International Pig Topics

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African swine fever III

Diagnosis

Because of the similarity of the clinical signs and post mortem findings to classical swine fever and other haemorrhagic diseases of swine, laboratory testing is essential to establish a definitive diagnosis. However, at post mortem the finding of hyperaemic splenomegaly, haemorrhagic infarction and haemorrhagic splenitis are very characteristic of African swine fever.

Samples that can be used for laboratory tests include lymph nodes, kidneys, spleen, lungs, blood and serum. Tissues are basically used for virus isolation, whereas blood and serum are primarily used for antibody detection but can also be used for virus isolation.

The most frequently used test for detecting virus are those based on direct immunofluorescence, the haemadsorption test and PCR.

Direct immunofluorescence can detect virus antigen in impression smears and tissue sections and is a good test in cases of acute African swine fever, but is less reliable in cases of subacute or chronic African swine fever.

There are several good PCR methods that are consistent, specific and highly sensitive for detecting the currently known genotypes of African swine fever virus.

As no vaccine is available the detection of antibody is indicative of the disease. Following infection antibody can circulate in the pig with African swine fever virus for six months and antibody can persist for years. The detection of antibodies is a useful way of confirming subacute and chronic forms of African swine fever.

ELISA is the most useful tool for large surveys and is well suited for control and eradication work.

Prevention and control

When African swine fever is suspected all pig movements must cease as no treatment or vaccine is available. It is important to protect African swine fever-free areas from the disease. In this context it must be noted that contaminated food waste at international airports has been an important source of this disease.

In Africa disease control includes tick management.