

Ascarid worms

Clinically and economically, the most important parasite of the pig in the UK is the large roundworm, *Ascaris suum*. The disease seldom has a high mortality, only in the most extreme cases will it cause death, but it will affect daily gain (worsening it by up to 10% across an animal's lifetime) and feed efficiency (up to a 13% decrease).

One of the main reasons that these worms can be challenging is the persistence of the egg stage in the environment. Once excreted from an infected host, the egg can persist for years in the environment – it has a shell that is both thick, hard and sticky. Simple washing has no effect at removing these eggs, and even using a disinfectant will give little response at reducing the infection pressure on the next batch of pigs. They can also be moved around or between farms easily by sticking to animals, people or machinery.

Clinical Signs

Clinical signs can be hard to pin down as they depend on the level of infection and what stage of the worm's lifecycle is present in the pig. After the eggs have been eaten, the larvae hatch out and burrow through the small intestine before moving towards the liver. They continue to migrate through the liver and it is this damage that gives the white scars that can be seen at slaughter or post mortem, so called 'milk spot'. This may be the first sign that there is a problem on farm and shows that there has been recent migration of larvae through the liver – if no other larvae hatch, the pig can heal its liver over the coming weeks to the point where the scarring disappears, a process that takes around 40 days. Milk spots on the liver are therefore an indicator of infection within the previous 6 weeks.

Following their trip through the liver, the worm larvae make their way into the lungs in order to trigger coughing and complete the cycle back into the intestines by being swallowed – at this point they develop into their final adult form and start laying eggs. The cough can be quite characteristic and will always end up being productive with an intermittent swallowing action.

Rarely, if there is a very high worm burden, the sheer number and size (the adults can be up to 40cm long) of worms present can cause vomiting, constipation, liver failure and even death.

Diagnosis

Diagnosis is not always straightforward, as the eggs are not consistently present in faecal samples. Data from abattoirs can be useful in assessing the challenge in finishers, and there are now blood tests that can show whether pigs have been exposed to ascarid worms.

Treatment & Control

Treatment of individuals or groups of pigs is carried out using conventional wormers such as ivermectin, fenbendazole and flubendazole. Control is important to have since, as with other infections at the same time, it has been shown that heavy worm infection over a vaccination timepoint can interfere with the immune response required for full protection.

By far the best way to deal with high levels of worm challenge is a thorough and intensive cleaning programme. Simple detergents, such as washing soda, are some of the most effective additions to a cleaning protocol to remove the sticky eggs, but this does not kill them and care must be taken to not take them back into a cleaned out area inadvertently.
