

TRANSMISSIBLE GASTROENTERITIS (TGE)

Pathology description

Transmissible gastro-enteritis (TGE) is an acute highly contagious disease of pigs caused by virus from the Coronaviridae family, Coronavirus genus. The disease is characterised by profuse diarrhoea and vomiting. There is high morbidity and mortality in piglets.

Symptoms

- **Sows:**
 - In acute outbreaks the most striking feature is the rapidity of spread.
 - Vomiting.
 - Diarrhoea.
 - Adult animals show varying degrees of inappetence and usually recover over a 5 to 7 day period.
- **Piglets:**
 - In the sucking piglet the disease is very severe.
 - Acute watery diarrhoea.
 - Almost 100% mortality within 2 to 3 days in piglets under 7 days of age due to severe dehydration and electrolyte imbalance.
 - There is no response to antibiotic therapy.
 - The most striking feature is the wet and dirty hairy appearance of all the litter due to the profuse diarrhoea
- **Weaners & Growers:**
 - When the virus is introduced into a finishing herd for the first time there is rapidly spreading, vomiting and watery diarrhea, eventually affecting almost all the animals.
 - Disease disappears spontaneously over a 3 to 5 week period.
 - Mortality is usually low.
 - The main effect on the individual growing pig is dehydration which is resolved in about a week.



Figure 1: intestines bloated with gas and containing curdled milk

Costs of the disease

- Increased feed cost
- Mortality in piglets <1 week old (nearly 100%)
- Morbidity in piglets >1 week old
- Less weight gain, increased slaughter age (5-10days)

Vectors

- **Environment**

Environmental contamination from one pen to another i.e. boots, brushes, shovels clothing etc
Entry may still occur by bird or wind transmission (up to 1.6 km)
Initial exposure takes place when pigs are placed on a site that has been contaminated with the corona virus.
- **Material**

Contaminated equipment

- **Animal**

Outbreaks of TGE usually start following the introduction of infected pigs. Sub-clinically infected animals can be a source of infection and recovered pigs often become carriers and can shed the virus for 2-3 weeks in their faeces. Large amounts of virus are excreted in the faeces of infected animals. The virus has a survival time of 2-3 weeks in faeces. Pig faeces therefore are the major source of transmission either directly carrier pig or indirectly through mechanical transmission.

- **Working method**

Poor hygiene procedures

Continual use of buildings without all-in, all-out may perpetuate disease.

Periods of stress may activate disease.

→ MAIN VECTOR: contaminated pigs

Preventive action

- Prevention of entry to farms relies on isolation, exclusion of unnecessary visitors or contaminated lorries and use of showers or disinfectant dips for visitors.
- Hygiene: cleaning and disinfecting of barn, let dry before new animals are entering
- An all-in, all-out policy should be operated in finishing and farrowing houses
- Putting new boars and gilts in quarantine: pigs remain carriers for 104 days of TGE, but may be safe after 40 days
- Control of rodents and birds may break the cycle of infection.

Controlling action

Because the TGE virus is easily spread during an epidemic by persons, animals and fomites, special care should be taken to prevent spread of unexposed groups of pigs and to neighboring herds. A specific treatment program should be implemented under the advice of the vet.

- Affected piglets can be supported using electrolyte replacer solutions.
- Early weaning, high environmental temperatures and hygiene may all help reduce mortality. Cross suckling of litters onto immune sows may also help.
- Water should be freely available to weaned pigs.
- Antimicrobials may control infections by other enteric pathogens.
- Vaccines do not protect completely and are not available in all countries.

Advised Protocols

For every possible vector, a hygiene protocol must be implemented. See these Specific Purpose Protocol:



HOUSING
HYGIENE



PERSONAL
HYGIENE



TRANSPORT