

O149:K91:F4 E. coli

The F4 and F18 pili are the most common adherence factors for post-weaning scours.

The Sta Stb LT EAST-1 F4ac pathotype (O149:K91:F4) has become the predominant cause of post-weaning scours in Canada over the past 5 years and is being seen with increasing frequency in other countries as well.

Incidence and impact can vary greatly between barns since approximately 50% of pigs are genetically resistant to O149:K91:F4 infection (they do not have the F4 receptor, therefore; no attachment occurs).

Mortality and morbidity are strongly affected by environment and predisposing factors such as other diseases infecting concomitantly (such as PRRSV, TGE and Salmonella).

Diagnosis may be achieved by a combination of methods including

identification of lesions and causative bacteria by histology, immunofluorescence, in situ hybridization/PCR, traditional microbial identification methods and serotyping by agglutination and gene probes or PCR on culture.

Recent research has been conducted by Dr. Fairbrother (University of Montreal) into the use of an oral vaccine for O149:K91:F4 infection in weaned pigs. The vaccine contains a live, avirulent E. coli strain, which is F4 positive, but negative for the toxin genes. This strain colonizes the gut and induces immunity but has no negative effects on the pig.

Animals are dosed at 5 and 12 days post-weaning.

This preventative treatment is still under research status, but trial results are promising in animals that are positive for the F4 receptor.

