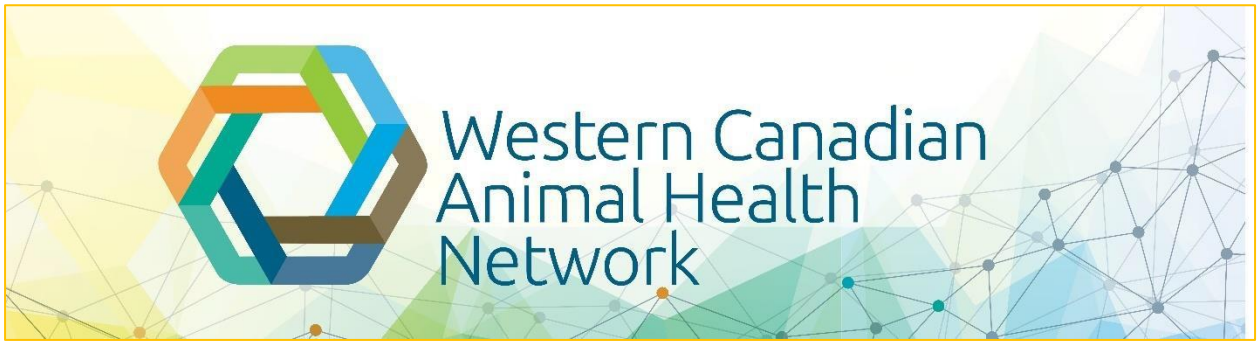

Western Canadian Animal Health Network

Year-end Summary – Spring 2025

Overview: Ubuntu and HPAI

The term “ubuntu” may refer to a shareware version of Linux, or an African word which has been translated as “I am because you are”. Both usages are pertinent to WeCAHN, an animal health surveillance system in which participants share and analyse large quantities of animal health data, and meet to give the data meaning. The highly pathogenic avian influenza (HPAI) outbreak in mammals occurring over 2024 in North America brought examples of ubuntu across the WeCAHN networks, as western Canada worked to understand complex HPAI datasets and give them meaning.

Highly pathogenic avian influenza (HPAI) continued to be a major story across WeCAHN networks in 2024-2025, as it was around the world. The HPAI outbreak in western Canada in 2024 posed challenges for western Canadian veterinary practitioners and livestock producers; it also provided numerous examples of WeCAHN’s ubuntu. Initially WeCAHN discussed potential clinical HPAI presentations in dairy cattle, and potential practitioner responses, shared e-blast updates to the bovine networks, later becoming a participant in the ongoing CAHSS weekly meetings and emails.

As 2024 continued and the quarterly network meetings for each WeCAHN network unfolded, each of the WeCAHN networks expressed different concerns and animal health issues with regards to HPAI:

- The dairy network followed the unfolding US story as veterinarians and researchers worked to identify clinical signs and particularly transmission routes, as well as surveillance methods and control measures. WeCAHN initially discussed potential clinical presentations and potential practitioner responses, shared e-blast updates to the bovine networks, later becoming a participant in the ongoing CAHSS weekly meetings and emails. An ongoing topic for discussion in the WeCAHN dairy networks this year has been western Canadian preparedness in the dairy sector, especially on an HPAI infected farm, should this happen in future.

- The beef network also discussed the potential for clinical presentations and responses (e.g. in introduction of cull dairy cows as nurse cows during calving season) and discussed pertinent research findings as these became available.

- Unfortunately, the commercial poultry network, unlike the others, did in fact see clinical HPAI infections in western commercial flocks. Network discussions included the impact on routine poultry practice work (i.e. attending to non-HPAI-related disease). One case report of *Salmonella* Enteritidis in a cage aviary layer flock suggested that indirect impacts of HPAI such as curtailing non-essential barn visits could also negatively affect flock surveillance and flock health.

- The small ruminants network discussed potential HPAI presentations in sheep and goats and likelihood of owners reporting to veterinarians. Consensus was that given the extremely small number of reported cases to date, HPAI would be relatively low on the rule-out list for neurological signs in neonates or mastitis in breeding females.

- The smallholder network discussed potential HPAI presentations in small poultry flocks, goat herds, or cows, especially dairy culls. E-blasts updated the WeCAHN smallholder veterinarian e-list on important

HPAI news from the US, such as the detection in a small herd of outside pigs in Oregon, and shared case reports involving clinical signs for which HPAI could be a rule-out, including diagnostic plans.

- The equine network discussed recent research on the potential for H5N1 to infect equids, as well as a current US survey of horses for evidence of exposure, or detection, of H5N1.

Broadly, the expansion of the HPAI outbreaks in 2024 to include mammalian livestock in the U.S. provided a template for WeCAHN response to an emerging disease in two fundamental areas: communication and collaboration.

Background

The Western Canadian Animal Health Network (WeCAHN) is a regional animal health surveillance system which began operations in April of 2020, with the support of the four western provinces (British Columbia, Alberta, Saskatchewan and Manitoba). WeCAHN is intended to be a permanent, sustainable framework for supporting animal health and welfare and veterinary public health in western Canada. The purpose of WeCAHN is to build an animal health surveillance system that connects producers, veterinarians, researchers and policy makers with the information needed to protect and improve animal health in western Canada (Western Canadian Animal Health Network (WeCAHN), 2021).

WeCAHN activity milestones in year five of operation (April 2024 – March 2025) included:

Beef network: One potential special project topic considered this fiscal year was estimating costs of pre-weaning BRD in beef cattle. The suggestion originated from conversations with the BCRC, the first organization to support continued funding of WeCAHN past year one. Investigation into possible approaches to the topic involved discussions with a range of western beef industry stakeholders, including veterinary practitioners, beef producers, provincial agrologists, and agricultural economists. While another topic was eventually selected for this year's special project, the preliminary work done on the pre-weaning BRD costing project could easily be leveraged in future years.
WeCAHN was delighted with the BCRC's invitation to review the BCRC Johne's disease webpages, and contribute WeCAHN network meeting graphics. In addition, the BCRC-funded series of three infographic-factsheets describing various aspects of western Canadian research into antimicrobial use and resistance (AMU and AMR) in western beef cattle, originally drafted in 2020, were updated with the most current available statistics.

Dairy network: A major recurring topic of discussion at network meetings this year has been H5N1, its potential incursion into western Canadian dairies, and our preparedness for such an event. Recent findings of the Canadian Dairy Network of Antimicrobial Stewardship and Resistance (CaDNetASR) were kindly shared by Dr. Daniella Rizzo, WeCAHN dairy network member and CaDNetASR lead.

Equine network**:** The WeCAHN equine network recently held its fourth quarterly meeting on 14th March 2025. The first year for the network has been a busy and productive one, starting with the drafting and refining of a WeCAHN equine clinical impressions survey. Each meeting has shown an increase in the level of practitioner involvement and information sharing. Additionally, a connection has been established between the network and

Equestrian Canada, with the WeCAHN website sharing EC information on their horse identification program (CHIP). A podcast for horse owners highlighting strangles risks and prevention was released in January 2025, and a factsheet for western equine practitioners describing the potential risks of the use of human pharmaceuticals used for equine sedation is being drafted.

Poultry network: Trends in condemnations at western federal poultry abattoirs are a regular topic of discussion at network meetings. Broadly, federal subcutaneous condemnations in chickens at western abattoirs continued to increase over the past year. Discussions continued outside network meetings with both veterinarians and broiler producers, regarding individual producer or practice experiences, and possible contributing factors. This topic was also considered for investigation in a special project. The one-on-one discussions with producers and practitioners were deeply appreciated, and strengthened WeCAHN's network ties with industry.

The Manitoba feather boards were directly connected with WeCAHN thanks to the effort of the Manitoba surveillance veterinarian. This resulted in improved dissemination of WeCAHN poultry network reports for producers as well as some very much appreciated feedback on those reports. Manitoba Egg Farmers kindly invited WeCAHN to contribute to their November 2024 newsletter, which was a first for the WeCAHN poultry network.

Smallholders network: This year has seen slightly increased and expanded activity on our smallholder e-lists, sharing case reports of queries from "general practitioner" veterinarians to our network specialists, seeking advice on diagnostic plans and potential treatment for smallholder cases. We also use this method for sharing pertinent animal health news, most recently regarding some US developments in their H5N1 outbreaks. We now have ~ 125 western Canadian veterinarians on the list and have received positive feedback on both case reports and news updates/alerts.

Small ruminants network: WeCAHN and CAHSS co-sponsored a webinar series of six weekly sessions on small ruminant medicine led by Drs Paula Menzies and Lynn Tait. Response to this series was extremely positive with 395 registrants. WeCAHN was also pleased to welcome a representative of Alberta Lamb to the small ruminants network this year.

Smallholders network: This year has seen slightly increased and expanded activity on our smallholder e-lists, sharing case reports of queries from "general practitioner" veterinarians to our network specialists, seeking advice on diagnostic plans and potential treatment for smallholder cases. We also use this method for sharing pertinent animal health news, most recently regarding some US developments in their H5N1 outbreaks. We now have ~ 125 western Canadian veterinarians on the list and have received positive feedback on both case reports and news updates/alerts.

WeCAHN organizational development and documentation: To support the new coordinator's transition, a WeCAHN manual of current activities and standard operating procedures has been developed, covering the broad areas of surveillance, knowledge transfer, communications, administration, and documentation.

WeCAHN as an early warning system

A key defining function of WeCAHN is to operate as part of a broader provincial and national early warning system for disease outbreaks. Across our networks, WeCAHN has identified, discussed, and shared information

on unusual case presentations or emerging disease.

Beef network: a recent network meeting discussed clinical presentations of sarcoscystosis, which, while not a novel pathologic diagnosis, was identified as an unfamiliar rule-out by the practitioners present. This was described in the Q3 veterinary quarterly report, which can be accessed by logging in to the members' side of the WeCAHN website. Membership is free of charge and can be obtained by submitting a membership request (https://members.wecahn.ca/register).

Dairy network: An outbreak of *Salmonella* Dublin septicemia in adult dairy cows (an unusual population for a clinical bovine *Salmonella* outbreak, in western Canada) was reported, associated with introduction of heifers from a development farm. LINK *E. coli* abortion supported by laboratory diagnosis was described in several western dairy herds. LINK

Equine network**:** Listeria septicemia was reported in a foal. LINK

Poultry network: HPAI continued to demand a huge amount of time and resources for network participants. Veterinarians also reported the dampening impact that HPAI had on normal practice activities, with reduced consultation on routine clinical disease or diagnostics. Some practitioners also suggested that the HPAI response, which included curtailing some regular industry barn visits, was partly responsible for the relatively late detection of specific flocks' disease problems, with a case of SE in layers being one potential example of this. On the prairies avian metapneumovirus was also reported as both acute clinical disease and more lingering downstream reduced production following acute disease outbreaks. LINK

Smallholder network: Muscovy duck disease was described at one recent network meeting vet report Q3 2024

Small ruminants network: The biggest story in this sector was the diagnosis of Cache Valley virus abortions and congenital malformations across the prairies, in late 2024 to early 2025. Different management strategies for next year, especially breeding season, were discussed, based on individual flock management and marketing goals. LINK *Neospora* abortion was also diagnosed in small ruminants in the west in 2024. LINK

The WeCAHN staff (coordinator and veterinary epidemiologist) have regular discussions with the WeCAHN network participants, other surveillance networks such as OAHN, RAIZO, the Canadian Animal health Surveillance System (CAHSS), the Canada West Swine Health Intelligence Network (CWSHIN), and AMRNet. Regular meetings are also held with industry groups such as the western Canadian cattle associations, and agricultural extension workers, as well as other stakeholders (e.g. Saskatchewan Sheep Board/Alberta Lamb/Equestrian Canada) to share successes and challenges, identify surveillance gaps to which WeCAHN might contribute, and identify potential additional data sources, as well as emerging concerns.
One of the best parts of WeCAHN staff work is discussing animal health issues with individual veterinary practitioners and producers as they contact WeCAHN on various matters ("I've been seeing ____. Anyone else seeing the same thing?"), and this too is an important part of maintaining connections in the western Canadian animal health early warning system.

WeCAHN Network Meeting Highlights April 2024- March 2025

The primary activities of WeCAHN occur within the context of the individual networks (currently beef cow-calf, dairy, poultry, and small ruminants). The main activity of each network is the quarterly network meeting. Participants at the network meetings include: veterinary practitioners from each western province active in the pertinent sector (e.g. beef cow-calf); representatives from each of the four veterinary diagnostic laboratories; provincial veterinarians representing their respective ministries of agriculture, faculty from the two western veterinary colleges; representative of CIPARS, where pertinent; industry representatives, and other researchers. Each network participant contributes data, information or intelligence as they are able, to the network dataset collated by the coordinator prior to the network meeting. This forms the basis for the network meeting discussion of animal health events during the three month period under discussion. Notes summarising the discussion are added to the dataset to create communications in summary and longer report format, in parallel for both producers and veterinary practitioners. These materials as well as additional specific targeted communications arising from them are then shared with industry groups, pertinent veterinary specialist groups, and disseminated on social media and via the WeCAHN website.

Common themes in communications across specific WeCAHN networks include identifying and assessing signals of emerging disease, sharing risk communications, and drafting and sharing targeted KTT.

Beef network**:** Some network practitioners described increasing diagnoses of bovine coronavirus infections in herds with BRD, from which no other pathogens were isolated. At one diagnostic lab, the detection of BCoV from respiratory samples is trending up over the past few years, in contrast to BCoV isolation from gastro-intestinal cases, for which any trend is less clear.

A veterinary pathologist inquired whether WeCAHN has noted increasing macrolide resistance in BRD pathogens. The AMR dataset we currently have access to really originate from one laboratory. With that caveat, the answer to that question is: no, in the datasets available to date (April 2025) we don't.

Background: we develop plots of resistance trends over time like this: we identify all of the isolates of a bacterial species, from a host species e.g. bovine, for which AST was done, in a 3-month period. We divide the number of these isolates classified Resistant by the total number of isolates tested. Then we plot these fractions of total isolates which are resistant, per quarter or 3 month period, in a graph.

Challenges in laboratory antibiogram and time-trend interpretation:

- We don't know why the isolates are being tested, or whether the animals from which the isolates originate have been treated, although we suspect most of them have.
- The veterinary practices from which the samples for testing come, have differing treatment protocols. For this and other reasons, the proportion of resistance seen in a certain bug-drug combination for a specific practice, even when it's significant part of our dataset, sometimes differs markedly from our overall computed proportion resistant. So what we observe for a quarter or over time may depend on who's submitting.
- The animal species for which we derive antibiogram plots may consist of major sub-populations (e.g. pre- and post-weaning calves) which we know have very different levels of AMU and AMR for the same bug-drug combination.

- One important field of metadata for many bacterial species, likely including BRD pathogens, is the sample type. So far we haven't stratified our plots this way although for some antibiograms, the level of resistance and time trend may vary markedly with the sample type.

With all these caveats, we do not see a time trend in tulathromycin resistance from clinical isolates of *M. haemolytica*, *H. somni*, and *P. multocida* from the lab for which we have the largest and most complete dataset. The BRD antibiograms do share some similarities with the 2023 feedlot antibiograms recently shared by the Canadian Feedlot Antimicrobial use and Antimicrobial Resistance Surveillance Program (CFAASP) pertaining to re-pulls ie cattle sampled after significant elapsed time in the feedlot, as opposed to cattle on arrival, who tend to have BRD microflora susceptible to commonly used antimicrobials (https://cfaasp.ca):

- Proportions rated resistant to tulathromycin for *M. haemolytica*, *H. somni*, and *P. multocida* on re-pulls, are comparable to those computed from the PDS clinical isolates for the same time period.
- They also share the same broad categorization of BRD pathogen AMR for 2023 ie *P. multocida* > *H. somni* > *M. haemolytica*.

A scientific article describing the case series of neonatal beef calves diagnosed with hepatic necrosis is being drafted with the objective of publishing in of the Canadian Veterinary Journal. The process of drafting this manuscript has involved a review of all the histopathology slides by two independent pathologists, resulting in refinement of the case definition and revision of the list of included cases.

Dairy network: HPAI in US dairy cattle, especially with regards to western Canadian preparedness, has been a frequent topic for network discussion this year. Leveraging the available US clinical research and descriptive summaries of attack rates, treatments etc. has supported discussion of preparedness of western Canadian diary farmers for a potential outbreak here. Recent findings of the Canadian Dairy Network of Antimicrobial Stewardship and Resistance (CaDNetASR) were kindly shared by Dr. Daniella Rizzo, WeCAHN dairy network member and CaDNetASR lead. A broad range of interesting clinical cases were discussed, including monensin toxicosis resulting from a feeding software error and an outbreak of "ketosis" eventually attributed to using the wrong test strips in a hand-held measurement device.

Equine network: At each quarterly meeting to date, the network has discussed the frequency of diagnosis of strangles cases on the prairies, as well as the potential challenges around diagnosis and management of some complex cases. Those cases investigated by PCR, and yielding detection with high Ct levels, are of particular concern.
While equine influenza has not been frequently reported by network practitioners or laboratories, the need for H5N1 surveillance in equids has been discussed at the last two network meetings given the small number of studies which document the potential or H5N1 infection in horses.

Poultry network: Trends in federal poultry condemnations is a regular topic of discussion at poultry network meetings. The observed trend to increasing subcutaneous condemnations has been discussed throughout the past year, with some practices especially conscious of increases in clients' cellulitis condemnations. Contributing causes vary across clients and flocks.
Both acute clinical cases of avian metapneumovirus (aMPV) and reduced performance in flicks with equivocal titres were described at recent network meetings. Some uncertainty has been expressed regarding the interpretation of relatively low aMPV titres in flocks with reduced performance as opposed to clinical cases of respiratory disease.

Smallholder network: The network clinical impressions survey for network veterinarians has been revised to allow capture of the syndromes most frequently reported by our practitioners, with input from the practitioners themselves. An updated list of provincial supports for veterinary diagnostics in smallholder medicine in western Canada has been drafted, circulated amongst network members, and shared publicly with our e-list of practitioners.

Small Ruminants Network: A recent network meeting in which a case of copper toxicosis was presented stimulated discussion of the optimal tissues for practitioners submit for workup of these cases, stressing the value of submitting both liver and kidney.
The potential use of client-performed necropsy and telemedicine have been an ongoing discussion. Some takeaways:

- Only a specific subset of clients will be interested and capable
- For these folks, this can be a useful activity for several reasons:
    - To provide documentation to support the maintenance of a VCPR
    - To provide insight into causes of early neonatal losses, which will often go un-investigated if necropsy must be performed by a veterinarian, for reasons of timing and cost.
- Additional supports for veterinarians and clients interested in client-performed necropsy could include:
    - Workshops/wet labs
    - Pictorial "atlas" or video resources, ideally available by phone

Website: The WeCAHN website continues to be the major platform for sharing animal health surveillance information with the public, especially veterinary practitioners and livestock producers. The support from CAHSS in providing a website of this caliber (capable of supporting searchable databases and generating targeted disease alerts to members) is crucial to WeCAHN's mission, and deeply appreciated.

Knowledge translation and transfer: During the year, a variety of KTT materials were shared including network reports, pagers covering a variety of animal health topics identified by the networks, podcasts, and webinars. A summary of the KTT materials prepared over the year is presented in Appendix 1.

Collaboration with other networks

WeCAHN is proud to collaborate with other surveillance networks, starting with the Canadian Animal Health Surveillance system (CAHSS). This relationship dates back to the earliest days of WeCAHN, when the pressing need for a WeCAHN website was met by CAHSS extending the invitation to be a microsite on the excellent CAHSS website.

Over the past year, WeCAHN also collaborated with CAHSS to present a webinar series on small ruminant medicine for veterinary practitioners, with registration of 395 veterinarians and veterinary technicians.

The Canada West Swine Health Intelligence Network is another extremely highly valued collaborator. While we continue to meet regularly to share challenges and best practices, over the past year we have also partnered in a more formal collaboration on the Outbreak Support Network (OSN). The OSN is a collaboration between CWSHIN and Western Canadian Animal Health Network (WeCAHN) with the purpose to establish a framework

for supporting practitioners and producers dealing with cases potentially reportable to CFIA. For purposes of the project, several diseases have been selected as examples of this kind of case: "blister" or vesicular diseases in swine; avian influenza in poultry, and bovine tuberculosis. The vesicular disease (VD) investigations, HPAI and bTB are representative diseases for rule out investigations, a rapid disease response, and a slower moving disease response, respectively.

The project, which began December 2023, is funded by Canada West Swine Health Intelligence Network (CWSHIN), working in collaboration with WeCAHN. Dr. Betty Althouse is the OSN coordinator and attended several WeCAHN network meetings to inform veterinarians about the project and to gather input. WeCAHN helped facilitate contacts with private veterinarians with experiences with the target diseases. From April 2024-March 2025 there was continued outreach to herd veterinarians, livestock producers and commodity groups, and government stakeholders.

An interim report in May 2024 articulated the problems for veterinarians and producers involved in a reportable disease investigation. Concerns varied with disease and species, but some common themes emerged, namely:

a. Communications and information-sharing (top priority)
b. Disease response policy (understanding, transparency)
c. Disease response structure (lack of inclusion of provinces and industry)
d. Timing of response (delays, preparedness)
e. Compensation process (information needed, costs covered)
f. Lack of financial supports for other costs (cleaning and disinfection, producers own costs related to disposal or transport, loss of sales, increased feed and other quarantine-related costs)
g. Lack of empathy for producers from regulators
h. Lack of mental health supports
i. Understanding public health roles in zoonotic diseases

Some solutions were proposed and shared with previous contacts, new interviews were held and in late summer the report and suggestions were shared with CFIA for input on recommended changes that they could influence. Contacts were made with western Canadian species veterinary groups and information on OSN was presented at:

- Western Association of Poultry Veterinarians (WAPV)- Banff-Oct 1, 2024
- Western Canadian Association of Swine Veterinarians (WCASV)-Saskatoon-Oct 19, 2024
- Western Canadian Association of Bovine Practitioners (WCABP)-Saskatoon-Jan. 18, 2025.

CFIA has provided input on the report and some of the identified problems have already been at least partially addressed. Some, such as financial supports, are identified as out of scope for both the project and CFIA.

With problems identified, the next year of the project will focus on recommendations to implement some solutions.

WeCAHN is also proud to collaborate with the Canada West Swine Health Intelligence Network (CWSHIN) in collecting data from network veterinary practitioners quarterly capturing their observations or client conversations regarding vesicles or “blisters” which could be a clinical sign of FMD or other vesicular (vesicle-

producing) diseases. The value of this type of evidence, documenting that Canadian veterinarians are "seen to be looking" could be particularly important in scenarios in which a signal was suggested present by, for example, a trading partner as opposed to Canadian producer, veterinarian, or regulatory agency.

Looking ahead: Plans for Year 7

Proposed activities for the networks in the coming year include:

- Welcoming our new WeCAHN coordinator, Dr. Ana Ulmer-Franco.
- Continuing to promote links with industry.
- Continuing refinements to data analysis and presentation.

Acknowledgements

WeCAHN requires the collaboration of many different people, groups and organizations. That said, we would like to specifically extend our thanks to:

- The network practitioners, who with the network producers form the beating heart of our surveillance networks. Fortunately for us, their passion for their work extends to joining network meetings, often while in the truck enroute to a call, or also juggling parenting duties first thing in the morning.
- The other network participants who similarly share time, data, and talents.
- Livestock producer groups in the four western provinces who similarly share WeCAHN news and materials and offer suggestions regarding potential activities and KTT.
- The existing animal health surveillance networks, especially CAHSS, C3H/PEN, and CIPARS, who have contributed substantial expertise and support.
- The WeCAHN steering and scientific advisory committees, who have offered their time, guidance and expertise in both the operation of WeCAHN and interpretation of findings.
- Prairie Diagnostic Services, led by Dr. Huang, for their steadfast support and encouragement.

References

Western Canadian Animal Health Network. Western Canadian Animal Health Network 2021 [Available from: https://www.wecahn.ca/.

Appendix 1. WeCAHN Knowledge Translation and Transfer, 2024-2025

Audience	Date	Participants	Title
Group training			
BC veterinary students	9 May 2024		Overview of WeCAHN
Poultry practice staff and clients	2 Aug. 2024	4	Trends in western Canadian federal subcutaneous condemnations
UCVM graduate students	4 Oct. 2024	6	Overview of WeCAHN
Conferences			
Western Association of Poultry Veterinarians	2 Oct. 2024	25	Update from WeCAHN
Canada West Swine Health Intelligence Network	24 Oct. 2024	3	Update from WeCAHN
Web-based training			
Western veterinary practitioners	Jan – Feb 2025	395	Small Ruminant Medicine Webinar Series
Western veterinary practitioners	9 May 2024	370	HPAI in Dairy Cattle: Update for Canadian Veterinarians/Veterinary Staff
Podcasts			
Western equine practitioners and owners	Jan. 2025	Network and Industry	Podcast: Strangles Risk and Prevention in Western Canada
Print media			
Western veterinary practitioners	March 2025	250	Western Canadian Association of Bovine Practitioners: Update from WeCAHN
Western livestock producers	Nov. 2024	300	Eggspertise article: *Salmonella* Enteritidis in an aviary layer flock: case report and takeaways
Western veterinary practitioners	Oct. 2024	Network e-list	Update: AI in a smallholder pig herd in the US
Western veterinary practitioners	March 2024	Network e-list	Smallholder Case Report: A Wobbly Goose
Western veterinary practitioners		Network e-list	Smallholder Case Report: ILT in a Small Flock
Western veterinary practitioners		Network e-list	Smallholder Case Report: Rooster with Swollen Comb
Western veterinary practitioners		Network e-list	Smallholder Case Report: Chicken with Oral Swelling
Western producers and veterinary practitioners	April 2025	Networks and industry	Use of Antimicrobials and Vaccines For Bovine Respiratory DiseaseInWesternCanadianBeefHerds
Western producers and veterinary practitioners	April 2025	Networks and industry	Antimicrobial and Vaccine Usage in Western Canadian Beef Cows
Western producers and veterinary practitioners	April 2025	Networks and industry	Antimicrobial and Vaccine Usage in Western Canadian Beef Calves
Western livestock producers	Quarterly	Networks and industry	WeCAHN Beef Network- PRODUCERS
Western veterinary practitioners	Quarterly	Networks	WeCAHN Beef-VET
Western livestock producer	Quarterly	Networks and industry	WeCAHN Dairy Network PRODUCERS
Western veterinary practitioners	Quarterly	Networks	WeCAHN Dairy - VET
Western livestock producer	Quarterly	Networks and industry	Poultry - PRODUCERS

Audience	Date	Participants	Title
Western veterinary practitioners	Quarterly	Networks	Poultry - VET
Western livestock producer	Quarterly	Networks and industry	Small Ruminants - PRODUCERS
Western veterinary practitioners	Quarterly	Networks	Small Ruminants - VET
Western livestock producer	Quarterly	Networks and industry	Smallholders - PRODUCERS
Western veterinary practitioners	Quarterly	Networks	Smallholders _ VET
Western livestock producer	Quarterly	Networks and industry	Equine - OWNERS
Western veterinary practitioners	Quarterly	Networks	Equine -VET