BVD: Not just one type of problem

Bovine viral diarrhoea (BVD) affects both beef and dairy cattle across the world. About 80-90 per cent of cattle worldwide have been exposed to the virus, although frequently the disease can be hidden and unreported in a herd, leading to significant performance and economic losses.

BVD can be detected in a herd by testing milk (individual or pooled samples), or via blood or ear notch testing. An unusual high abortion rate (something above 5 per cent) or ongoing fertility and calf health issues can act as warning signs. BVD in a herd and veterinary investigation should take place.

Two genotypes

Dr Richard Booth, of the Royal Veterinary College, says: "Two genotypes of BVD are in circulation: BVD type 1 and BVD type 2.

"Type 1 BVD is the most common genotype circulating within Europe, while type 2 is found in the US and Canada, where it is thought to occur for between 10-15 per cent of BVD cases.

"That said, a warning notice published last summer by the UK’s national animal health surveillance organisation AHVLA stated type 2 outbreaks had occurred as near as Belgium. It warned, considering the level of live animal trade with Belgium and neighbouring countries, vigilance was of the utmost importance to stop type 2 entering the UK." (See map).

BVD type 2 emerging in Europe

Germany

Germany reported at least 23 herds in North Rhine Westphalia and Lower Saxony have suffered outbreaks caused by BVD type 2.

The outbreaks were characterised by signs of respiratory disease, diarrhoea, high fever, weakness, drop in milk yield, bloody diarrhoea, abortions and high mortality in BVD-positive calves; in some groups of calves up to 90 per cent of calves were affected and died within 14 days.

Professor Klaus Dott, from the University of Gessern, Germany, explains: "These dramatic outbreaks were caused by a highly virulent BVD type 2 strain, which was propagated from herd to herd mainly by cattle dealers.

"Because of the atypical clinical picture at the beginning, it took four weeks in some herds until BVD virus was diagnosed as the cause of disease."

About 5 per cent of the German BVD strains are type 2. It remains to be seen whether the tide of events such as these recent outbreaks result in further dissemination of this genotype.

Before the start of the national control programme, BVD was endemic in Germany, with seroprevalence of about 80 per cent. Now, due to the elimination of many persistently infected animals, the number of seronegative cattle has considerably increased. Such herds are highly endangered, because of sometimes insufficient biosecurity measures. Moreover, the frequency of vaccinations has decreased significantly, caused by a false sense of security.

"This has increased the risk of BVD introduction, resulting in some dramatic outbreaks, also caused by BVD type 1, in previously unexposed herds. We know after the introduction of BVD virus in such naive herds, the economic losses are more extensive than in herds with endemic BVD," he says.

Netherlands

The Netherlands has reported two infected beef cattle herds all with imports directly from Germany. The infection had had a large impact in these two herds, with a case mortality of up to 50 per cent of calves.

United Kingdom

A vet in the South West of England reported a farm with beef cattle, a breeding herd, sheep and goats because of an unexpectedly high number of abortions in the goat herd. Testing of Salmannburg virus gave a negative result, but subsequent screening was positive for BVD type 2.

"No other testing was undertaken, but it was speculated BVD was a likely cause, with a total of 33 does either aborting, producing dead kids or kids which died shortly after birth."

Although not proven, the source of virus was thought to have originated from the beef herd, which regularly sources replacements from market. In addition to the countries mentioned above, BVD type 2 has been reported in Austria, Slovenia and Italy.

The recent identification of BVD type 2 in Germany and the subsequent spread to the Netherlands highlights the need to be vigilant.

DR RICHARD BOOTH