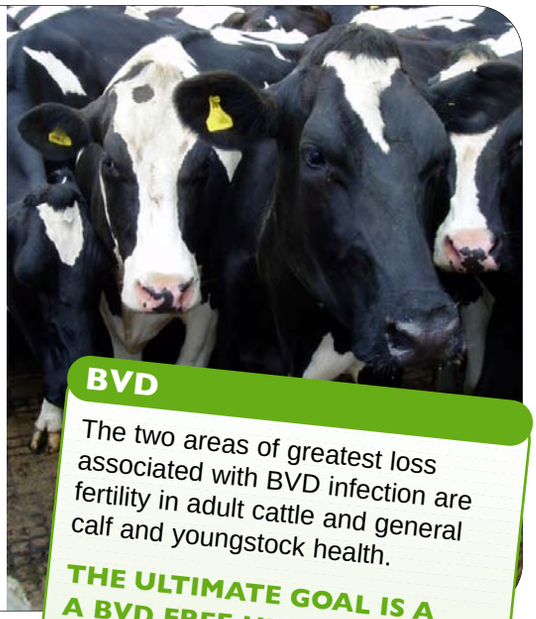
BVD Virus

BVD (Bovine Viral Diarrhoea) is a complicated virus with a misleading name - diarrhoea is not that commonly seen in infected cows and diarrhoea is certainly not the reason that this disease costs the UK cattle industries an estimated £50-75m per year.

BVD suppresses the immune system of infected animals. These animals are then less able to fight off infections such as mastitis or pneumonia. As a result, a whole host of disease situations may become much more serious on a farm where BVD is also active.



BVD

The two areas of greatest loss associated with BVD infection are fertility in adult cattle and general calf and youngstock health.

THE ULTIMATE GOAL IS A A BVD FREE HERD.

The ultimate goal is a BVD free herd. Protection for the herd can be maintained with vaccination.

Only once regional or national freedom from disease has been achieved and when appropriate biosecurity is in place, is it realistic to consider ceasing vaccination.

What Are The Effects?

- **Adult Cattle**

Although severe disease can occur in adult cattle, most infected animals will show no signs of ill health at all. Signs such as an elevated temperature, milk drop, reduced feed intake and diarrhoea may be apparent but these animals usually recover quickly and with good immunity against the virus.

The impact that BVD has on fertility is primarily dependent on the cow's pregnancy status at time of infection.

- **Infected Bulls**

The impact on bulls can be devastating particularly when a herd is relying on the performance of a bull or bulls for the year's production.

Infected bulls may develop a high temperature which can cause a reduction in semen quality for as long as two months after infection, by which time the breeding period may be over. Bulls can also be an important reservoir of infection as they may go on to shed BVD virus in their semen for a long and sometimes indefinite period of time.

- **Persistently Infected Animals**

Any PI animals are likely to die prematurely as well as spreading infection to their healthy pen mates.

- **Youngstock**

BVD infection is really bad news for calves. Infection usually enters a group of calves because of the presence of a PI calf in the group. When a batch of calves is exposed to active BVD infection the group's immune system may crash. As a result diseases such as pneumonia or scour may take hold and will often cause much more severe disease than usually experienced.

Status at time of infection	Outcome of infection
Non-pregnant cow	• Usually mild effects: Milk drop, diarrhoea. May have temporary reduction in fertility. • Cow's immunity develops
Pregnant cow infected during the first 3 months of pregnancy	• Embryonic death • Early abortion • Cow's immunity develops
Persistently Infected (PI) Calves 	One possible outcome of BVD infection in early pregnant cows is the birth of a persistently infected (PI) calf. These calves may survive to adulthood but frequently die young sometimes of 'mucosal disease'. PI calves shed huge amounts of virus and keep infection circulating on a farm. The calves in this photo are the same age but the calf on the left is a PI.
Pregnant cow infected in mid-late pregnancy	• Late abortion • Weak/deformed calf born • Cow's immunity develops

XLVets **BVD Virus**

Infectious / Parasitic Diseases

IP

How widespread is the problem and what is the cost?

If BVD virus is active on your farm then the costs are likely to be significant, possibly ranging from £50-£100 per breeding animal. The fertility costs - reduced conception rates, embryonic death, abortion and bull infertility - make up a large proportion of the total costs associated with BVD. It is estimated that 90% of UK cattle herds have been exposed to BVD. The impact of the disease will depend on a variety of factors including level of immunity within the herd, calving pattern, stress levels and levels of other diseases. Pictured left is a neonatal calf showing neurological signs as a result of BVD infection in utero.

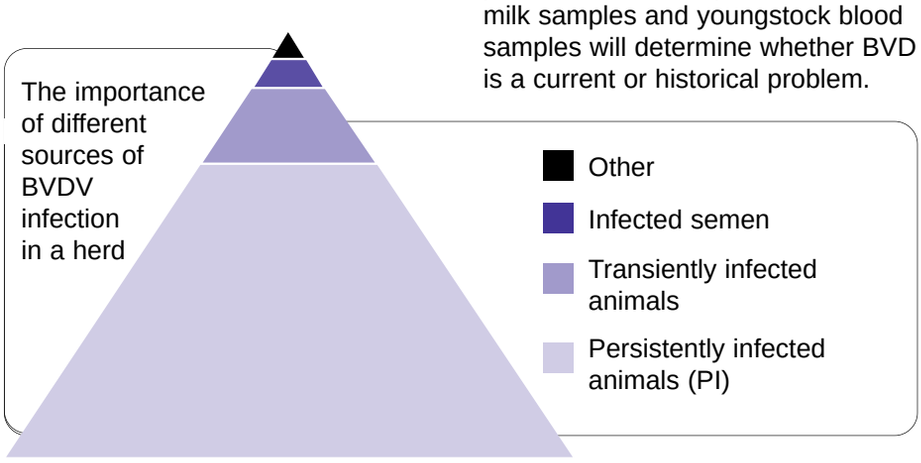
What can be done?

Aims:

1. Prevent poor conception rates, embryonic loss and abortion.
2. Prevent further PI calves from being born.
3. Remove PI animals and persistently infected bulls.

To achieve 1+ 2 you must prevent pregnant cows from being infected with BVD virus. This can be achieved by keeping the virus out of your farm or by using the very cost- effective BVD vaccine.

Removing PI animals and infected bulls will reduce the amount of virus circulating on your farm.



Step one:

Find out your BVD status:

Speak to your vet about bulk and heifer milk samples (dairy) or heifer and calf blood sampling (beef and dairy). If you are completely free of BVD then this is great news. However, your cattle may have no immunity to the virus which means that if infection did enter the herd then the results could be catastrophic.

If you are 'BVD free' review your measures for keeping it out and consider vaccinating.

If you are one of 90% of herds which has been exposed to BVD this does not necessarily mean that you have an active problem. Heifer milk samples and youngstock blood samples will determine whether BVD is a current or historical problem.

Next steps:

Once you know your status you can assess the risk to your herd with your vet. Given that determining your BVD status can be achieved at little or no cost this is a must for all cattle farmers.

When you know the risk you can make an informed decision on what action to take. Steps taken will vary and may include:

- Review biosecurity
- Review purchased stock policy
- Vaccinate
- Remove all PI animals

NEXT

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Talk to your vet about finding out what your BVD status is, then take control over your plan to protect your herd and your business.

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