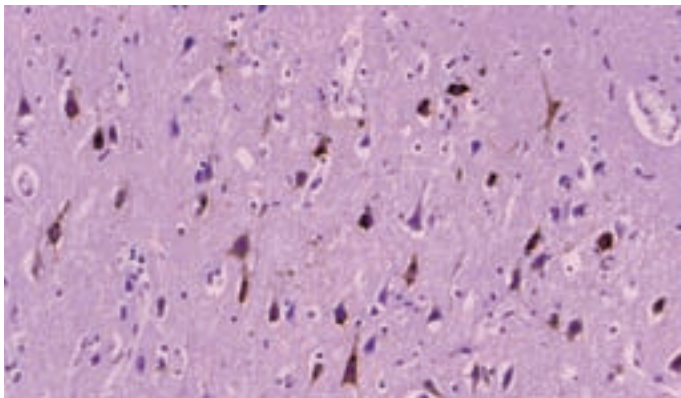


# Herd Health Planning

## BVD



Bovine virus diarrhoea (BVD) virus is one of the most important viral infections of cattle. The virus infects cattle of all age groups, including the unborn calf. It can cause devastating losses in individual herds and the cost to health and productivity of the national herd is estimated to be £40-£60million.

### How does BVD affect cattle?

- Adult, non-pregnant cattle usually show little to no clinical signs. Infected cows will show poor fertility with high return rates due to reduced conception rates and early embryonic death
- In pregnant cattle, the virus crosses the placenta and infects the unborn calf. Depending on the stage of gestation at the time of infection BVD causes abortions, stillbirth, birth of malformed calves, birth of weak calves and birth of persistently infected (PI) calves
- Acute, clinical BVD is usually seen in cattle aged 6 - 24 months. These animals have diarrhoea, oral lesions, depression, fever, poor appetite and runny eyes and nose. BVD causes immuno-suppression and so affected cattle are prone to secondary infection with other disease agents. The severity and duration of other diseases, like pneumonia, is increased by BVD, often leading to death of the affected animals
- Mucosal disease (MD) is an invariably fatal disease of persistently BVDV infected animals that normally occurs at 6-18 months of age. Signs of MD are profuse, diarrhoea that is resistant to treatment, progressive weakness and lack of appetite, erosive lesions of the mucosa of the nose and mouth (hence the name MD), the coronary band and interdigital cleft.

### What are persistently infected animals (“PI”s)?

When the cow, and thus the foetus, are infected before 125 days of gestation, the immature immune system of the foetus will not recognise the virus as a disease agent. This allows the virus to establish an infection that persists throughout the life of the animal. When born, these calves carry and shed BVD virus and become the main reservoir for virus to pass to other cattle. Usually PIs are weak, unthrifty and die before they reach maturity from mucosal disease or secondary diseases such as pneumonia. If PIs survive long enough then as PI cows they always produce PI calves and as PI bulls they shed virus continually including in their semen.

### How is BVD spread?

Persistently infected animals are the main route of spreading infection, as they produce and shed the BVD virus continually in large amounts. The most likely way to introduce BVD to a naïve herd is by buying in stock persistently or acutely infected with BVD virus.

### Is BVD a problem in your herd?

When first introduced to a susceptible herd, there may be considerable losses. However, depending on various factors the losses level out over time and since the symptoms are not specific, the presence of BVD may stay undetected in a herd. If you frequently see some of the clinical signs of BVD ask your vet to check for BVD. Blood and milk samples can be tested for evidence of BVD infection. **Estimated financial losses from BVD are around £45,000 for a 100 cow beef herd over ten years.**



## How do I control BVD or reduce the risk of BVD infection?

Herds without BVD must aim to prevent its introduction by implementing strict bio-security measures. Costly as such measures might be, they are usually cheaper than the consequences of infection in a susceptible herd and prevent the introduction of other infectious diseases, like bovine tuberculosis. Once present, a BVD control and eradication plans depend on your herd structure and management practices. A key point is detection and removal of persistently infected animals. There are a number of steps that can be taken to minimise the risk of clinical BVD in your herd:

- Operate a closed herd policy to prevent introduction of disease carrying animals
- Buy breeding animals from an accredited herd or find out the BVD status of the source herd
- Keep bought in breeding animals in isolation until they have been tested. However, single tests on individual animals can fail to pick up a carrier animal
- Separate cattle with 3 metre fencing to eliminate nose-to-nose contact from neighbouring farms or between separately managed groups
- An infected stock bull can be an efficient transmitter of infection, so particular attention should be paid to the status of the bull on farms not using AI
- Systematic testing and culling of the persistently infected animals

- For some herds vaccination, along with good biosecurity, can help in preventing reproductive disease and the birth of PI calves. The decision to vaccinate should be made on an individual farm basis after consultation with your veterinary surgeon, with disease history, farm management practices and assessment of farm risk all taken into account.

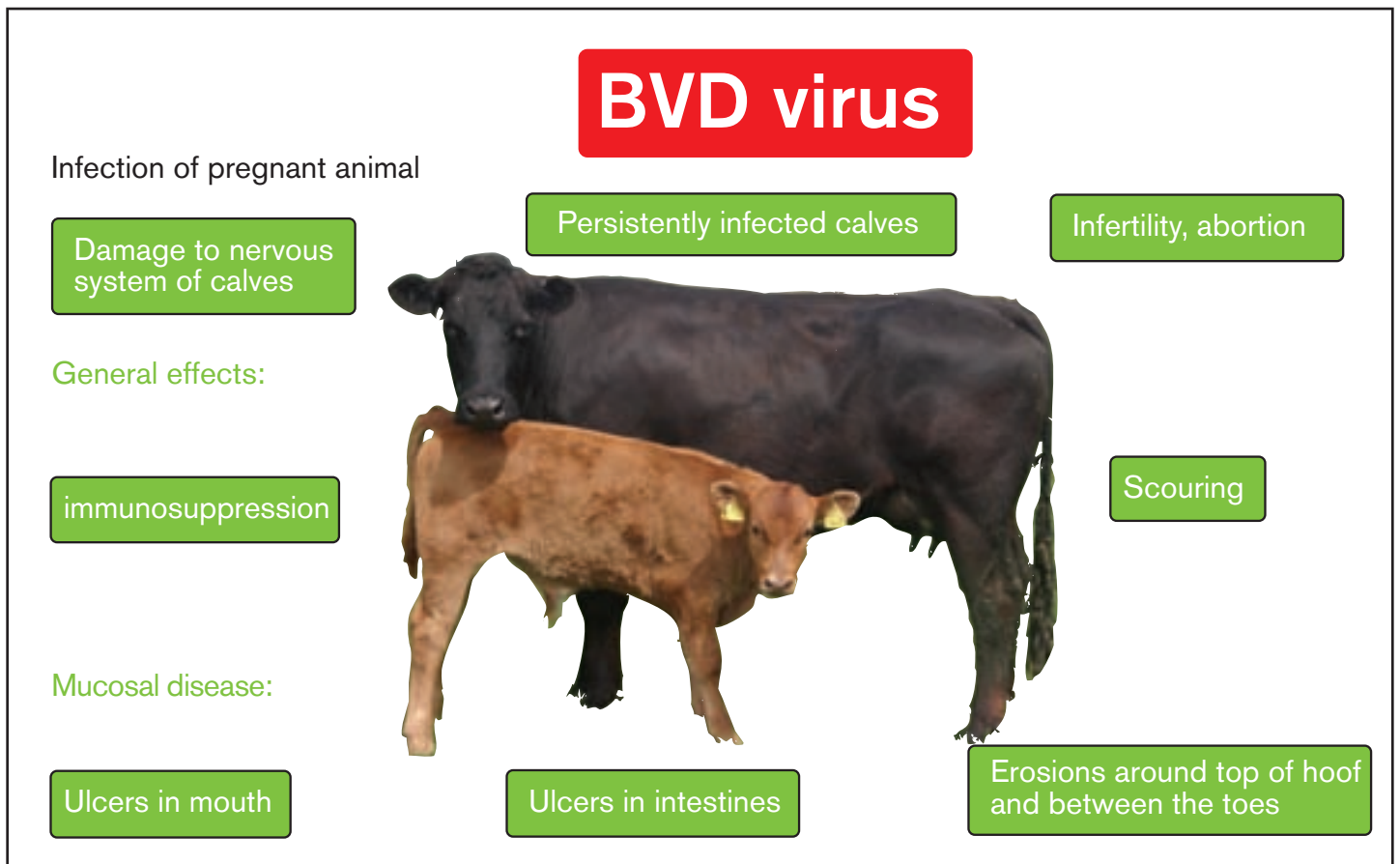
A farm can acquire BVD-free accredited status through a CHeCS cattle health scheme. At less cost and with less stringent biosecurity regulations, a farm can also be a part of a screening and eradication programme for BVD with some schemes.

## Managing the risk of BVD

### Lowest risk

1. Free from BVD virus and strict biosecurity to keep BVD virus out.
2. BVD infected herd but test and removal of PI animals plus vaccination
3. BVD infected herd but no testing for PI animals and no vaccination
4. Free from BVD virus but poor biosecurity and regular purchase of animals of unknown BVD status.

### Highest risk



# Herd health planning – BVD decisions

Is there a problem?

Date: \_\_\_\_\_

Results – this year	Number	Percentage BVD positive	Target for next year
No. of abortions			
Clinical cases of BVD			
Deaths from Mucosal Disease			
Blood tests for BVD antibodies			
Blood tests for BVD virus (PI)			
Persistently infected animals			
Other signs of BVD			

Is any action planned?      Yes/No

Vaccination		
Product Used	Target groups	Dates

Testing		
Dates	Target groups	Results

## Biosecurity

Double fencing Yes/No  
 Quarantine of purchased animals Yes/No  
 Blood testing of purchased animals before mixing Yes/No  
 Testing of stock bulls before breeding season Yes/No

## Purchase policy

Closed herd policy Yes/No  
 Buy stock from BVD Accredited herds in CheCS Health Scheme Yes/No  
 Find out health status of the herd of origin Yes/No

Testing and culling BVDV persistently infected cattle Yes/No

Join accreditation programme Yes/No

**Herd health planning BVD review date:** \_\_\_\_\_