

ASK THE VET...

WHAT'S THE PEDv THREAT TO MY UNIT?

Duncan Berkshire (MA VetMB MSc CertPM MRCVS), from the North Yorkshire-based XL Vets Bishopton Veterinary Group, gives us the lowdown on PEDv and outlines some steps that producers can take to help protect their herds

QUESTION:

I've been hearing a lot about this new virus sweeping through North America called PEDv. What's the threat to my unit and what can I do to help keep the disease out of my pigs?

ANSWER:

Porcine epidemic diarrhoea virus (PEDv) is a relatively old infection, first diagnosed several decades ago in Europe. The latest problems with PEDv in North America, however, have been related to a new strain that originated in the Far East and then entered the North American pig herd with catastrophic consequences.

The new strain of PEDv has been circulating in China, Thailand and Vietnam for quite some time, with some reports heading back to 2010. It was first diagnosed in central USA in May 2013 and there is currently no confirmed way that the disease entered the country. Since then it has spread into 29 states in the US, along with both Canada and Mexico. No cases have yet been reported or detected in Europe, and there is a voluntary ban on the import of live pigs from North America.

Old-style PEDv was relatively low impact, with minor scour hitting young pigs and low virulence, meaning that it didn't spread too quickly between other pigs and farms. This new strain of PEDv is exceedingly infectious and spreads quickly both on and between farms. It has far more severe clinical signs within the animals and a far higher rate of mortality.

Although the old strain of PEDv has circulated in Europe previously within the pig herds, it would appear likely that there is very little cross-protection towards the new strain, meaning there are a lot of pigs that would be susceptible should it break out over here.

The biggest clinical sign seen in naïve herds is very high mortality



in young pigs, with the majority of North American infected farms hitting above 90% mortality within pre-weaned piglets when the disease first hits a unit. This does reduce during the subsequent weeks, though to an overall higher than normal rate, but not before potentially removing more than five weeks of production from the unit.

Older pigs in both the finishing and the breeding herd can be affected at first infection, showing scour and increased mortality, though not to the extent of that in the young pigs. This settles down more quickly as the herd builds immunity, and eventually the clinical signs will subside.

Other clinical signs seen within the young pigs are an acute scour, giving very dehydrated and lethargic piglets, along with shivering and, occasionally, vomiting.

Growth is impacted enormously since the intestines are unable to absorb anything from the gut contents. Older pigs have also shown some looseness and dehydration, but this is often reported with other infections that are present at the same time that affect them through the finishing period.

Transmission is mainly through the faeco-oral route, in other words in the muck. Tiny amounts of virus in small amounts of faecal material are required to infect large numbers of animals – it is very infectious. Pigs themselves are obviously the biggest risk, but anything that can become contaminated with muck is a threat to another farm.

Biosecurity is the major way of helping to reduce the movement of the disease, with all contact with people and transport heavily controlled. Semen has been proved to

be free from the virus, although there is a tiny potential risk of contamination from the environment.

The other route that has been implicated in transmission is the use of pig blood plasma products used in some early weaner diets and milk replacers. These should be excluded from your farm in order to be certain that you have removed the risk, and the use of plasma in any diets is not allowed under Red Tractor assurance.

Treatment and control once the infection has hit a farm has been very difficult to implement. The current commercial vaccines from Asia are ineffective against the new strain, as are the current autogenous vaccines (tailor-made for the farm) being trialled in the US. Some control is obtained by use of an on-farm 'feedback' or 'controlled exposure' method, but there are many pitfalls with this

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particular intervention and certain practices used abroad are illegal within the UK.

The PED virus is very sensitive to drying and disinfection, however, so cleaning and resting are very effective to help with control in combination with depopulation programmes within pig pyramids.

So, in answer to your question, the threat to your farm is relatively low at the moment, although the risk to Europe and the UK as a whole are present and vigilance for any clinical signs needs to be paramount. Countrywide biosecurity is important, and there are several groups of people, including vets, producers and allied industries, trying to make sure that everything is being done to keep the virus out of the country in combi-



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nation with government agencies.

For your farm itself, a review of your current biosecurity practices will help assure you that you are doing everything you can.

Make sure that you include incoming pigs, people, feed, all vehicles, and deliveries.

Your protocols for lorry washing should be tight, since this is how the virus moved around North America, and your unit's perimeter protection should be checked both with regard to fencing and wash-down procedures for the loading ramp.



Although all of these should be reviewed on a regular basis for general disease prevention, the current climate with regard to 'big' diseases, including PEDv, makes this even more important.

Lastly, make sure you discuss any unusual clinical signs with your vet so that correct samples

can be taken for diagnosis at the earliest suspicion of disease. If we do end up with PEDv active in Europe and/or the UK, the earlier we find it and attempt to stop its spread, the more chance we have of containing it and reducing the potentially huge impact to the industry as a whole.

Ask the vet...

Send your animal health questions to sophie.throup@xivets.co.uk