International Pig Topics'

Pighealth BYTES

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31 – Swine vesicular disease I

Introduction

Swine vesicular disease is a disease of pigs that looks very much like foot and mouth disease. It was first seen in Italy in 1966 and since then has only been in Europe and a few Asian countries (Taiwan, Honk Kong, Macau and Japan). In Europe it disappeared by the early 1990s, but it reappeared in Portugal in 2007 and Italy in 2011.

Swine vesicular disease is on the OIE list of diseases. The disease is difficult to differentiate from foot and mouth disease so it helps in the diagnosis of foot and mouth disease to know that a country is free of swine vesicular disease. In 1997 when the disease was present in Taiwan, early cases of foot and mouth disease were misdiagnosed.

Cause

Swine vesicular disease is caused by a picornavirus and as there are only small antigenic variation between isolates, swine vesicular disease virus is considered to be a single serotype although four distinct phylogenetic groups are known.

This virus is not a public health risk.

Epidemiology

The swine vesicular disease virus was first isolated in Hong Kong in 1971 and then in various European countries the following year. Italy, because of its history of this disease, has a serological screening programme for swine vesicular disease virus and this detected the 2011 outbreak.

This disease has not been seen in the Americas. A UK study showed the main means of spread was movement of pigs (46%) and this was made up as follows: use of contaminated transport (21%), movement of infected pigs (16%) and market contacts (11%). After movement of pigs, the second source of infection was the feeding of contaminated waste food (15%). Contact with infection leads to viraemia within a day and clinical signs within two days. Shared open drainage systems in pig houses are a very effective way of spreading infection.

Pathogenesis

Swine vesicular disease can be subclinical or mild as well as severe (acute), but this latter form is usually associated with pigs housed on concrete flooring in humid conditions.