

## Ontario

### Encephalomyocarditis virus outbreak among suckling pigs

Over a two-week period in early May 1988, 16, two- to three-week-old piglets from four litters died suddenly on a 108-sow, farrow-to-finish farm. Cyanosis of extremities, copious serofibrinous pericardial and thoracic exudates, and diffuse myocardial hemorrhages were consistent necropsy findings. Histologically, the major lesions were nonsuppurative myocarditis, myocardial necrosis, and nonsuppurative meningoencephalitis. Bacterial cultures were unremarkable and viruses were not isolated from representative tissues.

A serum sample taken from a live piglet submitted near the end of the outbreak, and another taken from a surviving littermate two weeks later, had titers of 1:24 and 1:96 respectively to encephalomyocarditis (EMC) virus. Based on the clinical signs, gross, histopathological, and serological findings, a diagnosis of EMC virus outbreak was made.

The producer reported that rat infestation had become so severe over the winter that professional exterminators had to be contracted. Eradication procedures started the week prior to the outbreak.

We had previously demonstrated serological titers to EMC virus in Ontario pigs and alerted veterinarians to the possibility of clinical outbreaks (1).

#### References

1. Sanford SE, Derbyshire JB, Josephson GKA. Serological evidence of encephalomyocarditis virus in pigs in Ontario. *Can Vet J* 1985; 26: 228.

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## Alberta

### Avian salmonellosis

Three cases of avian salmonellosis were diagnosed in the Edmonton Veterinary Laboratory in September 1988. In each case, a different source of infection was implicated.

Mortality in a loft of pigeons started six weeks after newly purchased pigeons from Eastern Canada were added to the group. Both resident and newly purchased pigeons were emaciated and had lesions of hepatitis, nephritis, and enteritis. *Salmonella typhimurium* was isolated from the liver, kidney, and intestine of one dead and four live pigeons. Contact with free-flying birds, feed, and loft sanitation were eliminated as possible sources of infection. There was no previous health history of salmonellosis. The newly purchased birds were thought to be the most likely source of infection. It is well documented that birds surviving salmonellosis become carriers. They shed the organism periodically and infect penmates through contamination of feed and water. Transport for long distances is stressful and enhances shedding in carriers.

The second case occurred on a commercial broiler chicken farm. Mortality from salmonellosis started ten days after the chicks were placed at one day of age on the farm. It was suspected that infection most likely took place on the farm because of this delayed onset of mortality. Further investigation revealed a high

population of mice on the farm. Mice had access to the feed, which was heavily contaminated with mouse feces. A heavy growth of *Salmonella* sp. was obtained from mouse feces collected from the feed. Mice, rats, and other rodents should be considered carriers and can be a potential source of *Salmonella* sp. to poultry.

The third case was omphalitis due to *S. mbandaka* and *S. thompson* and was found in four-day-old chicks in two different commercial broiler farms. Omphalitis is a disease of newly hatched chicks. Infection occurs at the time of hatching, and fecal contamination of egg shells is of foremost importance in transmission of organisms causing omphalitis, including *Salmonella* sp.

In addition to the above, a variety of other sources can introduce *Salmonella* sp: animals (dogs, cats, swine, cattle, sheep), environment (water, soil, feed, litter), humans (attendants, servicemen, catching crews), and others such as feed trucks, crates, feed sacks, and flies.

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