

The information was obtained from a survey of the clinical impressions of practicing veterinarians between February 1st, 2017 to April 30th, 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 2, 2018 (February 1st - April 30th, 2018)

Virulent Newcastle Disease Update

In May 2018, the United States Department of Agriculture's (USDA) Animal and Plant Health Inspection Service confirmed several cases of virulent Newcastle disease in backyard birds in San Bernardino County, California. Virulent Newcastle disease has not been found in commercial poultry in the United States since 2003.

Additional information about this outbreak is available at:

https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian-influenza-disease/vnd/!ut/p/z1/04_iUIDg4tKPAFJABpSA0fpReYllmemJJZn5eYk5-hH6kVFm8X6Gzu4GFiaGPu6uLoYGjh6Wnt4e5mYG7mam-l5gjQj9IBPw64iA6oAqh1P6kUZFvs6-6fpRBYklGbzWn5-hFleSn6BdlRkQDKFRsj/

Virulent Newcastle disease is a contagious and fatal viral disease affecting the respiratory, nervous and digestive systems of birds. Clinical signs of virulent Newcastle disease include: sudden death and increased death loss in the flock; sneezing; gasping for air; nasal discharge; coughing; green, watery diarrhea; decreased activity; tremors; drooping wings; twisting of the head and neck; circling; complete stiffness; and swelling around the eyes and neck.

If you have any concerns regarding the health status of your flock, contact your veterinarian immediately.

Properly implemented biosecurity is the poultry producers' first-line of defense against infectious diseases, including virulent Newcastle disease. Farm biosecurity protocols should be well thought-out, stringently implemented, and continuously followed.

Additional information on biosecurity for commercial and small flocks can be found at:

<http://www.omafra.gov.on.ca/english/livestock/poultry/facts/16-047.htm>

<http://www.omafra.gov.on.ca/english/livestock/poultry/facts/12-039.htm>

Biosecurity recommendations for Ontario poultry farms

The following is a list of **suggested biosecurity measures** for Ontario poultry farms to prevent **infectious poultry diseases**:

- 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.

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- 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 3 times a day.
- The barn floor should reach 32° C at least 4 days prior to placement to ensure at least 24 h are available to create a stable barn temperature at an optimal chick range.
- **Before spreading manure** from an infected or suspect flock, it is important that it is properly **composted** to neutralize the virus. Pile and compost the litter inside the affected barn or in a designated and contained facility/area. You need to check the temperature of the compost pile 3 times a day and ensure the temperature of the compost pile is at least 32° C or 90° F for a minimum of 3 days.
- Do not spread used untreated litter within at least 1 km of a poultry barn. Avoid spreading on very windy days.
- Have an effective **insect** (e.g. darkling beetle) and **rodent control program** as vermin can be vectors of pathogens, and can act as reservoirs and can transmit pathogens to subsequent flocks

Additional information on biosecurity, composting, and darkling beetle control available at:

<http://www.omafra.gov.on.ca/english/livestock/poultry/facts/16-047.htm>

<http://www.omafra.gov.on.ca/english/engineer/facts/09-017.htm>

<http://www.omafra.gov.on.ca/english/livestock/poultry/facts/16-053.htm>

Poultry Veterinarian Survey Highlights

Broilers

- **Inclusion body hepatitis (IBH) update**
The increase in the number of IBH cases that was reported by poultry veterinarians in Q1 2018 continued this quarter (Q2 2018) and based on the lab data, many of the affected flocks are 14 to 22 days of age. Notable mortality of affected flocks has been seen. Serotypes FAdV 8 and 11 have both been detected in some of the submissions and these are the most common serotypes identified in Canada and have always been included in the broiler breeder IBH autogenous vaccine. No common breeder flock origin has been identified. Two clinical pictures of low background mortality and high rates of mortality have both been reported. In some cases, the IBH infection overlaps with other conditions such as *E. coli* septicemia, coccidial and IBV infections, suggesting immunosuppression may be playing a role.
- **Lameness of viral origin** caused by reovirus has substantially decreased compared to the previous two quarters (Q4 2017 and Q1 2018) but is still more than expected. The decision has been made to commence autogenous reovirus variant D strain vaccination of the Ontario broiler breeder flocks, however, delays with autogenous vaccine production will push out the anticipated placement of the first broiler chicks from these flocks on Ontario farms until early 2019. At the beginning of Q3 2018 a sudden increase in the number of reovirus-associated lameness cases have been reported, which will be described in detail in the next OAHN report.

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- The number of **IBV infections** remained stable for this quarter. Several flocks were serologically positive, but they did not show any clinical signs. Some birds were diagnosed with late respiratory/airsac infections and were condemned at slaughter with DMV and California strains detected.
- A broiler flock, late in the growout, was positive for ILT Niagara virus-like strain. The subsequent crop of ILT vaccinated broilers also developed ILT and the same strain was identified. No additional cases were reported. The biosecurity advisory sent out to farmers in the affected area by the Feather Board Command Center will remain in effect until mid-July. These are the first two cases of ILT in commercial broilers in Ontario in several years.
- These are the first cases of ILT in commercial broilers in Ontario in several years.
- **Late systemic bacterial infections** (>14 d old) and **early systemic bacterial infections** (<14 d old) with *E. coli* involvement remained stable.
- **Lameness of bacterial** origin continues to be reported with some practitioners reporting an increase in the last quarter. The majority had *Enterococcus cecorum* involvement with fewer mixed infections with *E. cecorum*, *Staphylococcus aureus*, and *E. coli*. Two cases of femoral head necrosis with *E. coli* and vertebral osteomyelitis with *E. cecorum* and *E. coli* have also been reported.
- Intestinal conditions including **coccidiosis** and **necrotic enteritis** were reported primarily in Raised Without Antibiotics flocks.
- Some flocks repeatedly had elevated titers to **infectious bursal disease virus (IBDV)**, sometimes in combination with IBV infections, indicative of wild virus challenge. With the mixed viral infections, production was affected but mortality rates were not in these flocks. Disinfection and vaccination are useful strategies.
- Complaints of runting / stunting caused by astrovirus were raised as a concern by some practitioners. Since Q2, 2016, we have continued to see a few cases each quarter.
- Condemnation issues remained stable for this quarter, cellulitis, and late air sac infections due to IBV challenges being the main reported causes.

Broiler-Breeders

- The number of **early bacterial infection (<14 d old)** cases, primarily in males increased in this quarter with some reports of very high mortality. Most commonly *E. coli* was isolated, and yolk sac infections were also reported. Only mild increases in early female mortality were reported. A few cases of early mortality due to dehydration/starve out, also was noted by practitioners.
- **Bacterial lameness** cases slightly increased. Modified live *Pasteurella multocida* vaccinated breeders on occasion do develop leg problems from which *Pasteurella multocida* is isolated. Primarily males 16 weeks of age and in the lay barn were affected with tenosynovitis from which mostly *Staphylococcus aureus*, occasionally mixed with *E. coli* or *Enterococcus cecorum*, was isolated. There are only a few reports of bacterial lameness in pullets and in a small number of cases, footpad abscesses in the lay barn were reported. There were more reports of flocks with a few males with curly toes. If the deformations are severe enough, they can impact their performance.
- **Viral and developmental lameness** cases remained stable.
- **IBV** infections in broiler breeders were stable to decreased. Two flocks experienced drops in production with California strain detected in one flock and DMV strain in the other. DMV strain was also associated with poor fertility. Cystic oviducts were identified in one flock and IBV was suspected but not proven.
- Cases of early lay *E. coli* associated **peritonitis** were reported as reduced this quarter.

- A few reports of **cecal coccidiosis** were noted. Intestinal intussusceptions were reported in a flock of 16-week-old hens but typically this condition is seen in younger flocks 8-10 weeks of age.
- One flock with cecal cores was suspected to have **histomoniasis (blackhead)**. This is of concern because there are no preventive or treatment medications.
- ***Mycoplasma synoviae*** infection was detected on a single farm.
- One flock tested positive for *Salmonella* Enteritidis through routine monitoring and was slaughtered through the PIE program. Other flocks had low percentage of *Salmonella* isolations on routine environmental monitoring. *S. Kentucky* and *S. Heidelberg* were the most common serovars.
- **Disease related hatchability issues were stable.** A few cases with an unusual presentation of increased infection rates in embryo were noted as were a couple of cases of white chick syndrome.
- **Male aggression** was stable this quarter. A few feather pecking events in broiler-breeder pullets were reported.

Layers

- Cases of **IBV infections** in mature laying flocks were stable in this quarter. When diagnosed, IBV had a minimal effect on production. Only one case of false layer/cystic oviducts and one case of California strain IBV associated mortality were reported. Currently an IBV monitoring program, sponsored by the Egg Farmers of Ontario, is underway in Ontario. The program is designed to sample a wide group of layer pullets across the province. All the data will be anonymized, and presented as group information. The acquired information will be used to further understand false layer syndrome, and to get an insight into the extent of bronchitis infections across Ontario.
- **Bacterial peritonitis/ salpingitis** due to *E. coli* remained stable.
- Occasionally, *Mycoplasma synoviae* infections on multi-age farms were detected. One asymptomatic *M. gallisepticum* infection was identified on a multi-age farm.

Turkeys

- **Early (<14 d old) and late systemic bacterial infections (>14 d old)** were stable. *E. coli* and in one case of *E. coli* with *Salmonella Heidelberg* was the predominant bacterium in the late systemic bacterial infections.
- **Necrotic enteritis** was stable, and a few cases were reported secondary to coccidiosis.
- Increase in **ORT** cases continued this quarter. This condition in turkeys is not as uncommon as erysipelas. Bacterial culture is required to differentiate from other bacterial causes of pneumonia such as *E. coli* or *Pasteurella multocida*.
- Recurring outbreaks of gangrenous dermatitis caused by *Clostridium septicum* continues to be the concern of one practitioner. The bacterium exists in the environment as a spore, and effective disinfection between winter flocks is difficult as moisture and heat are both required.
- Sporadic cases of NE/coccidiosis continue to be seen.
- **Salmonellosis** cases were stable for this quarter. The most common serovars isolated were: *S. Senftenberg*, *S. Schwarzengrund*, *S. Uganda*, *S. Heidelberg*, *S. Albany* and *S. Mbandaka*.

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Updates

- The federal government made regulatory changes to address antimicrobial resistance. By December 2018, growth promotion claims will no longer be allowed on the labels of veterinary products containing antimicrobials that are important to human medicine, and veterinary prescription will be required for the purchase of antimicrobials that are important to human medicine. Antimicrobials listed in the MIB for mixed feed will be available at feed mills and will also require a veterinary prescription. After November 13, 2017, no medically important antimicrobials are authorized for importation for own use. Ionophore products and coccidiostats will NOT be affected by this change. OMAFRA is proposing to make changes to Regulation 730 under the Livestock Medicines Act (LMA), including removal of medically-important antimicrobials from the list of drugs available for sale from provincially licensed Livestock Medicines Outlets. 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: **Health Day**, June 20, Stratford, Ontario.
- Where can non-poultry veterinarians in Ontario access resources to assist with small flock testing and management information? - Ontario Animal Health Network (OAHN) small flock veterinary listserv: a FREE listserv for veterinarians interested or working on small flock poultry. Veterinarians can email the group to access help from experienced poultry practitioners, and over 40 other practitioners interested in small flocks. Email: oahn@uoguelph.ca to be added to the listserv.
- 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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