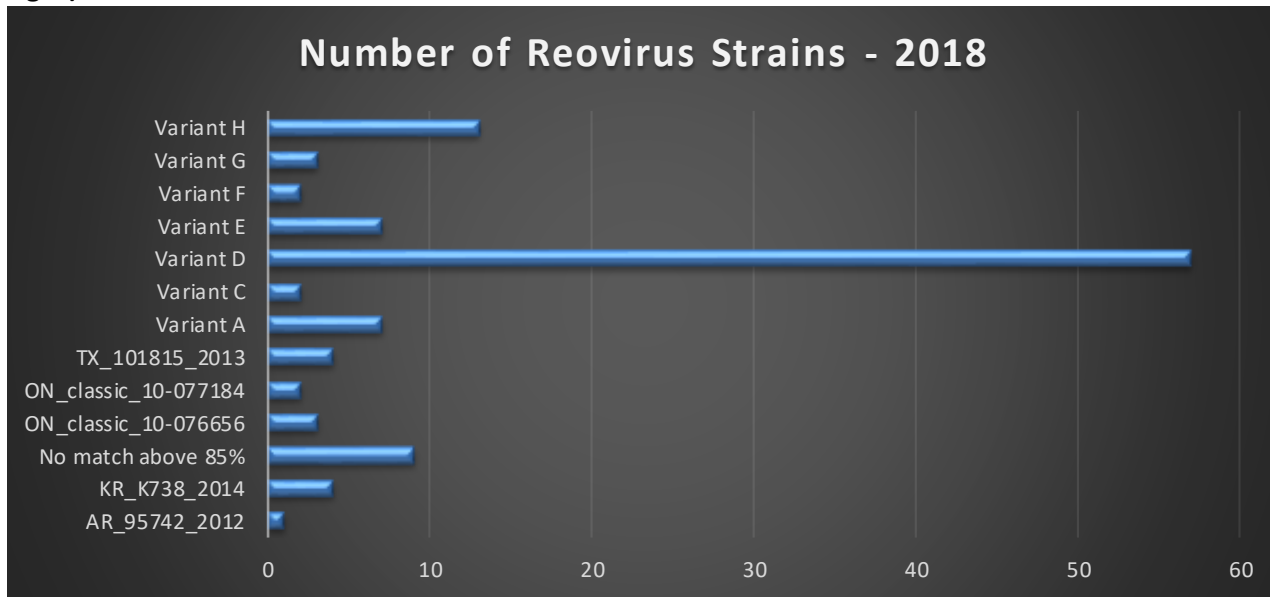


Fig D) Number of reovirus variant cases in broilers that were submitted to the Animal Health Laboratory in 2018.



- 5 cases of early lameness responsive to Vitamin D were reported by one practitioner and multiple practitioners also reported cases of rickets but only one practitioner reported an increase in nutritionally associated lameness.
- **Lameness of developmental origin** remained stable. Some practitioners reported cases of angular bone deformity, TD, and VVD.
- A couple of practitioners reported an increase in **lameness of bacterial origin** cases in this quarter. The majority had *E. coli* or *Enterococcus cecorum* involvement with fewer mixed infections with *E. cecorum* and *E. coli*.
- **Inclusion body hepatitis (IBH)**. The increase in the number of IBH cases that was reported by poultry veterinarians in previous quarter (Q1, Q2 and Q3 2018) continued. However, the number of samples submitted to the Animal Health Laboratory decreased this quarter (**Fig. E**). Serotypes FAdVD and FAdVE were the most commonly detected in 2018 (**Fig F**). Domestic breeder flock vaccination with reformulated autogenous vaccine containing serotype 8 and 11 strains of fowl adenovirus began in August, 2018.

Figure E. Number of samples submitted to the Animal Health Laboratory in each quarter for FAdV PCR testing (Nov 2017 – Oct 2018).

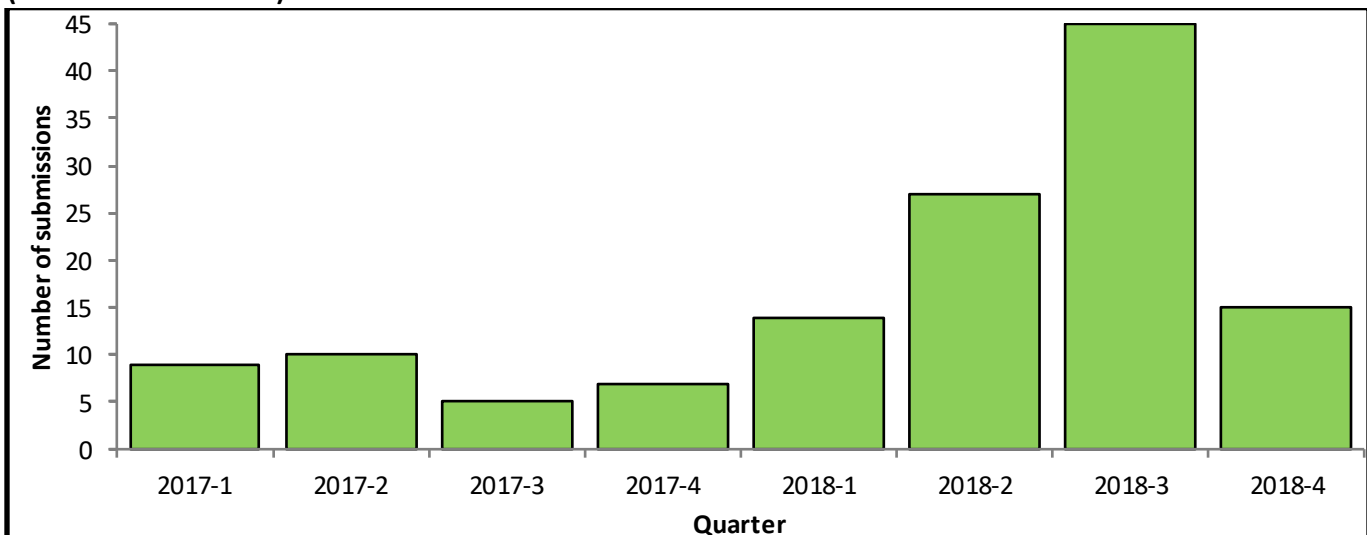
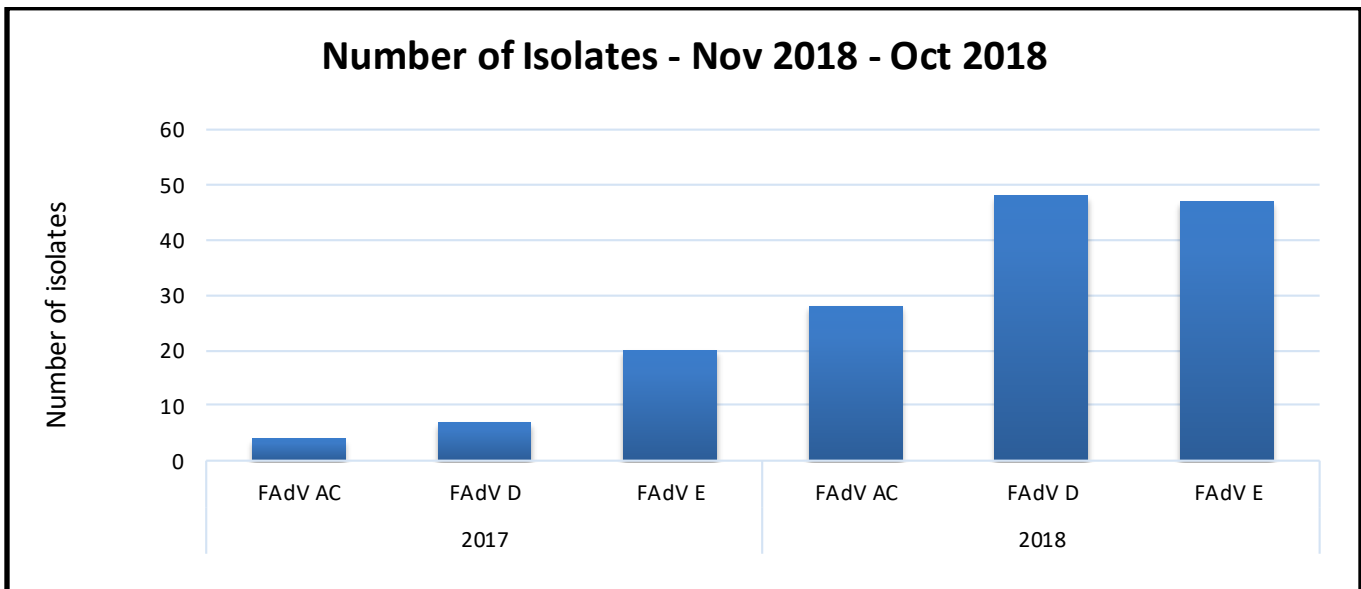


Figure F. Proportion of various FAdV types detected at the Animal Health Laboratory (Nov 2017 – Oct 2018).

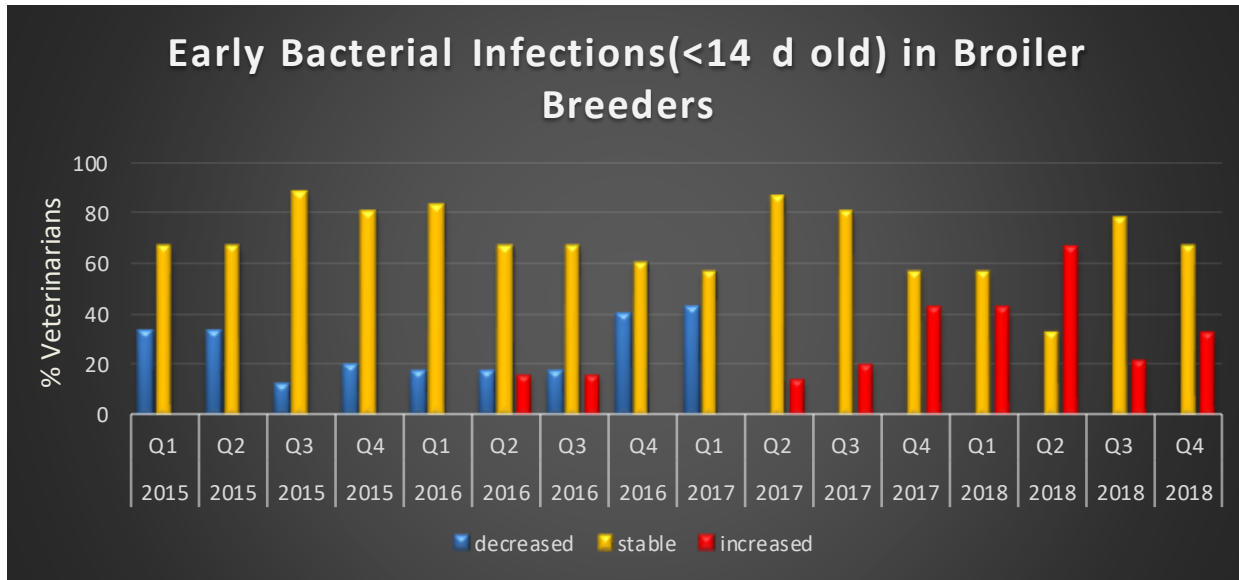


- The reports of **IBV infections** slightly increased this quarter. One case of airsacculitis was reported. Mostly only high titres at processing with no significant clinical signs or losses reported. There was one confirmed case of variant DMV IBV reported in the lab data.
- Occasional high titres to **infectious bursal disease virus (IBDV)** at processing has been reported. These birds are not making production targets, however, they do not show clinical signs.
- Cystic enteropathy associated with astrovirus infection is one cause of runting-stunting in flocks and this particular syndrome continues to be seen at consistently low levels in Ontario broilers based on lab data.
- Secondary **insecticide toxicity** was diagnosed in 3 - day old broilers who ingested dead darkling beetles.
- **Condemnation** issues remained stable. Cellulitis was reported as the main reason for condemnation.

## Broiler-Breeders

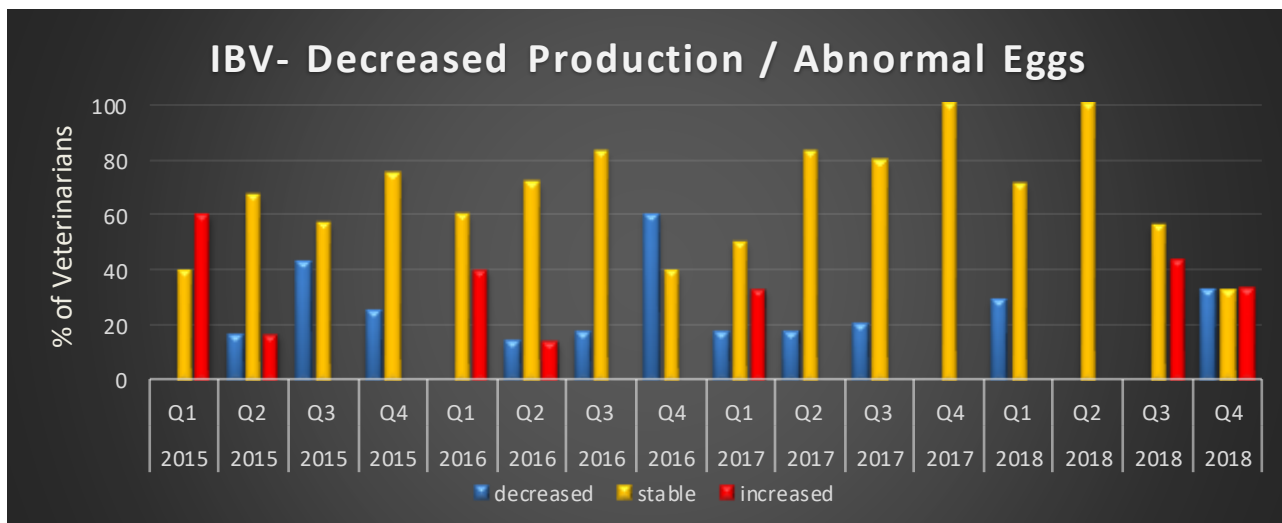
- The number of early bacterial infections (<14 d old), primarily in males increased in this quarter (**Fig G**). Most commonly, *E. coli* was isolated with only occasional cases where a mixture of bacteria including *E. coli*, *Enterococcus cecorum* and/or *P. aeruginosa* were isolated. A few cases of early mortality due to dehydration/starve out were noted by practitioners however the lab reported an increase in submissions which included mycotic pneumonia and meningoencephalitis and a few cases of the atypical fungal infections including pneumonia, associated with *Aspergillus oryzae*. One practitioner has also reported one case of *A. oryzae* pneumonia in a 3 week old flock that repeated in the same flock at 5 weeks of age. These atypical *Aspergillus* sp. infections were initially reported in late 2015 and 2016 and then a single case was identified again in Q2 2017. Please refer to the June 2016 AHL newsletter article: Atypical mycotic infection in poultry: *Aspergillus oryzae*, for further details including gross photos <https://www.uoguelph.ca/ahl/content/avianfurexotic-species>
- There was one report of Histomoniasis contributing to mortality in a 4- week- old broiler breeder flock.

**Fig G) Trend of early systemic bacterial infections in broiler breeders between January 2015 and October 2018 based on the clinical impression survey of Ontario poultry veterinarians**



- **Bacterial lameness** cases increased this quarter. In young flocks, tenosynovitis with *Staphylococcus aureus* alone or mixed with *E. coli* was noted. In older flocks, pododermatitis (bumblefoot) with mixed bacterial involvement was reported.
- There were no reports of reovirus this quarter.
- **Developmental lameness** cases were stable. One practitioner reported VVD and TD, and ricketts was also reported by one practitioner.
- There was a very mixed response in the frequency of **IBV infections** with both DMV and California variant strains causing **decreased production** and reduced peaks and increased mortality this quarter by practitioners (**Figure H**), but stable lab submissions. Cystic oviducts continue to be seen occasionally and in this quarter were associated with the California strain. There was one report of strain DE072 identified in a flock experiencing increased mortality and systemic bacterial infections.

**Fig H) Trend of IBV infections in broiler breeders between January 2015 and October 2018 based on the clinical impression survey of Ontario poultry veterinarians.**



- Cases of **in-lay bacterial septicemia** were stable this quarter. Mostly *E. coli* were reported from these cases.
- **Disease-related hatchability issues** remained stable. Low numbers of white chick syndrome cases continue to be seen.
- One case of **gangrenous dermatitis with isolations of both *C. perfringens* and *E. coli*** in a 20 week old flock was reported.
- There was a single report of *Dermanyssus gallinae* (poultry red mite) infestation on male broiler breeders experiencing leg issues.
- Breeder flocks had low percentage of ***Salmonella* isolations** on routine environmental monitoring. *Salmonella* Kentucky and *S. Heidelberg* were the most commonly reported serovars, and they tend to be isolated from the same barns repeatedly.
- **Male aggression** was stable this quarter. Males in early lay barns were mostly affected, and were managed with proper male to female ratio.

## Layers

- The disease pressure on laying hens has been low this quarter.
- The biggest concern in laying hen production is the upcoming lack of access to antibiotics for treatment after Dec 1, 2018. Several initiatives are underway to attempt to deal with this issue.
- **Bacterial peritonitis / salpingitis** due to *E. coli* remained stable.
- Occasionally aggression and cannibalism were reported. The aggression is mostly found in aviary housing systems.
- Coccidiosis, necrotic enteritis, and IBV seem to be well controlled through vaccination and biosecurity and are stable or decreased.

## Turkeys

- **Early (<14 d old) and late systemic bacterial infections (>14 d old)** remained stable. Mainly *E. coli* and in some cases *E. coli* mixed with *Salmonella Heidelberg* were the predominant bacteria in the early systemic bacterial infections. Other causes of early mortality included dehydration, starve-out and brooding error.
- A case of ***Bordetella avium*** causing respiratory signs was reported by a single practitioner.
- **Necrotic enteritis and coccidiosis** were stable.
- **One case of enteritis** caused by HEV, one case caused by round worms, and one case of non-specific enteritis resulting in wet litter were reported by practitioners.
- Round heart was reported from the same genetic line where management error (increased CO<sub>2</sub> level) was suspected as a cause of the disease.
- Increased numbers of reports of turkeys with bone growth abnormalities including angular leg deformities, short shanks and enlarged hocks, tibial dyschondroplasia and unspecified developmental lameness were reported in turkeys at an unspecified age and also between 16 and 20 weeks of age. Further discussion revealed that these leg issues tend to appear sporadically, more commonly in the summer and then will disappear or drop to a very low level only to reappear again and no linkages to disease/nutrition or genetics have been made.
- **Tibial dyschondroplasia** associated with severe lameness were described in a few flocks.
- **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. Shahbaz Ul Haq, Dr. Genevieve Huard, Dr. Mike Joyce, Dr. Anastasia Novy, Dr. Rachel Ouckama, Dr. Mike Petrik, Dr. Joanne Rafuse, Dr. Fernando Salgado-Bierman, Dr. Kathleen Sary, Dr. Ben Schlegel, Dr. Chanelle Taylor, Dr. Lloyd Weber, Dr. Alex Weisz, and Dr. Jessalyn Walkey.

## Antimicrobial Prescription Changes

- As of December 1, 2018, antimicrobials will no longer be 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)

## Updates

- Upcoming **Poultry Industry Council** events: **Producer Updates:** Belleville, Dec 5, 2018; Brodhagen, Dec 12, 2018.
- **Poultry Health Research Network** lectures can be accessed on the PHRN website or on the PHRN YouTube channel: <https://www.youtube.com/user/PoultryHRN>



## Your OAHN Poultry Network Team:

**Practitioners:** Dr. Rachel Ouckama, Dr. Mike Petrik, Dr. Cynthia Philippe, Dr. Alex Weisz

**Animal Health Lab:** Dr. Marina Brash

**OMAFRA:** Dr. Csaba Varga Network co-lead, Dr. Tim Pasma, Al Dam

**Ontario Vet College:** Dr. Michele Guerin

**Network Coordinator:** Dr. Kathleen Todd