

# BVD Virus

## Diagnostics and control

You may suspect that BVD (Bovine Viral Diarrhoea) is present in your herd by recognising signs such as reduced fertility, abortions, scour and pneumonia. However the effects may not always be this obvious. Can you be sure that your herd isn't failing to reach peak performance as a result of BVD? The only way to be sure is to test!

BVD infection in the early-pregnant cow may result in the birth of a persistently infected (PI) calf. An animal cannot become a PI, it can only be born a PI.

**PI calves frequently fail to thrive and die young, sometimes of 'mucosal disease'. However you can't tell an animal is a PI just by looking at it: it is only possible to accurately identify PIs with the aid of laboratory tests.**

This involves either a blood test, or use of a BVD tissue sample tag, which simultaneously identify animals and harvest a sample for virus-testing.

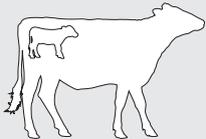
Theoretically, the birth of PI calves can be prevented by vaccinating cows against BVD before they are served. However, herd vaccination is not a failsafe approach. Reasons for this include:

- Incorrect timing of vaccination;
- Incorrect storage or administration of vaccine;
- Concurrent disease (eg. mastitis) means cow fails to respond to the vaccine;
- Vaccinating a PI is of no benefit – PI status is for life, and a PI will always give birth to a PI.

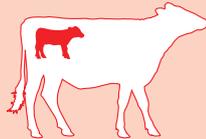


The spread of BVD dam to calf

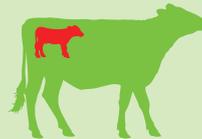
BVD in early pregnancy



Cow and calf infected



Only dam becomes immune



Calf born persistently infected (PI)



**Know your status... protect your herd.**

For more information, visit [www.bvdfree.co.uk](http://www.bvdfree.co.uk) or ask your vet

## How do I know if there is BVD in my herd?

### Breeding herds

BVD antibodies are produced in response to exposure to BVD virus. The starting point is therefore usually to blood-test youngstock for antibodies, the presence of which provide evidence of infection. Animals to test are as follows:

- Over 9 months old – as maternal antibodies may still be present until this point;
- Not vaccinated for BVD;
- Under 18 months old to remove the possibility of infection being 'historical';
- Homebred ideally, otherwise exposure to the virus may have been on the farm of origin, not due to a PI on the current farm;
- Sample five individuals from each separately managed group. If there are fewer than five, sample ALL animals in the group. If only one group is sampled, you may miss the full picture, as infection will only spread a few feet, and a PI may exist in the group you didn't sample.

### Youngstock buyers

Blood-testing as above will provide information about the stock you have already purchased, and about the BVD status of the herd(s) of origin. However this is not necessarily of direct benefit to your business. The only way to be sure that you are not buying PI animals is to know the BVD status of each individual you purchase. This can be achieved by a blood test, or by using BVD tissue-sampling tags, which simultaneously identify animals and harvest a sample for virus-testing.

Ideally testing should be carried out pre-sale (for example, at the time of the pre-movement TB test), thus preventing the purchase of diseased animals. When purchasing stock, look for a BVD tissue-sampling tag, and obtain the result for each individual.

Youngstock check tests are a vital part of BVD diagnostics and control as failure to tag either bull calves or aborted /stillborn calves could lead to missing the presence of BVD in a herd. BVD tissue-sampling tags may also not identify the impact of acute/transient BVD infections in a herd from straying stock.



### What if there is evidence of active BVD within my breeding herd?

Ideally, a 'PI hunt' should be carried out, by virus-testing (blood or tissue) all stock which is yet to calve.

Whole-herd testing is not always considered an economic option, but by testing all future births, any PIs should be identified within a few years.

If using BVD tissue-sampling tags, these should be used on **all** births – including dairy bull calves, stillbirths and abortions. This is a crucial point, as without testing all calves you may miss detecting PI cows. Cows which have not calved for a long time should also be tested.

### What if I find a PI?

Any animal with a virus positive result should be isolated and blood-tested after a minimum of three weeks to establish whether the viraemia was due to transient infection, or because the animal is a PI. The dam should also be tested as she may also be a PI. Confirmed PI cattle should be euthanased or sold for meat.

