

The information was obtained from a survey of the clinical impressions of practicing veterinarians between February 1st, 2017 and April 30th, 2017 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 2, 2017 (February 1st 2017-April 30st 2017)

Infectious Bronchitis Virus Update

Infectious bronchitis virus (IBV) infections continued to increase this year in the broiler, broiler breeder and layer sectors. Genotyping results show that new strains of IBV are continuing to emerge and flocks can be infected with more than 1 strain. So far, in 2017, the Delmarva (DMV) strain has emerged as the predominant strain. Talk to your veterinarian about the strains found in your flocks to determine best health management measures.

Premises Identification is a critical first step to build an effective traceability system. Applying for a Premises Identification Number is easy and free. You can register with the Provincial Premises Registry online at www.ontarioppr.com or by phone at 1-855-697-7743 (MY PPR ID). Knowing the location of poultry farms allows for timely mapping during a poultry disease outbreak. Premises identification numbers were used to map and illustrate the spread of IBV through Ontario's poultry flocks in 2016 (Figure 1).

Infectious bronchitis virus can be spread by aerosol, ingestion of contaminated feed and water, and contact with contaminated equipment or clothing. The virus is not transmitted vertically directly from the hen to the embryo in the egg. The virus is highly infectious and can spread quickly in a susceptible flock. As the virus generally survives and thrives better in cold weather, IBV infections are more commonly seen in the winter in Canada. The virus is fragile and easy to kill if exposed to warmer temperatures or disinfectants, but will survive longer if protected in organic material. Flocks infected with different virus variants may show very different clinical signs that can include: increase in mortality with or without respiratory signs, decrease in egg production in layers and broiler breeders, reduced growth rates, increase in secondary complications including systemic bacterial infections, ascites, and elevated condemnations and very high bronchitis titers at slaughter in broilers.

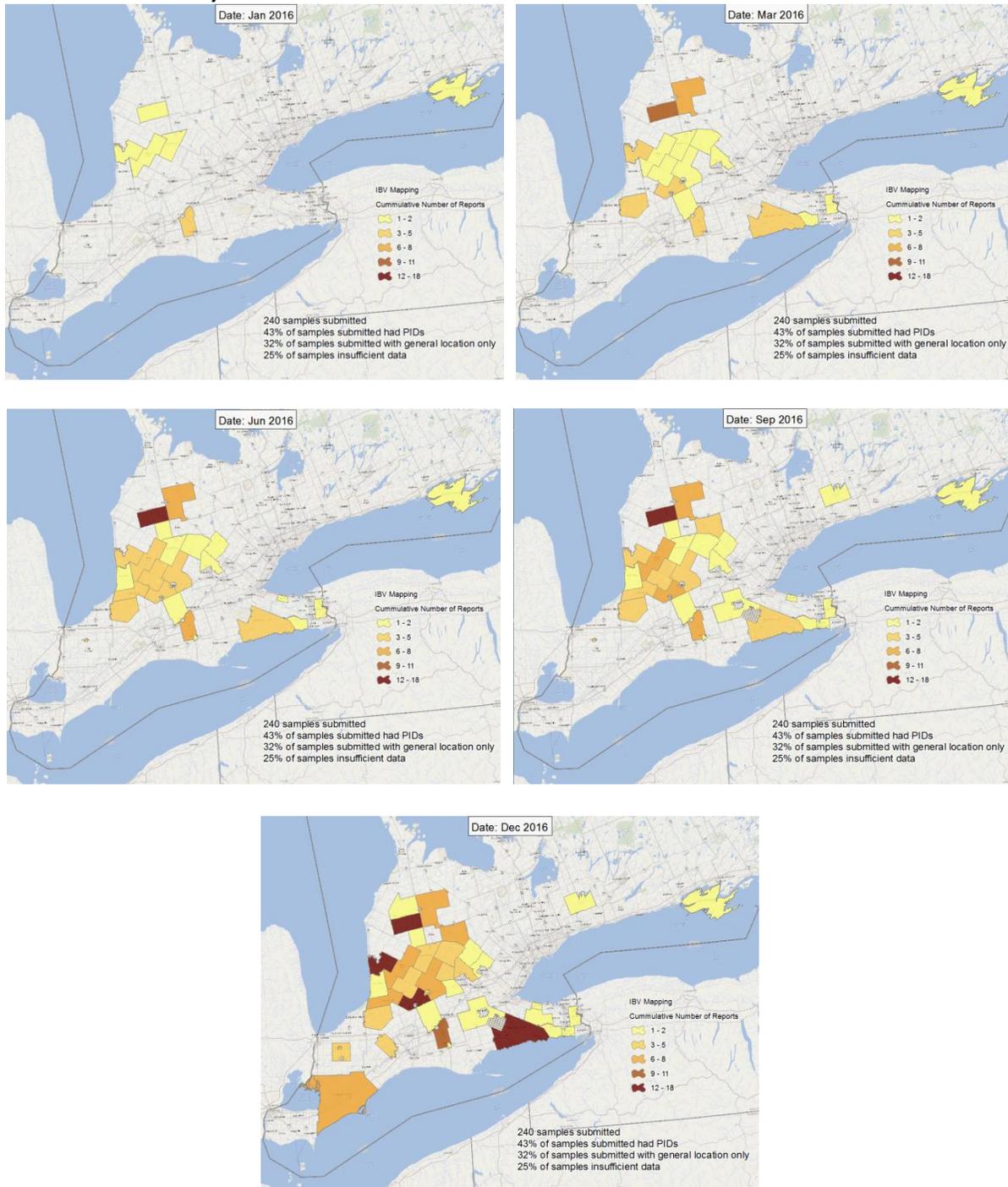
Although commercial Infectious Bronchitis Virus vaccines are not directly protective against variant strains, they may provide some local immunity; therefore, it is recommended to use a robust vaccination program in accordance with your veterinarian's recommendations.

Properly implemented biosecurity is the poultry producers' first-line of defense against infectious bronchitis. Farm biosecurity protocols should be well thought-out, stringently implemented and continuously followed. The following is a list of suggested biosecurity measures for Ontario poultry farms:

- Each farmer, employee and every person entering any poultry barn must put on clean footwear, protective clothing and follow all biosecurity protocols.
- Minimize visits to other poultry production sites and avoid any co-mingling of birds.
- Avoid exchanging equipment with other poultry production sites.
- Ensure all vehicles/farm equipment that access the barn vicinity are clean and that the laneway is restricted/secured.
- If possible, have a pressure washer or a hose available to wash tires and equipment, and make this available to all service vehicles and visitors.

- If possible, “heat treat” the barn/litter after cleanout and introduction of new bedding, and in advance of bird placement (to 32°C or 90 F for a minimum of 2-3 days). Note the floor under the bedding must reach 32°C for this technique to be effective. The temperature should be measured with an appropriate thermometer (consider an infrared thermometer) at multiple locations along the inside perimeter of the barn at least three times a day.

Figure. 1. Infectious Bronchitis Progression Maps in Ontario based on Animal Health Laboratory Submissions (January to December 2016)



Little change was noted in the warm months of summer; large increases in reported cases have been seen in spring and fall.



Poultry Veterinarian Survey Highlights

Broilers

- The increase in **IBV** infections is continuing.
- **Late systemic bacterial infections** (>14 d old) with *E. coli* involvement increased this quarter. This increase might be result of the increase in the incidence of IBV associated with secondary *E.coli* septicemia.
- **Early systemic bacterial infections** (<14 d old) remained stable.
- **Lameness of viral origin** has remained stable this quarter. Two serious cases in US origin flocks with reovirus variant D (2016) have been observed. Both flocks were euthanized and replaced, with no recurrence.
- **Lameness of bacterial origin** with *Enterococcus cecorum* and *E. coli* involvement continues to be reported.
- A condition called “turtle back” roasters was mentioned in the clinical impressions survey. This is a condition that affects both older pullets and cockerels with a few affected birds seen in many flocks. The cause is thought to be an electrolyte imbalance. Chickens are unable to right themselves due to physical size of breast and become dehydrated.
- Practitioners reported an increase in the number of **ascites** cases and the possibility of a relationship to the increase in IBV infections was suggested.
- Intestinal conditions including coccidiosis and necrotic enteritis were considered to be stable and reported mostly in RWA flocks.
- **Increased infectious bursal disease (IBD)** serological positives with no on farm clinical signs have been reported. However, increases in condemnations in these flocks have been observed.
- A slight increase in average **condemnations** has been noted that seems geographical and appears to be associated with high IBV and IBD titres.

Broiler-Breeders

- There are still increased reports of IBV infections in the broiler breeders but the rate of infection has somewhat stabilized, and it was reported that the flocks are receiving more IBV vaccinations to stimulate immunity. The IBV DMV variant has been associated with disease but also is reported to be identified in flocks with no to minimal clinical signs.
- A few more **early bacterial infection (<14 d old)** cases than normal has been reported this quarter with *E.coli* being the most commonly isolated bacterium and less frequently *E. coli* mixed with *Pseudomonas aeruginosa*.
- **Bacterial, viral, and developmental lameness** cases remained stable. The AHL lab data indicated an increase in the number of cases of lameness of bacterial origin and the most commonly isolated bacterium was *Staph aureus* both in pure culture and also in mixed culture with *E. cecorum* and/or, *E. coli* or *Gallibacterium anatis*. In addition, two cases of *Pasteurella multocida* associated arthritis with extensive amyloidosis in vaccinated flocks were reported.
- **In-lay bacterial septicemia** has remained stable. Cases were usually associated with yolk peritonitis but when exceeded, normal rates were associated with obesity or male aggression. *E.coli* in pure culture or

in mixed culture with a variety of bacteria including *E. cecorum*, *S. aureus*, and *G. anatis* were typically identified. One case of *G. anatis* septicemia was also diagnosed.

- One case of small intestinal coccidiosis with concurrent NE was reported. Two cases of **cecal coccidiosis** were reported. Intestinal intussusception continues to be reported at a low rate.
- Histomoniasis was diagnosed as a cause of pre-lay mortality in one flock. One case of atypical systemic mycosis (*Aspergillus oryzae*) was also reported in a 6-week-old flock that experienced a short spike in mortality and then the flock recovered.
- Four cases of **white chick syndrome** have been seen so the cases have dropped back to the normal rate following the outbreak that spanned Q3-2015 to Q1 2016 inclusive.
- One case of **ulcerative tracheitis** associated with *S. aureus* and *E. coli* was reported in a 21-week-old flock that responded to penicillin.
- A few cases of **fatty liver** with hemorrhage were also observed. Also a few cases of visceral and articular gout and urolithiasis were reported and thought to be associated with mineral imbalances.

Layers

- **The IBV** infections in layer flocks are unprecedented and continue to increase. Several cases of IBV have been seen in laying hen flocks with the variant DMV strain as the predominant strain however there was also a flock with IBV 4/91. In-lay vaccination has reduced impacts on production and mortality of flocks. A number of flocks that were infected early in their life have not come to full production with a reduction of 10-55% in flocks (known as false layer syndrome). Egg Farmers of Ontario (EFO) is providing support to producers experiencing lower productivity related to emerging strains of IBV. EFO launched the Emergency Bronchitis Relief Program for producers who are experiencing decreased production at less than 80 per cent of normal egg production. The program will offer quota credits to the affected producers to help offset lost production by allocating additional birds that may be placed either with the replacement flock or at a later date.
- One case of **Infectious Laryngotracheitis (ILT)** was diagnosed in pullets that have been previously vaccinated. Vaccination failure was suspected.

Turkeys

- A slight increase in early (<14 d old) and late systemic bacterial infections (>14 d old) have been seen. *E. coli* and *Salmonella* spp. were isolated from these cases.
- Single cases of clostridial dermatitis, poxvirus infection, and inclusion body hepatitis were reported.
- A small number of **fowl cholera** cases were reported by individual practitioners.
- Enteritis in a small number of antibiotic-free flocks was noted.

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Updates

- The Small Flock Disease Surveillance project is ongoing, with subsidized testing for a set of postmortem 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>



Your OAHN Poultry Network Team:

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

Ontario Vet College: Dr. Michele Guerin

Network Coordinator: Dr. Melanie Barham

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	

