International Pig Topics

Pighealth BYTES

Your own reference source on pig health

Number: 210

Foot & mouth disease III

Pathogenesis

Infection enters the pig's body by crossing the lining of the pharynx (back of the throat) or it can enter through damaged skin. After initial virus multiplication in the pharynx or, in the case of the latter scenario, the regional lymph nodes, the virus passes into the circulation to create a viraemia, which typically lasts for four or five days. Then the virus rapidly multiplies in the cornified epithelia of the mouth, tongue and skin where the vesicles (blisters), which are typical of the disease, are produced.

The severity of the disease is influenced by viral virulence, the dose of virus and the physical state of the animals.

Incubation period

The incubation period for foot and mouth disease is very variable and is influenced by viral strain, dose, route of infection and farming conditions.

With direct intensive pig to pig contact the incubation period is usually 1-3 days but can be as long as nine days. The incubation period for farm to farm spread is 4-14 days.

Clinical signs

Foot and mouth disease is typically characterised by acute fever and the formation of vesicles in and around the mouth and on the feet. Heat and pain can be detected in the feet 24-48 hours before the appearance of the vesicles.

Lameness is a common finding, although this can be hard to see in animals housed on straw compared to animals on concrete. Affected animals can adopt a dog sitting posture, depression, anorexia and fever. The fever is variable and, typically, the temperature is 39-40°C but it can get as high as 42°C.

Mortality in adults is relatively low but can be high in piglets when an acute viral myocarditis occurs. Secondary bacterial infections in foot vesicles can result in chronic lameness, wasting and mortality.

Foot and mouth disease causes abortion.