Western Canadian Animal Health Network

WECAHN DAIRY NETWORK REPORT

MARCH 5TH 2021

Dairy Network Meeting

The first video-conference meeting of the Western Canadian Animal Health Network (WeCAHN) dairy network was held 5th March, 2021.

Dataset: Data discussed include the veterinary practitioners' clinical impressions survey, diagnostic data from three western veterinary diagnostic laboratories, and CFIA abattoir condemnation data.

Practitioners' 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 (as this can be a major barrier to participation).

It asks practitioners to report, for a list of selected pathogens/syndromes, how frequently (never/rarely/ commonly/very frequently, as defined within the survey) they have diagnosed these pathogens over the time period in question (for this pilot meeting of the network, Oct.-Dec. 2020). Additionally, they are asked whether, compared to the previous time period (for purposes of this meeting, July-Sept. 2020) their diagnosis of these pathogens is increasing/ decreasing/ or stable.

Respiratory diseases: Pneumonia was the most frequently diagnosed syndrome, associated with *Mannheimia hemolytica*, *Pasteurella multocida*, and *Histophilus somni*. Bronchopneumonia associated with Bovine Virus Diarrhea and Bovine coronavirus were reported as increasing by one practitioner.

Digestive diseases: were the most frequently diagnosed system for disease, with abomasal (stomach) disease the most frequently diagnosed syndrome. Diarrhea was the most frequently diagnosed potentially infectious syndrome (commonly to very frequently), with viral diarrhea associated with rotavirus and bovine coronavirus very frequently diagnosed by one practitioner. Cryptosporidiosis was also commonly diagnosed by one practitioner, with all the preceding diarrheas being reported in pre-weaning calves.

Reproductive diseases: Reproductive disease, and within this category, primary disease of the reproductive tract, (e.g. uterine infection in an individual cow) was reported commonly to very frequently by network practitioners. Abortions were reported variably across practices. Infectious infertility was consistently not seen by the practitioners; however, non-infectious infertility was reported variably, with energy/calorie deficiency and problems of water quality reported commonly by one practitioner.

Musculo-skeletal diseases: Musculo-skeletal disease was reported commonly to very frequently, especially arthritis, septic arthritis, and abscesses.

Teats and udder: diseases of the teats and udder were diagnosed rarely to commonly by the network practitioners. Acute mastitis was reported rarely to commonly, associated with *Streptococcus uberis* by one practitioner. Chronic mastitis was seen more frequently and consistently relative to acute, associated most with *Staphylococcus aureus*, *S. uberis*, *S. dysgalactia* or *E. coli*. Traumatic teat and udder injuries were less frequently diagnosed by network practitioners.

Syndromes captured as 'Other' in survey tables: Klebsiella septicemia, associated with Klebsiella mastitis, was seen in dairy cows bedded with shavings.

Unusual presentations: *Salmonella* Tyhpimurium outbreak in pre-weaning calves. First noted as diarrhea in cows, then diarrhea/septicemia in calves in off-site calf barn.

Diarrhea in cows continued and clinical breaks seemed somewhat related to problems with cow density. This occurred in an 'open' herd (consensus was that clinical salmonellosis tends to occur more frequently in open relative to closed herds).

Laboratory data:

Milk bacteriology: Most frequently isolated bacteria included *Escherichia coli*, *Staphylococcus aureus*, *Streptococcus dysgalactia*, and *Streptococcus uberis*.

Salmonella: *Salmonella* Dublin and *Salmonella* Typhimurium cases in dairy cattle were reported from both Manitoba VSL and PDS diagnostic laboratories. Multidrug resistance, was reported for both species.

Dairy surveillance at UCVM: several projects are underway, including CHeSS: (Cattle Health Surveillance System) sampling selected Alberta dairy farms for major infectious diseases and antimicrobial resistance; a Johne's disease eradication program; a voluntary leucosis control program; and the lameness reduction initiative, training veterinarians in the use of a risk assessment tool, and interviewing dairy producers to understand attitudes towards

Takeaways:

- *Salmonella* Dublin and Typhimurium cases are concerning, given the multidrug-resistant strains isolated, and the potential for zoonotic infection. Across a relatively small number of cases, one fairly consistently management practice identified is maintenance of an open herd, with recent introductions prior to diagnosis of clinical *Salmonella* cases .