

Coccidiosis

Coccidiosis is a worldwide disease, caused by a parasite called *Isospora suis*. Diarrhoea is usually seen in pre-weaned piglets 5 to 15 days old, although in cases where this clinical sign is not seen (subclinical disease), affected pigs have a reduced growth rate. Clinical signs in adults are rare.

The juvenile parasite invades the lining of the intestine and, once it has reached the adult stage, eggs (oocysts) are released back out into the intestine. These infectious oocysts are passed out in the faeces which are then a source of infection for other pigs.

Coccidiosis is usually brought into the herd through incoming stock that are not showing clinical signs. Spread between pigs is via fresh infected pig faeces and contaminated pens. Sows only shed a small number of oocysts in their faeces, although enough to infect a piglet – young pigs shed a large number of eggs. The cycle of other piglets eating these causes many oocysts to be produced and gives a large environmental burden that can infect the next litter of piglets.

Cocci eggs are very stable in the environment, being able to survive for months outside the pig. They are also resistant to disinfectants, making cleaning and disinfection of pens difficult.

Clinical Signs

The function of the small intestine is to absorb nutrients from food as it passes along the gut. To increase the available surface area for absorption, the inside of the intestine is lined with many small finger-like projections, called villi.

The parasite invades these villi, causing them to shrink in size and so reduce the surface area of the intestine where nutrients are absorbed. Undigested food then passes into the large intestine where it interrupts the absorption of water, which is the main function of this part of the gut.

This disruption to normal digestion results in a pasty to watery scour that is whitish to yellow in colour. The piglet loses condition rapidly and may subsequently remain hairy for weeks. Severely affected piglets may die, while those who survive can take 10 to 14 days to recover from infection. Secondary infections, such as *E. coli* or Rotavirus, will make the recovery period longer and increase mortality up to 20% potentially. Due to the severe damage to the intestines, the pig can have a reduced growth rate through to slaughter.



White to yellow scour seen with coccidiosis.



Pictures courtesy of Nadis.org.uk

Diagnosis

Although piglets do shed the oocysts in their faeces, detection can be difficult and does not necessarily mean that it is the cause of the clinical signs seen. The only reliable method is to submit untreated, acutely affected piglets for post mortem examination. The intestine will appear thickened and histopathology on a piece of intestine, where the intestine is examined under a microscope, is essential for confirmation.

Due to the difficulty in reaching a definitive diagnosis, response to treatment is often used to diagnose coccidiosis. Control methods can also be used to help support this.

Treatment

Individual treatment with Toltrazuril is the most effective form of treatment. The timing of this treatment is very important and will vary between farms dependent on the farrowing house environment and the infection pressure present. Low level infection in the gut needs to have taken place prior to treatment in order that an adequate immune response is generated – generally treatment at 4 days of age is optimum for it to be effective, but this will vary between farms.

Response to antibiotics is poor since coccidial disease is caused by a parasite – antibiotics however, may be needed to treat secondary bacterial infections. The most suitable antibiotic for your farm will depend on what bacterial pathogens are present on the unit.

Symptomatic treatment, particularly with electrolytes, is beneficial.

Control & Prevention

Good hygiene management of the farrowing houses is essential to reduce transmission of oocysts between batches. Piglets shed the highest number of eggs in their faeces, so the farrowing pens can carry a high level of environmental contamination. The oocysts survive in any cracks and are also very resistant to drying.

The best method of reducing infection between batches is a combination of treatment at the correct time and also the use of limewash after cleaning and disinfection – this gives a protective layer between the piglets and the pen surface that contains the eggs. It is important to let the limewash dry for 3-4 days before using the pen for farrowing again since wet limewash can cause skin burns, especially important for the mammary glands of the sows post entry.

Please speak to your Vet to discuss any questions you may have about Coccidiosis on your farm