Western Canadian Animal Health Network

WECAHN POULTRY NETWORK REPORT

January—March 2021

Poultry Network Meeting

Background

The second meeting of the WeCAHN poultry network was held 21st May, 2021.

Clinical impressions survey:

Broiler production: Commonly reported diagnoses included: Early (≤ 14 days old) systemic bacterial infection, and also antimicrobial resistance (AMR) by one practitioner, and categorized increasing in frequency relative to the previous time period (i.e. October-December 2020); Late (> 14 days old) systemic bacterial infection; Other causes of early mortality; Ascites; Coccidiosis; Inclusion Body Hepatitis, also reported increasingly diagnosed by 2 practitioners; Bacterial lameness, Condemnation due to cellulitis, and Yolk sac infections.
Infectious Bronchitis and Infectious Bursal Disease were diagnosed commonly and reported increasing by one practitioner.

Broiler-breeders: Commonly diagnosed: Early (≤ 14 days old) systemic bacterial infection, Bacterial lameness; Yolk sac infections. These conditions were all categorized as stable or decreasing relative to the previous time period.

Layers: Commonly diagnosed: Bacterial peritonitis/ salpingitis ; Egg yolk peritonitis; Decreased egg production, cause unknown, and Yolk sac infections. Mycoplasma infections were reported diagnosed rarely but increasingly, by one practitioner. *Salmonella* infections, were reported rarely to commonly by two practitioners. These conditions were all categorized as stable or decreasing relative to the previous period.

Turkeys: Reported commonly: Early (≤ 14 days old) systemic bacterial infection; Late (> 14 days old) systemic bacterial infection, and categorized increasing by 1 practitioner. Aggression and cannibalism were diagnosed very frequently and categorized increasing in frequency of diagnosis relative to the previous time period, by 1 practitioner.

Smallholders: Reported commonly: Marek's Disease; Mycoplasma spp., also reported increasingly diagnosed by 1 practitioner. Histomoniasis was reported increasing relative to previous time period by one practitioner.

Laboratory data: largely mirrored clinical impressions survey, with bacterial septicemia and yolk sacculitis and lameness commonly. In contrast, other pathogens (e.g. Avian Orthoreovirus, Infectious bronchitis virus, Infectious bursal disease, Mycoplasma spp), which were reported rarely diagnosed, and stable relative to the previous (Oct.- Dec. 2020) time period, by practitioners.

Meeting takeaways:

Inclusion body hepatitis was again categorized as 'increasing' by some of the practitioners completing the clinical impressions survey.

Small flocks: ILT, Marek's disease, and Mycoplasma spp. infections were reported occurring commonly in Alberta.

Background

The second meeting of the WeCAHN poultry network was held 21st May, 2021, with 6 poultry practitioners, diagnostic laboratory and provincial veterinarians from the four western provinces, veterinary college faculty, and a representative of the Canadian Integrated Program for Antimicrobial Resistance Surveillance (CIPARS) in attendance.

Data discussed:

Clinical impressions survey
Scan of other surveillance network reports
- Community for Emerging Zoonotic Diseases: Avian influenza internationally
- Canadian Wildlife Health Cooperative: Avian influenza surveys in Canada
- RAIZO: *Enterococcus cecorum*

Laboratory data:
-Manitoba Veterinary Diagnostic Services (VDS)
-Prairie Diagnostic Services (PDS)
-UCVM Veterinary Diagnostic Unit (VDU).

Clinical impressions survey:

The purpose of the clinical impressions survey is to be a simple, quick overview of diagnoses by practitioners, which does not require practitioners to extract data from their information management systems to complete.

Broiler production: Commonly reported diseases included:

Ascites
Early (≤ 14 days old) bacterial infection diagnosed with increasing frequency relative to the previous time period (i.e. October-December 2020).
Late (> 14 days old) bacterial infection
Other causes of early mortality
Condemnations due to cellulitis
Inclusion Body Hepatitis, also reported increasingly diagnosed by 2 practitioners. This continues the trend in which it was categorised increasing in October-December 2020.
Bacterial lameness
Yolk sac infections

Broiler-breeders: Commonly reported diseases included:

Early (≤ 14 days old) systemic bacterial infection
Bacterial lameness
Yolk sac infections
These conditions were all categorized as stable or decreasing relative to the previous time period.

Layers: Commonly reported diagnoses included:

Bacterial infections
Egg yolk peritonitis
Decreased egg production, cause unknown
Yolk sac infections

Mycoplasma infections were reported diagnosed rarely but increasingly, by one practitioner.
Salmonella infections, including serovars C2, C3, Kentucky or Enteritidis, were reported rarely to commonly by two practitioners.

These conditions were all categorized as stable or decreasing relative to the previous time period.

Turkeys

Diseases reported commonly:
Early (≤ 14 days old) systemic bacterial infection
Late (> 14 days old) systemic bacterial infection, and categorized increasing by 1 practitioner
Undifferentiated enteritis

Smallholders

Diseases reported commonly:
Marek's Disease
Mycoplasma spp., also reported increasingly diagnosed by 1 practitioner

Discussion: major diseases seen in small flocks:

Alberta:

One practitioner reported diagnosing ILT very commonly in Alberta; also sees lots of Mycoplasma and Marek's Disease.

The province sees a range of diseases with the Alberta Non-commercial Poultry (small flock) program, but priorities for diagnosis are reportable diseases.

Alberta Provincial laboratory:

- sees Infectious laryngotracheitis (ILT) all year; most frequently in winter.
  - sees both *Mycoplasma gallisepticum* and *Mycoplasma synoviae*, possibly in combination

Manitoba:

ILT seems to be decreasing in Manitoba small flocks after spiking last fall first, peaking in Manitoba Oct. – Nov., then in Saskatchewan. Also see Marek's Disease very frequently.

Scans of surveillance reports from other networks

RAIZO, the Québec counterpart of WeCAHN, reports *Enterococus cecorum* is thought to be increasing in prevalence as a poultry pathogen, typically recovered from bones and joints.

Community for Emerging Zoonotic Diseases (CEZD): Avian influenza

Report of bird flu (H5N8) in humans in Russia

Spring 2021- Europe:

- Bulgaria reported 6th outbreak of highly pathogenic avian influenza in layers in Germany, Italy, Sweden reported H5N8 in wild birds

For more information:
https://cezd.ca

Canadian Wildlife Health Cooperative Dead Bird Avian Influenza Survey 2021

Region	Tested	Matrix Positive	H5 Positive	H7 Positive
B.C.	178	0	0	0
Alberta	54	0	0	0
Saskatchewan	0	0	0	0
Manitoba	0	0	0	0
Ontario	29	0	0	0
Québec	3	0	0	0
New Brunswick	0	0	0	0
Nova Scotia	4	0	0	0
Prince Edward Island	29	0	0	0
Newfoundland and Labrador	0	0	0	0
Yukon	0	0	0	0
Northwest Territories	0	0	0	0
Nunavut	0	0	0	0

Notes:

All birds tested were negative for highly pathogenic avian influenza.

For more information:
www.cwhc-rcsf.ca

Laboratory data January—March 2021

Laboratory data, similar to the practitioners' clinical impressions survey, identify a *E. coli* as a very common potential pathogen, causing multiple forms of clinical disease (e.g. early mortality; bacterial lameness, yolk sac infections) with some isolates displaying resistance to one or more common antimicrobials .

The range of pathogens detected by PCR were in general much less frequently diagnosed, even when looking at clinical samples tested from sick animals (as opposed to environmental or freedom-from-disease' testing.

Meeting takeaways:

Inclusion body hepatitis was again categorized as 'increasing' by some of the practitioners completing the clinical impressions survey.

Small flocks: ILT, Marek's disease, and *Mycoplasma* spp. infections were reported widespread, by practitioners and laboratory scientists.