



Bovine Viral Diarrhoea Virus (BVD)

BVD is a disease of major financial importance. It causes fertility problems in adult cattle and affects the health of calves and youngstock. It causes suppression of the immune system, which then makes animals more susceptible to other infections.

It is estimated that over 90% of all herds have had exposure to BVD and having infection on farm could be costing you from £50-£100 per breeding animal.

BVD is spread by Persistently Infected animals (PI's) and recently infected animals via their secretions (faeces, saliva, nasal discharge, semen).

Symptoms

There are 2 types of BVD virus, Type 1 is the 'classical' strain that we usually see in the UK showing the signs described below. Type 2 is more prevalent in Europe and America but cases have been diagnosed in the UK. This tends to give a much more serious disease with bloody diarrhoea and high mortality.

Adults – breeding cows

When an adult is infected they will often show only mild signs of disease such as depression, reduced appetite and increased temperature. They usually recover quickly from these symptoms but the main consequences are on fertility and offspring.

The result of infection depends on whether the cow is pregnant and if so, how far.

Stage of pregnancy	Effects of infection
Not pregnant	Mildly affected – reduced appetite, increased temperature, reduced milk yield and Live Weight Gain
Early pregnancy (up to 120 days)	Early abortions or absorption of foetus Birth of a PI calf*
Mid to late pregnancy	Late abortions Deformed or weak calves

*PI calves are a key component in the spread of disease; they commonly die early (but will often appear outwardly normal), but 28% will make it to milking age. They never produce immunity to disease and will constantly shed the virus throughout their life times.

They will often die of Mucosal Disease – when they come into contact with BVD virus again they form ulcers throughout their digestive system and will have severe diarrhoea.



Calves

Presence of a PI calf within a group results in lowered immunity for the rest of the calves, meaning that they are unable to fight off other infections appropriately; consequently diseases such as pneumonia and scour become a lot more severe.

Adults – Bulls

Bulls can act as a reservoir for infection, shedding the virus in their semen. Infected bulls also have a reduced semen quality causing a major impact on fertility.

Diagnosis

Knowing your BVD status is very important, it allows you to form the best plan for your farm whether that is keeping the virus out or taking steps to become BVD free.

Even if you vaccinate, and have done for some time, this may not be enough to ensure that you stay free. The best method to determine whether you have circulating infection of farm is to take a sample of 5 youngstock bloods to check for the presence of antibody. If any are antibody positive then you have disease circulating. This test can then be followed up with bulk milk sampling, further blood testing or ear tagging to determine the prevalence of disease.

Control

Once your BVD status is known there are several protocols that you can follow in order to maintain or achieve a BVD free herd. Discuss your results with our vets and they will help to form the best protocol for your farm. This will vary from farm to farm but some measures will include:

- Reviewing biosecurity measures
- Identify and remove PI's
- Reviewing or implementing a vaccination protocol

The overall aim is to achieve (and then maintain!) a BVD free herd in order to reduce early embryonic losses and abortions, improve conception rates and improve the health of youngstock.