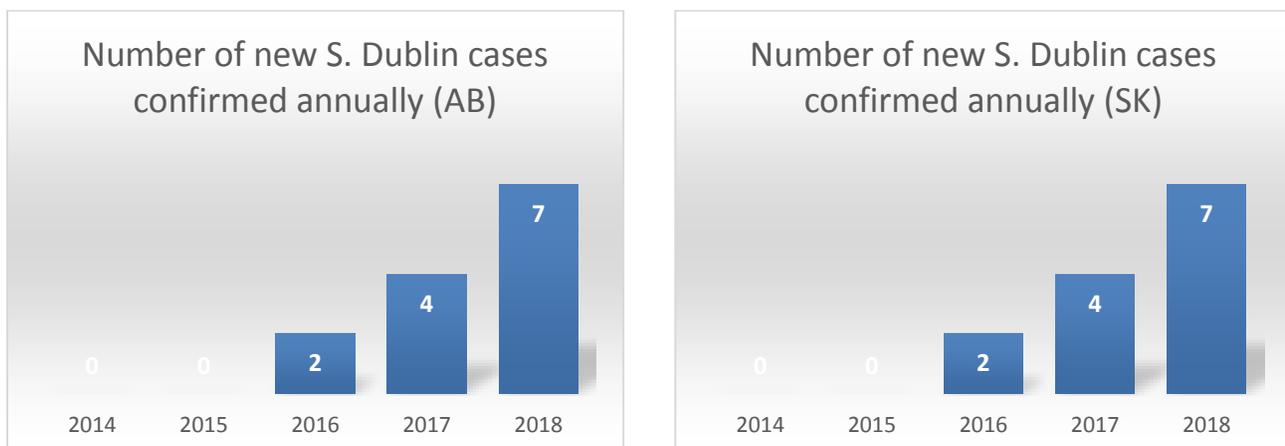


Multi-drug Resistant Salmonella Dublin in Cattle

Prairie Diagnostic Services (PDS) has increasingly been isolating *Salmonella Dublin* (Group D) from diagnostic samples submitted from cattle premises in Alberta and Saskatchewan. They have all shown the same antimicrobial susceptibility profile, being resistant to multiple antibiotics including:

- Ceftiofur
- Tetracycline
- Tilmicosin
- Florfenicol
- Tulathromycin

While the number of cases diagnosed annually is still relatively low, there is a clear increasing trend:



It is unknown how and when multi-drug resistant *Salmonella Dublin* strains emerged in the Canadian bovine industry, or how widespread they are. In Quebec, the disease was first diagnosed in 2014 and, since then, surveillance has shown that it has spread to at least 10 per cent of that province's dairy herds. *Salmonella Dublin* is characterized by a common multi-drug resistant profile regardless of where it is found, be it Canada, the United States or Europe.

(the following has been largely excerpted from Cornell University Animal Health Advisory on *Salmonella Dublin*, accessed from <https://ahdc.vet.cornell.edu/programs/NYSCHAP/docs/SalmonellaDublinUpdate.pdf>. Visit this link for more information on the epidemiology and management of *Salmonella Dublin* in cattle.)

It is advised that cattle operations take steps to prevent the introduction and transmission of *Salmonella Dublin* and other enteric pathogens. Illness associated with *Salmonella Dublin* can be difficult to treat, may be fatal, and the environment, once contaminated, may be difficult to clean up. People, other livestock and companion animal species are also susceptible to infection and could suffer serious illness. Carrier animals can maintain the infection within a herd and may continue to shed organisms contributing to repeat exposure of healthy and sick animals. Cattle owners and caretakers should be especially alert to cattle illnesses involving fever, diarrhea, abortions, and respiratory signs (especially in calves) including coughing and labored breathing. While pneumonia is not considered to be an unusual illness in cattle populations, all pneumonia associated with a high incidence or mortality rate should be investigated promptly by a veterinarian. Blood cultures, nasal swabs, transtracheal washes, fecal cultures and other samples from sick animals can be submitted to PDS in Saskatoon for *Salmonella* diagnostic testing and other infectious diseases.

Salmonella spp. have the potential to infect people and can cause illness and death. Notify a physician or the local health department if any animal caretakers show signs of serious illness, such as fever, delirium, vomiting, diarrhea with or without blood, and abdominal cramping. Individuals with weakened or suppressed immune systems, pregnant women, and the very young and very old are most susceptible to infection and illness with *Salmonella spp.*
Consumption of raw milk is a high risk practice, especially from herds experiencing a suspected or confirmed outbreak of *Salmonella*