International Pig Topics'
Pighealth BYTES
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008 – E. coli infections III

Diagnosis of neonatal diarrhoeas

Diagnosis is based on a combination of clinical signs, post mortem findings and isolation of an E. coli from a serogroup associated with this problem.

An antibiogram of the isolated E. coli should be made as this will facilitate treatment.

The differential diagnosis should include other causes of diarrhoea in young piglets, such as Clostridium perfringens infection, transmissible gastro enteritis (TGE), rotavirus infection and coccidiosis. Sometimes combination infections occur.

Treatment

Treatment centres around removal of the pathogenic E. coli, countering their harmful effects and optimising the environment and management of the piglets.

It is important to determine the antibiotic sensitivity pattern of the causative E. coli as these can vary dramatically between isolates and resistance to various antibiotics is commonplace.

Fluid therapy that centres around the administration of electrolytes and glucose to counter dehydration and resulting acidosis is often beneficial, as can be the use of drugs which counter the secretory effects of enterotoxin, such as chlorpromazine.

Young piglets must be kept warm (30-34°C) and out of draughts.

Prevention

The starting point of any prevention programme is the reduction of the numbers of pathogenic E. coli in the environment by good hygiene and between batch cleaning and disinfection. If we can reduce these numbers enough the piglets' own defence mechanisms will control infection by them.

The farrowing crate design should be such that the sow's faeces are deposited away from the piglets. This can be assisted by perforated or slatted floors behind the sow.

A dry, warm environment should be maintained in the farrowing house as this reduces E. coli numbers. Conversely, a damp or wet environment favours E. coli growth and multiplication. The sow should ideally be kept at 22°C because if she gets too warm she will disperse drinking water in an attempt to cool herself. Piglets need a higher temperature and this can be provided by a separate creep area.

If new animals are brought into the herd quarantine should be practised. Obviously, when it comes to this disease and its prevention there are merits in maintaining a closed herd.

The piglet should receive sufficient colostrum as this contains antibodies against the E. coli strains the sow has encountered. Maternal vaccination is a very effective way of passing immunity on to her progeny and protecting them against neonatal diarrhoeas caused by E. coli.