

Common Airborne Transmissible Diseases in Canadian Swine Herds

What are Airborne Transmissible Diseases?

Microorganisms that are spread through aerosol droplets of animals, affecting the health of other animals or humans.

Porcine Reproductive and Respiratory Syndrome (PRRS):

A virus that attacks the macrophages, defense mechanisms, weakening the immune system of pigs. The virus affects the reproductive system in sows and the respiratory system in young pigs. PRRS is commonly known as blue ear disease.

Symptoms

Sow

- Loss of appetite
- Fever
- Fertility issues (abortion, still birth, and birth of weak piglets)

Young pigs

- Loss of appetite
- Lethargic
- Respiratory distress
- Red discoloring of skin
- Blue ears

Transmission

Transmission of PRRS is often related through the movement of pigs. Reports indicate movement of virus via contaminated transport vehicles and unsanitary handling practices (i.e. needles, clothing, unwashed hands). Other forms of viral transmission are windborne spread and insects.

Porcine Enzootic (Mycoplasmal) Pneumonia:

A lung infection caused by an organism called *Mycoplasma hyopneumoniae*. The infection alone is usually quite mild, however, when accompanied by other infections such as PRRS, Swine Influenza, and Actinobacillus pleuropneumonia the symptoms can worsen. Enzootic pneumonia is known as a prime organism that leads to other diseases by opening the lungs to infections.

Symptoms

Acute

- Fever
- Respiratory distress
- Pneumonia
- High mortality in all ages of pigs

Chronic

- Respiratory distress
- Prolonged cough
- Lung lesions

Transmission

Porcine Enzootic Pneumonia has two routes of transmission which include movement of infected pigs and windborne spread.



Swine Influenza Virus:

A rapid spreading virus with the capability to create new strains by altering its antigenic structure. Rapid outbreaks of the virus can be attributed to its short incubation period of 12-48 hours.

Symptoms

- Fever
- Acute respiratory distress
- Coughing
- Loss of appetite
- Fertility issues
- Possible repeat of virus at herd level

Transmission

Swine influenza can be spread by infected humans and pigs. Wind is another suggested form of transmission, but it is yet to be proven.

Porcine Epidemic Diarrhea (PED):

A virus that causes a rapid spread of disease throughout a herd. PED is brought about from the coronavirus, which damages the villi, hair like projections that increase absorption in the stomach, leading to dehydration.

Symptoms

- Diarrhea
- Vomiting
- High mortality in piglets

Transmission

PED is frequently spread through the feces of pigs. The virus has been found in a number of locations such as pig barns, transportation vehicles, slaughterhouses, along with many fomites (i.e. boots, coveralls etc.).

References:

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