CWSHIN

CWSHIN serves western swine producers, swine herd practitioners and governments to improve swine health, production, and the economic prosperity of the sector.

Our vision is to have a surveillance system imbedded in an intelligence network that monitors diseases both present and absent.

For diseases present in western Canada (domestic diseases) to:

- Detect emerging swine health issues early
- Integrate information for response to regional health issues
- Provide information about endemic diseases (benchmark)

For diseases absent in western Canada to:

- Detect emerging swine health issues early
- Provide evidence of the absence of disease to support trade

https://www.cwshin.ca/

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CWSHIN swine health surveillance 2nd quarter 2020

Producer Report

Topics

- CanSpotASF
- CWSHIN surveillance
  - Laboratory data – diarrhea & *Step suis*
  - Good looking pigs condemned at slaughter
  - Epidemic Diarrhea (PED) in Manitoba
- Follow-up
  - Follow-up on *Strep zoo* from last quarter
  - Follow-up on "Purple sows"
- Around the world
  - New influenza virus found in swine in China
  - Aujeszky's disease (Pseudorabies) in wild pigs Oregon, USA

Practical tips

- Contact you herd practitioner:
  - when you see "purple sows"
  - when you see unusual diarrhea
  - if your finishers have: a short cough; severe heavy breathing difficulties – sitting with open mouth and pumping flanks.
- Biosecurity
  - If you feel sick (flu-like symptoms, cough, fever), stay home.
  - Discuss and review barriers and possibility for contact between your farmed pigs and wild pigs with your herd practitioner.
  - Assembly yards, layover facilities etc. (high traffic & high-risk facilities) and connected transport continue to be a risk for PED.
  - Producers are reminded that infected manure is a possible route of disease introduction and to take extra precautions when spreading possibly infected manure.

CWSHIN & CanSpotASF

CWSHIN's role is to help distribute information about CanSpotASF.

THE DISEASE AFRICAN SWINE FEVER CAUSES ADVERSE EFFECTS ON PRODUCTION AND THE SECTOR - THE SURVEILLANCE PROGRAM WILL HELP MINIMIZE THE ADVERSE EFFECTS!

The first new tool in CanSpotASF "Risk-based early detection testing" at approved laboratories starts in the 3rd quarter 2020

Samples arriving at pathology laboratories across Canada may be tested for ASF.

For more information:

https://www.ahwcouncil.ca/african-swine-fever-surveillance-information

CanSpotASF

CWSHIN's role is to help distribute information about CanSpotASF

CanSpotASF is enhanced surveillance to protect the swine sector from the impacts of ASF. It is made up of several surveillance tools that will be phased in, with the first starting in the 3rd quarter of 2020 as a pilot. Phase 1 is the "Risk-based early detection testing at approved laboratories" and the goal is to improve early detection and help minimize the impact of ASF.

The problems in the early days (or weeks) of a case of ASF are that: (1) clinical signs of ASF and normally occurring disease may look the same to producers, herd veterinarians and pathologists at the laboratories; and (2) at first ASF will spread slowly in a herd with few animals affected. Therefore, it is hard to detect ASF early. So, by testing animals from herds with a history of these diseases, or cases with similar signs at the laboratory, we improve early detection of ASF.

From the 3rd quarter 2020, samples arriving at pathology laboratories across Canada may be tested for ASF. Based on data from PDS and VDS we expect about 50 cases to be eligible per quarter; however, not all will be tested. The decision to test for ASF will be made in collaboration between the pathologist and the herd veterinarian.

The test is close to perfect, so with the planned testing in Canada we expect one false positive in 14 years. A herd with a false positive should expect movement restrictions for 48-96 hours during the CFIA's investigation before going back to normal.

Currently, the approved laboratories for ASF testing are:

- the MAPAQ laboratory in Quebec,
- the Ontario Animal Health Laboratory,
- Prairie Diagnostic Services,
- Alberta Agriculture and Forestry Agri-Food Laboratories, and
- the BC Animal Health Center.

Note that VDS in Winnipeg is working on a system for referral of samples to NCFAD for ASF testing so they can participate in the surveillance.

CWSHIN surveillance

Laboratory data

New PCR test for COVID-19 in animals was added to PDS service.

Lab-data - diarrhea

An increase in diarrhea was driven by Colibacillosis, Rotavirus and Salmonella

Colibacillosis was the most frequent disease in the digestive syndrome.

Herd practitioners reported that diarrhea associated with salmonella in a co-infection with other pathogens seemed to be more frequent.

This time the salmonella illness in humans was traced to red onions from the USA but it could have been traced to pork.

Septicemia – *Strep suis*

A new and higher level of septicemia occurrence has been seen at laboratories since the last quarter of 2018.

Practical tips

Diarrhea in swine herds should be carefully investigated by your herd practitioner.

Call your veterinarian when you see unusual diarrhea.

Laboratory data

PDS added a test for COVID-19 in animals to their service. The test will only be performed after approval by the CVO in the province where the animals are located.

Diarrhea

An increase in diarrhea (Digestive syndrome) was driven by three diseases Colibacillosis, Rotavirus and Salmonella. Diarrhea with no mortality in late nursery caused concern as a differential to PED.

Colibacillosis was the most frequent disease, but the practitioners reported that clinical salmonella was seen more frequently as a co-infection with other pathogens such as Rota virus.

CDC, public health and regulatory officials in several states (the USA) and Canadian Health officials have reported an outbreak on Salmonella [enterica serotype] Newport illness in humans.

In Canada, individuals became sick between mid-June 2020 and mid-July 2020 and following provinces have reported cases: British Columbia (23), Alberta (31), Manitoba (3), Ontario (1), and Prince Edward Island (1).

Investigators in Canada and the USA collaborated to identify the source of the outbreak and by early August, red onions from the USA were identified as a source.

This time the salmonella illness in humans was traced to red onions from the USA but it could have been traced to pork. Therefore, it is important to control salmonella-diarrhea in swine herds to avoid contamination at slaughter.

Septicemia – Strep suis

SPC chart shows a new and higher level of septicemia since the last quarter of 2018 (chart not shown).

When the pathogens detected in cases of septicemia were explored it was found that *Strep suis* showed the same pattern as the septicemia.

From practices it was reported that *Strep suis* is always around and sporadically it causes clinical signs. One practitioner reported that more cases were seen.

CWSHIN surveillance

Clinical Impression Survey

APP (*Actinobacillus pleuropneumoniae* serotype 12) caused 10% condemnation rates in pigs from one flow.

Practical tips:

Contact your herd veterinarian if your finishers have:

- A short cough
- Severe heavy breathing difficulties – sitting with open mouth and pumping flanks.

PED

One active PED premises remains from the 2019 PED epidemic in MB.

On 9 June 2020, two new premises in MB were confirmed positive for PED.

On 10 July 2020, PED recovering pigs were moved to a premises that was designated as the 3rd infected premises based on the movement.

Surveillance for PED is ongoing in MB.

Practical tips

Assembly yards, layover facilities etc. (high traffic & high-risk facilities) and connected transport continue to be a risk for PED.

Producers are reminded that infected manure is a possible route of disease introduction and to take extra precautions when spreading possibly infected manure.

Clinical Impression survey

Good looking pigs condemned at slaughter.

Up to 10% condemnation rates due to pleuritis was seen in pigs from one flow. The diagnosis APP (*Actinobacillus pleuropneumoniae* serotype 12) was confirmed by laboratory diagnosis on tissues from the abattoir. Serological testing of pigs from the flow indicated seroconversion in the mid-finisher period.

Contact your herd veterinarian if your finishers have:

- A short cough, perhaps one to three coughs at a time
- Severe heavy breathing difficulties – sitting with open mouth and pumping flanks.

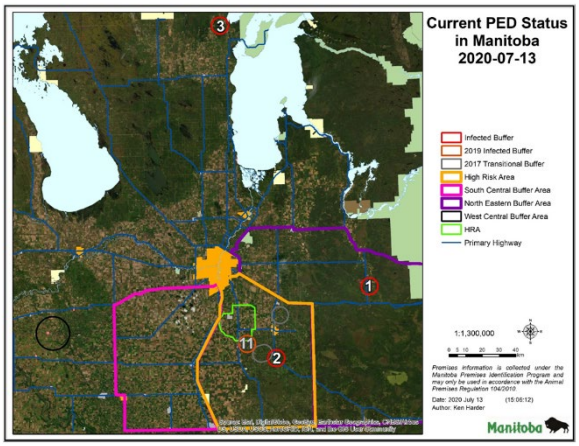
Rotavirus vaccines

The Prosystem RCE vaccine does not work consistently for all strains of Rota A and there is no vaccine for Rota B & C. It was suggested to make a justification to bring in the USA technology for B & C strains, but also for Rota A strains that are different than in the Prosystem RCE vaccine that is available.

Porcine Epidemic Diarrhea (PED) in Manitoba

2019 PED in MB

From 27 Feb. to 21 Nov. 2019, 82 swine premises in MB were confirmed PED positive. One finisher premises remains infected in buffer area 11. All other affected premises (81) have obtained presumptive negative status.



2020 PED in MB

Three swine premises have been confirmed to have PED. On 9 June 2020, two nursery operations located in Buffer Areas (1 &2) showed clinical signs and subsequently tested positive for PED. 10 July 2020, recovering pigs from these were moved to a finisher operation in the Buffer Area (3). There are NO premises with swine in a 5km radius from this finisher operation and the affected pigs are the only pigs on the premises.

Follow-up from last quarter

Purple sows – current conclusion.

"Purple sows" is a clinical sign that may be caused by various pathogens.

The severity of the cases may depend on what pathogens are causing purple sows.

The emerging issue investigation was deemed useful.

Suggested next step is to develop a diagnostic plan for purple sows with the objective to describe the host of pathogens that cause this clinical presentation in the region.

Practical tip:

Contact you herd practitioner when you see "purple sows".

PED surveillance in MB

Surveillance conducted on contacts and premises within 5 km of the 1st case and targeted premises between 5 and 10 km of the 2nd case has been negative to date. No positive premises have been identified.

Follow-up from last quarter

Follow-up on Strep zoo

One premises depopulated, 4 premises were stable and no *Strep zoo* issues at provincial abattoirs were reported for a while

Follow-up on "Purple sows"

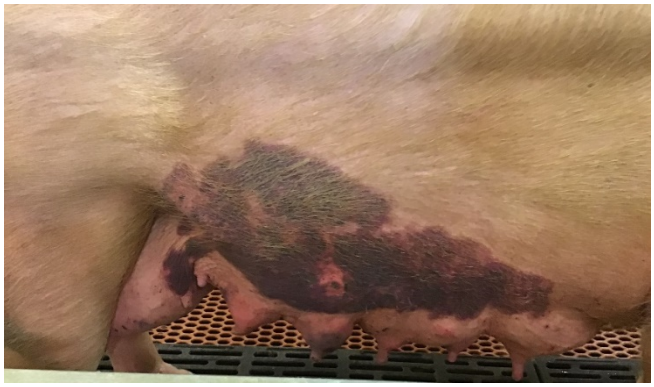
Last quarter we piloted a new activity we have named "Targeted emerging issue investigation" where we follow-up on an emerging issue/condition. The pilot was about the unusual condition "purple sows", described as sows affected with hemorrhagic purpura located on abdomen and distal extremities.

Discussion and next steps:

This type of emerging issue investigation was deemed useful (by call participants) to get a better perspective across the region.

The result of the "Purple sows" investigation was that the condition seems to be very rare and PCV3 may be one of many pathogens that may cause purple sows.

The suggested next step is to develop a diagnostic plan for purple sows with the objective to describe the host of pathogens that cause this clinical presentation in the region.



Around the world

New Influenza virus found in China?

Attention has been paid to a Chinese study that led to media headlines referring to “human pandemic risk”.

This virus has characteristics of pig, avian and human influenza. However, there are multiple influenza strains with the same characteristics.

So, finding one influenza virus with these characteristics does not indicate any increased risk to people. They are simply reporting that they found it and there are potentials

Aujeszky’s Disease (Pseudorabies) (AD) in wild pigs Oregon, USA

AD is a highly contagious infectious disease of livestock, causing neurologic, respiratory, and reproductive disorders. In fully susceptible sow barns, a common presentation is abortions, and close to 100% preweaning mortality.

Practical tips:

Get vaccinated against human seasonal influenza.

If you feel sick, stay home.

Good biosecurity includes barriers to contact between farmed pigs and wild pigs.

Review barriers and possibility for contact between your farmed pigs and wild pigs with your herd practitioner.

Around the world

New influenza virus found in swine in China?

Substantial attention has been paid to a study published in the Proceedings of the National Academy of Sciences in June 2020. The study led to media headlines referring to “*human pandemic risk*”, which is not necessarily true!

This virus may have reached the press because it has characteristics of pig, avian and human influenza and we are in the middle of another human pandemic (COVID-19).

However, there are multiple influenza strains with the same characteristics. So, finding one influenza virus with these characteristics does not indicate any increased risk to people. They are simply reporting that they found it and there are potentials.

Aujeszky’s Disease (Pseudorabies) (AD) in wild pigs Oregon, USA

An adult wild pig from Oregon has tested positive for AD in the surveillance program. The pig was sampled on 8 June 2020 and is the 1st detection of pseudorabies in a wild pig in Oregon since 2007, when the program started.

AD is a highly contagious infectious (herpes virus) disease of livestock, causing neurologic, respiratory, and reproductive disorders. In fully susceptible sow barns, a common presentation is abortions, and close to 100% preweaning mortality. In finisher barns, the disease looks like influenza. Pigs are the only natural host but most other livestock species (except horses) may be infected, typically with death within 48 hours of onset of clinical signs. In cattle, the disease is also known as “mad itch disease.”

Practical tips:

Good biosecurity includes barriers to contact between farmed pigs and wild pigs. Review barriers and possibility for contact between your farmed pigs and wild pigs.

Canada West Swine Health Intelligence Network