

NADIS disease bulletins are written specifically for farmers, to increase awareness of prevalent conditions and promote disease prevention and control, in order to benefit animal health and welfare.
Farmers are advised to discuss their individual farm circumstances with their veterinary surgeon.

Porcine Epidemic Diarrhoea

Porcine Epidemic Diarrhoea (PED) is an acute viral infection of the intestine of the pig, causing a dramatic but non fatal diarrhoea and vomiting with loss of condition. However, in individual animals, the disease is short lived and rapid recovery will normally occur. The disease is normally divided into 2 forms:-

Type I - Only affecting pigs from weaning onwards. Type II - Affecting all age groups. The latter can present very similar to Transmissible Gastroenteritis (TGE) without the mortality characteristic of that disease other than losses in baby pigs, either through dehydration or loss of milk from an affected mother.

Causative Organisms

PED is caused by 2 separate coronaviruses that are autogenically distinct from TGE and Porcine Respiratory Coronavirus and, as such, the immunity imparted to the pigs by the latter - which cross protects against TGE - does not protect pigs against PED.

That having been said, the incidence of diagnosed PED has declined through the 1990's but occasionally reappears, particularly affecting growing pigs in continuous flow and scrape through dunging systems.

Spread of the virus between and within farms is either by the movement of infected excreting pigs or their faeces. The disease can thus be spread mechanically by people, birds, lorries and rodents.

Clinical Signs

Typically, the disease will affect a high proportion of a population simultaneously producing a profuse, watery diarrhoea, often green in colour and usually associated with vomiting. The disease will typically last 2-3 days in individuals with inappetence and loss of growth before a complete recovery. In adults, associated production losses can occur such as:-

- 1) Increase in returns to service in sows affected in early pregnancy
- 2) Agalactia in farrowed sows
- 3) Loss of libido in boars
- 4) Abortions can usually occur

In a major herd breakdown, the disease will often spread in waves between departments, the speed of which is influenced by herd size, pig flow, housing design.

Historically, the disease has tended to be more prevalent in winter, where better viral survival favours spread between and within farms.

In continuous flow systems in finishing herds, the disease can become epidemic if newly introduced pigs are exposed to the faeces of previously affected animals.

Diagnosis

Diagnosis, as with most diseases, is based on clinical presentation supported by laboratory tests. The disease would be suspected where scour is seen in various age groups or is of a profuse watery nature and is unresponsive to treatment. Severe colitis in young growing pigs may be

confused with it, as will a range of infectious agents affecting the suckling pig (e.g. E coli, rotavirus). PMWS may also be confused with PED in weaners.

Differentiation from TGE is achieved by the lack of mortality and failure to demonstrate TGE virus in faeces/scour. Serological testing in recovered pigs will confirm the diagnosis.

Treatment and Control

As a viral disease, there is no specific treatment available, but it is necessary to provide support therapy to offset dehydration and starvation in young pigs and to avoid secondary disease.

In the face of an outbreak, the prudent approach is to attempt to accelerate the spread of infection around the herd to curtail the duration of an outbreak. This should only be done under veterinary direction.

In chronic disease situations, where clinical signs recycle within a finishing system, management changes must be put in place to break the cycle of the disease. This will involve washing and disinfecting of pens between batches and in the scrapethrough system, depopulation of the building may be needed with washing and disinfecting before re-stocking.

Prevention

The aim must be to keep the disease out of the herd. Thorough attention to biosecurity with respect to visitors and transport is essential, paying particular attention to stock lorries collecting pigs and fellmongers. Control of rodents, especially rats, should be an integral part of any farm and measures should be taken to minimise bird ingress to buildings and particularly avoid feed contamination.

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