International Pig Topics

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Roundworms IV

Ascarids

The large roundworm, Ascaris suum, is, despite decades of aggressive worming, the most common roundworm in the global pig population.

The male reaches 25cm and the female 40cm in length. It resides in the pig's jejunum unattached and holds its position by swimming against peristalsis.

Each female lays 100,000s of eggs a day over its six month or so lifespan and, since these eggs have long lives and are resilient, the environment is invariably heavily contaminated wherever pigs are housed.

Lifecycle

The lifecycle is a direct one. Eggs are passed via the faeces and take about a month to become infective. The larvae are protected against environmental adversities and, after ingestion by another pig, pass down to its jejunum where they penetrate the intestinal wall. Most of the larvae are then carried via the bloodstream to the liver. A few go to the mesenteric lymph nodes and elsewhere in the pig's body.

The larvae that went to the liver then go, once again via the bloodstream, to the pig's lungs. After moulting and spending a few days in the lungs they enter the bronchioles. They are then coughed out of the lungs and carried up the trachea via capillary action and swallowed. They pass down the digestive tract to the jejunum to become mature adult worms. They start to lay their eggs six weeks after the original infection of the pig occurred.

The eggs of A. suum are resistant to extremes of temperature and can persist on pasture for 10 years or more. The eggs are resistant to many chemicals but steam and sunlight will destroy them.

These ascarid eggs have a sticky outer surface which aids their dispersal by boots, flies and other fomites.

Resistance

By the time pigs are six months old, they are resistant because of previous exposure to migrating larvae and/or age resistance.

Resistance causes larvae to be arrested in the jejunal wall by an intense inflammatory reaction as the larvae try to penetrate the wall.