

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.

The surveillance system will be monitoring and assessing trends over time to:

- Detect new emerging swine health issues;
- Detect unusual clinical presentation of known diseases;
- Provide information about endemic diseases; and,
- For diseases absent in western Canada (such as FMD and ASF) the objective is to help provide evidence of the absence of disease to support trade.

In the intelligence network, we seek to exchange experience and knowledge on disease occurrence, treatment, control, and prevention.

<https://www.cwshin.ca/>

CWSHIN

Swine Health Surveillance

4th quarter 2022

Producer Report

This report is intended for swine producers in the region.

Message

New organisms and unusual presentation of known diseases have come to our attention. Some organisms that are new to the region may have trade impact (such as Seneca Valley Virus, SVV) and others may have detrimental impact on production (such as *Streptococcus equii zooepidemicus*). For new diseases or unusual clinical presentations, the relationship between the organism and disease is often still unclear. However, we need to be vigilant and build knowledge to be prepared to minimize their impact on the swine sector and individual producers.

Practical tips

Therefore, producers you can help by being on the look-out for:

- Skin lesions such as blisters on snouts, legs, or other parts of the pig; discoloring (bleeding)
- Sudden death in any age group
- Increased diarrhea

and contact your swine practitioner if you see any of these signs.

Contents

This quarter (October to December) we followed up on three conditions from the previous quarter:

- A case of *Streptococcus equii zooepidemicus* in Alberta
- Porcine Epidemic Diarrhea (PED) in Manitoba
- Seneca Valley Virus (SVV) and Skin syndrome

The surveillance results focused on “**unusual clinical presentations**” and detection of organisms with an unclear role in disease. The cases were reported as comments in the clinical impression survey and discussed as case stories.

Follow-up: *Strep zoo*

Case story

A 5,000-sow operation in Alberta was diagnosed with *Streptococcus equii zooepidemicus*. This case has had high sow mortality about 300 sows (in a 4-month period).

Exposure under treatment from October to December failed as control measure.

S zoo caused sudden death – 12 hours from sows go off feed to death. Therefore, the disease is easy to miss in the early stages where treatment may be effective.

The experience is that *S zoo* is a sporadic and slow-moving disease requiring nose-to-nose contact.

Practical tip

Sudden death in sows could be *S zooepidemicus* or African Swine Fever (ASF)

- Call your swine practitioner when you see sudden death
- Ask the swine practitioner to request ASF testing as a rule-out in laboratory submissions

FOLLOW-UP: *Streptococcus equii zooepidemicus* in AB

Recap from last quarter (Q3 2022)

There had been 5 previous cases (2019) in one system in MB. All cases were depopulated to cleaned up.

A 5,000-sow operation in Alberta was diagnosed with *S equii zooepidemicus* in late September 2022. The sow operation implemented a control strategy without depopulation but applied treatments while acclimating gilts through feedback. In addition, cull sows were held back until they could be shipped Fridays to a plant that could handle them.

Update (October to December 2022)

The sow mortality has been high with total deaths at 300 sows (about 6% in a 4-month period), last week alone (late January) 60 sows were lost (1.2%).

Exposure (feedback) under treatment from October to December failed as control measure. From October to December (under the blanket of treatment) the sow mortality returned to normal. However, when the antibiotic treatments ceased in December the sow mortality increased again. In January, about 70 sows per day needed treatment.

The experiences from this case are:

- *S zoo* is a sporadic and slow-moving disease requiring nose-to-nose contact
- *S zoo* causes sudden death – 12 hours from sows go off feed (depression) to death. Therefore, it is easy to miss the early stages of the disease where treatment may be effective.
- Nursery / finishers have been doing well with low mortality and so far they have been *S zoo* negative
- Cull sows have been shipped with no increased mortality. They are shipped between provinces – transport time 6-7 hours

Experience from the 2019 cases in MB

- Finishers doing well until stressed (shipped to slaughter)
- Clinical problems seem to start as animals get close to adulthood.

Follow-up: PED in MB

A total of 128 premises have been declared positive for PED since October 2021.

The last new case was 31 October 2022 where the status was revoked on a finisher operation in Buffer 2 (high-risk area). There are (still) 43 active cases (24 January 2023).

Practical tip

Diarrhea is one of the most common diseases in pigs – it could be PED therefore,

- Call your swine practitioner if you see increased diarrhea

FOLLOW-UP: Porcine Epidemic Diarrhea (PED) in MB

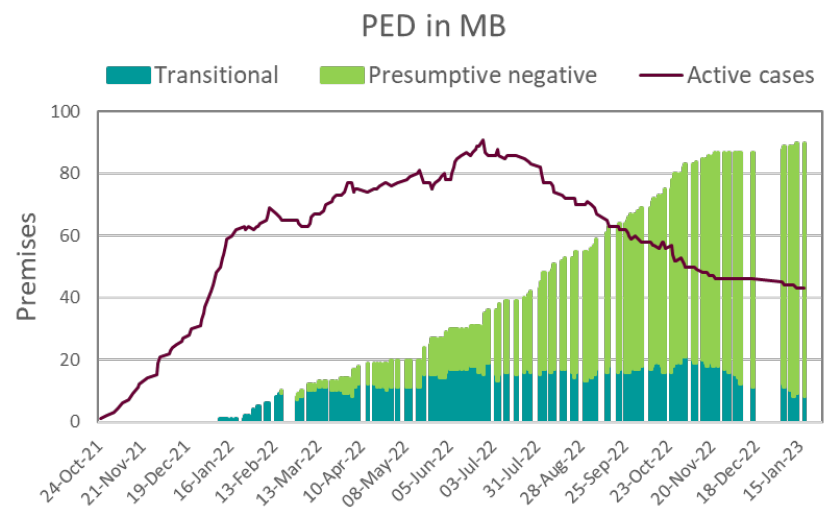
Sit Rep 107 / 24 January 2023.

Since October 2021, a total of 128 premises have been declared positive for PED

- 121 swine premises in the high-risk area
- 7 outside the high-risk area

The last new case was 31 October 2022 where the status was revoked on a finisher operation in Buffer 2 (high-risk area). The (still) active cases are:

- 35 premises with finishers. These are expected to take time before recovered pigs can be shipped to slaughter and the premises can achieve transitional / presumptive negative status
- 6 nurseries
- 2 sow premises (both unique and no longer high risk)



Follow-up: Skin syndrome and SVV

In summer 2022, Seneca Valley Virus (SVV) caused a disruption in flow of cull sows to slaughter in the USA. Therefore, in CWSHIN, we observe the Skin syndrome and SVV more closely now.

In Q3/Q4, there was an increase in laboratory positives for greasy pig and the surveillance for SVV at assembly yards has been ramped up.

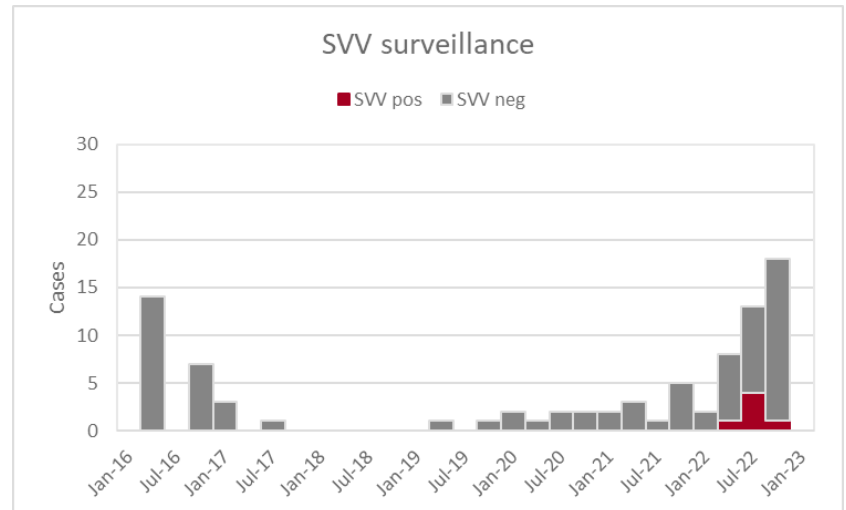
FOLLOW-UP: Skin syndrome and Seneca Valley virus (SVV)

Background on SVV

Without laboratory testing SVV is indistinguishable from FMD because SVV cause blisters on snouts and legs very similar to FMD.

SVV has been reported in at least 7 states the USA (South Dakota, Iowa, Minnesota, North Carolina, New Jersey, Illinois, Louisiana, California). Other countries that have seen SVV are Australia, New Zealand, Brazil and lately the UK. In Canada, SVV has been detected at assembly yards in MB and ON (2016); two herds in ON (2019); and lately again at assembly yards in MB in 2022

SVV has caused export disruption for cull sows from assembly yards destined for slaughter in the US in 2022 which affected the cull sow flow in MB, SK, and AB.



As a result, the assembly yards have had to step up their control measures, export inspections, and surveillance. The testing and inspection for SVV (and FMD) must prove that SVV is the cause of blisters if any are seen before sows can be shipped.

Currently there are no other trade impacts. However, if SVV should become more widespread in Canada then international trade with pork, swine, beef, dairy cattle etc. may be impacted because the trade depends on WOA's¹ recognition of Canada as FMD free. This status (among other factors) would hinge on an increasing number of new cases with blisters that must be investigated by CFIA and/or (enhanced) active surveillance with testing for FMD/SVV.

¹ WOA World Organization for Animal Health previously know as OIE

CWSHIN Blister Model

CWSHIN has developed and maintains a model to help provide evidence of freedom from infectious viral diseases that cause blisters such as Foot and Mouth Disease (FMD) and SVV.

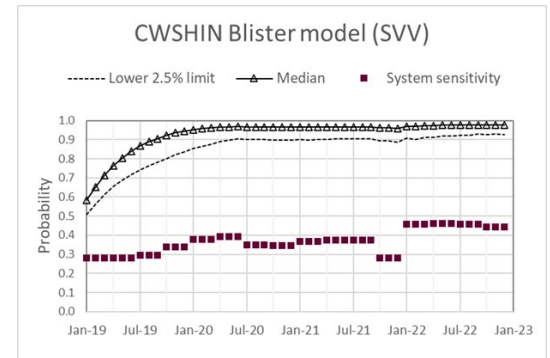
Practical tips

Producers can also contribute.

If you see blister in your pigs – call your practitioner.

CWSHIN REPORT

As preparedness for such a situation (widespread SVV and enhanced surveillance), CWSHIN's contribution is the Blister Model. Since 2019, the model has built evidence that commercial and small-scale swine operations in MB, SK, AB, and BC (excluding assembly yards, abattoirs etc.) are free from infectious viral vesicular diseases such as FMD and SVV. It is based on data provided by the swine practitioners in the Clinical Impression Surveys. At the end of 2022 the model result was a 95% probability of freedom from infectious viral vesicular diseases such as FMD and SVV in swine in the region.

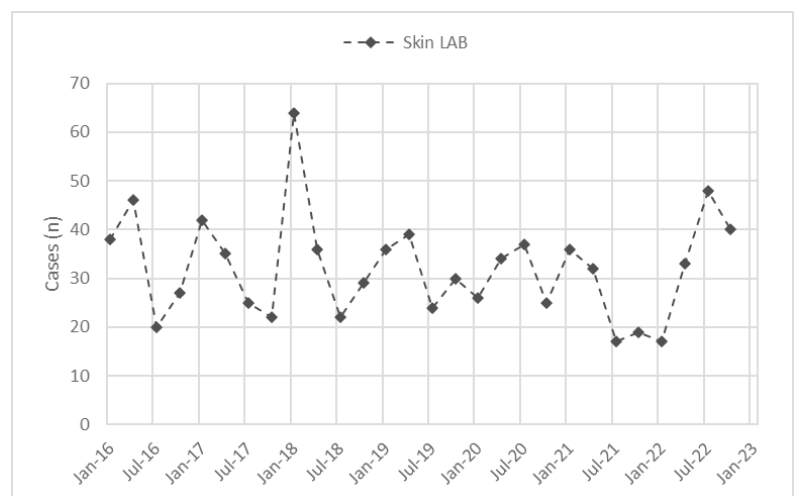


Producers can also contribute to build this evidence by calling their swine practitioner if they see blisters on snouts, legs, or any other part of a pig.

This quarter (October to December 2022)

The number of skin cases (n) submitted to the laboratories increased in Q3 and Q4 due to:

- Enhanced SVV surveillance at assembly yards over the last 6 months
- Greasy pig (*Staph hyicus*) testing and the number of positives increased in the same two quarters (Q3/Q4)
- External parasites testing has a seasonal pattern.



Case Stories

Unusual clinical presentation and organisms

Swine practitioners are reporting unusual clinical presentations and unusual organisms.

Producers should note that the open discussion of case stories help swine practitioners and other swine health expert be aware of potential new diseases or change in known and common disease.

Case Stories

The case stories reported in the Clinical Impression Surveys by the practices mentioned unusual clinical presentation of disease and unusual organisms.

Three practices reported cases of diarrhea where sapovirus was found. The general picture was diarrhea in young pigs (suckling or nursery). Sapovirus may be present in many herds (endemic) but its role in disease is still unclear.

A herd raised without antibiotics (RWA) and group housing of sows was diagnosed with parainfluenza and *Strep equisimilis*. The parainfluenza presented as flu-like clinical signs in gilts and piglets with cough and clear nasal discharge. The *Strep equisimilis* presented as *Strep suis*-like septicemia with sudden death.

In a herd that was newly repopulated with new genetics, 5-10% of piglet had splay leg (back legs only). The condition was so severe it had an impact on preweaning mortality. Brain lesions and atypical Pestivirus (APPv) were found. As additional information (on the call) a pathologist reported to have diagnosed APPv on 4 sites recently. However, the causal relationship is unclear.

CanSpotASF

ASF rule-out testing in Q4 was about half of the testing in Q3 with the same number of pathology cases at PDS/VDS.

Therefore, let us be reminded that:

- ASF suspect cases must be reported to CFIA immediately
- For cases with bleeding, discoloring or sudden death – call your swine practitioner and ask to have an ASF rule-out test requested if material is submitted to a laboratory
- Abattoir selection of eligible cases (selected total condemnations codes) has started on federally inspected abattoirs and will start soon on provincially inspected plants.

CanSpotASF - West	Jan-22	Apr-22	Jul-22	Oct-22
Pathology (caseID)	180	100	113	113
Eligible disease cases	34	34	22	19
Cases ASF tested (caseID)	25	33	25	14
Cases ASF tested (caseID) in % of eligible	74%	97%	114%	74%
Cases ASF tested (caseID) in % of pathology cases	14%	33%	22%	12%