Bovine Viral Diarrhoea (BVD) is one of the biggest disease issues facing the cattle industry today costing UK farmers in total between £25-£61M.

The BVDFree England Scheme was launched on 1 July 2016 with the aim of eliminating BVD from all cattle in England by 2022.

A voluntary industry-led scheme, it has the backing of more than 100 partner organisations and is based on achieving the elimination of BVD through identification and removal of animals persistently infected (PIs) with the virus.

Beef producers are encouraged to set up a BVDFree programme on their farm. A national searchable database will hold details of the BVD status of all herds signed up, so farmers can buy cattle knowing they are BVD free. The database will also be searchable by tag number for the status of individual animals where this is available, eg tag and test result.

By joining BVDFree, farmers can show they have played their part in helping the English cattle herd become free from the BVD virus.

What is BVD?

Bovine Viral Diarrhoea is a widespread, highly contagious disease of cattle usually transmitted through direct cattle-to-cattle contact.

It is caused by a virus and lingers in herds through Persistently Infected (PI) animals, which can appear clinically normal.

Natural vaccination with exposure to PI animals is unreliable and risks creating fresh PIs with exposure to pregnant females. Vaccines are available and provide good protection against outbreaks of BVD. Discuss the need for vaccination with the vet and develop a plan to protect the herd from BVD.

BVD has been estimated to cost between £13 and £31 per cow, but costs can be much higher during a breakdown, as this case study shows:

**BVD outbreak in 2009/10 – 120 cow beef herd in Derbyshire**

<table>
<thead>
<tr>
<th>Costs</th>
<th>Calculation</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased barren rate from 5% to 27%, ie 26 more cows were barren so 26 fewer suckled calves at sale @ £600/head* minus production costs/calf to weaning (assumed to be £60/head**)</td>
<td>26 x (£600-£60)</td>
<td>£14,040</td>
</tr>
<tr>
<td>Calf mortality increased from 5% to 11% so seven extra calves died up to six months of age at forecast value of £600* minus production costs**</td>
<td>7 x £540</td>
<td>£3,780</td>
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<tr>
<td>Total cost for the herd</td>
<td></td>
<td>£17,820</td>
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<td>Cost per cow (based on 120 cows)</td>
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<td>£148.40</td>
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*300kg liveweight @ £2.00/kg
**Production costs – marketing £15, transport £20, vet/medicines £5 and feed £20
The majority of BVD infections occur after birth. Signs of BVD are not always obvious and costs can be hidden.

• Reproductive losses – early embryonic death, returns to service, abortions
• Secondary disease – immune suppression increases the chance of pneumonia and scour in calves, lameness and mastitis in adults
• Poor production – lower milk yield, poor growth rates, increased cull rates
• Deaths – common through secondary infection

Persistently Infected animals (PIs)

If cows and heifers become infected within the first 120 days of gestation, the unborn calf may become PI. A calf will only become PI if its mother is infected during pregnancy. It cannot become PI after birth. Persistently Infected animals shed high quantities of BVD virus into their environment for life. They are the most significant source of infection to other cattle. Within infected herds, PIs often only account for one or two out of every 100 animals. It is contact with these PIs that leads to infection of other animals within the herd.

How can I tell if I have PI animals?

Sometimes PIs have stunted growth and rough coats, but they often appear completely normal. Cattle can be tested for antibodies to see whether the herd has been exposed to BVD. The identification of individual PI animals can be done through testing blood or tissue samples for traces of the virus. All PI animals must be removed from the herd. This is essential to protect the herd and to achieve a successful BVD eradication scheme.
How to establish the BVD status of Beef herds

**Break free from BVD**

- Know the BVD status of your herd
- Test the youngstock
- Blood sample 5-10 calves (9-18 months of age, unvaccinated) from each management group and test for antibody
  - +ve
  - -ve

- Know the BVD status of individuals
- Test the adult herd (optional)
- Blood samples from 10 cows/breeding bulls in each management group (unvaccinated)
  - +ve
  - -ve

- I want to know the BVD status of my herd
- Test the whole herd for PI (optional)
- Test all animals for PI (all cows, calves and bulls)
  - +ve
  - -ve

- I don't know my herd status
- Test your youngstock for PI
- Tag and test (or blood sample) all calves, including aborted foetuses and stillborns
  - +ve
  - -ve

- Remove any PI animals ASAP

*You can also get a BVDFree herd status through testing individual animals when every animal in the herd has a BVDFree individual status

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**BVD elimination using ADAM**

**STEP 1: Assess herd**
- Biosecurity/vaccination
- Disease history/disease risk

**Not satisfactory**

- Seek veterinary advice

**Satisfactory**

**STEP 2: Define herd status**
- Blood test between 5-10 youngstock (9-18 months of age) from each management group - screen by antibody ELISA

**STEP 3a: Action plan**
- Put in place to control risk of introducing BVD onto the farm

**STEP 3b: Action plan for BVD screen for PIs on farm**
- Test all animals – cull PIs
- Tag and test all calves for one year after PIs removed – cull any PIs
- Continue for further 12 months if more PIs – cull PIs. (Tests to be used are Antigen ELISA and pooled samples for PCR)

**STEP 4: Monitor progress – update**
- Repeat STEP 2 to retain BVDFree herd status (test youngstock at 7-12 month intervals for antibody or tag and test all calves)
- Join accreditation/surveillance programme

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*Courtesy of Joe Brownlie and Richard Booth, RVC*
1. Register to join the scheme using the form available at bvdfree.org.uk or fill in the form on page 5 and post

By signing the form the farmer agrees to:

• Actively engage in BVD control to eliminate the disease from the herd
• Report all BVD testing results to the national database
• Allow herd status and individual animal status to be openly accessible through the BVDFree database (no farm name or keeper will be shown)
• Not move PI animals other than directly to slaughter or a dedicated red slaughter market

2. Work with the vet and use ‘ADAM’ to develop the best approach for BVD control on the farm:

• Assess the biosecurity and disease risk
• Define the BVD status of the herd
• Action plan for the control of BVD put into place
• Monitor progress with an annual status check

3. Test for BVD – for the virus (antigen test) or antibodies to the virus to identify the BVD status of the herd or individual. All test results are uploaded to the BVDFree England database

4. Before you buy, check animal and herd BVD status at bvdfree.org.uk by entering the tag number or CPH number
BVDFree Ltd takes the privacy of users of this website (bvdfree.org.uk) seriously. By submitting your personal information using either the downloadable registration form or the electronic form held on the website, you give your consent that all personal information that you submit may be processed and stored by BVDFree in the manner and for the purposes described below:

- For purposes relating to disease prevention and control
- For purposes of alerting your veterinary practice that you have signed the BVDFree England Charter
- To send you knowledge transfer information and updates on issues we think will be of value to you
- To contact you occasionally to inform you of new services BVDFree England will be providing or events or information we think will be of value to you
- To internally administer this website and help us improve our services. BVDFree Ltd is the ‘Data Controller’ and shall be responsible for determining how all personal information you submit to us is utilised, processed and stored in accordance with applicable law and in particular shall ensure it has appropriate security measures in place to guard against the loss, misuse or alteration of the information you provide and shall keep your personal data only for as long as reasonably necessary for the purposes for which it was collected or to comply with any applicable legal requirements. The Agriculture and Horticulture Development Board (AHDB) or other body appointed by BVDFree may act as the contracted ‘Data Processor’

I agree it is my responsibility to inform BVDFree of any changes and out of date data, such as change of vet, address details, CPH numbers, etc.

I understand that by registering I am accepting these Terms and Conditions. I agree that my herd test results will be held and displayed, along with herd/individual animal status by BVDFree England in the National Database or portals approved by BVDFree (eg Livestock Data Exchange Hub). I also understand that I may opt out at any stage, but any previously submitted BVD test results will remain on the BVDFree database.

In relation to any dispute arising out of use of websites operated by BVDFree Ltd the user and BVDFree Ltd agree to submit exclusively to the jurisdiction of the court of England.
About the scheme

Q. How much does it cost to register for the BVDFree England Scheme?
A. Registration is free. There is a small charge to cover the uploading of test results – 50p for antibody tests and 25p for virus/antigen tests. This will be added to the cost of the laboratory tests for BVD.

Q. I already belong to a herd health scheme. Why should I register for the BVDFree England Scheme?
A. Most herds fully participating in the Cattle Health Certification Standards (CHeCS) BVD programmes meet the testing requirements and farmers do not need to do anything else apart from upload their test results to the database. Registering for BVDFree will give recognition for herd and/or individual status and will help move the industry towards national elimination of BVD.

About testing for BVD

Q. How do I test for BVD under the scheme?
A. To be assigned a herd status, herds must test every year using one of the approved testing methods. Go to bvdfree.org.uk to see the requirements.

Q. Which beef animals need to be tested?
A. • Youngstock – either ear tag and test all calves at birth for BVD virus or test blood samples from at least five cattle aged nine to eighteen months for BVD antibody per separately managed group.
• As calves are closely mixed with their dams, it is not essential to test breeding cows in beef suckler herds.
• Testing breeding bulls before mixing with the herd is strongly recommended.

Q. How does vaccination affect test results?
A. It has no effect on the presence of virus in PI animals and vaccinated animals will be antibody test positive.

Q. How soon can a calf be sold with a negative result after it has been tissue tagged?
A. A calf may be sold as BVD virus test negative as soon as a result is received.

About accessing the national database

Q. How do I access my test results?
A. The laboratory will send out a copy of all test results. Those who have joined the BVDFree England Scheme will have agreed to report all BVD testing results to the national database. The laboratory will upload the results to the database at bvdfree.org.uk. All farmers can check their results by searching via ear tag or CPH number.

Q. What should I do if I have problems accessing the database or cannot find my results?
A. Contact the dedicated BVDFree England helpdesk on telephone 0333 241 3113 between 9.00am until 5.00pm, Monday to Friday. Or send a question by email to help@bvdfree.org.uk.

Q. Can I find out if my neighbouring herds have tested positive or negative for BVD?
A. If the neighbours have signed up to the BVDFree England Scheme, it is possible to search for the status of other herds in the scheme, as long as the CPH number is known.

For more information contact:
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Kenilworth
Warwickshire
CV8 2TL
Tel: 024 7647 8834
Email: brp@ahdb.org.uk
beefandlamb.ahdb.org.uk

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More information on BVD

The best source of information on BVD on the farm is from the vet. Specialist advice can also be sought from CHeCS accredited health schemes.
To register and to find more information on the BVDFree England Scheme and the national results database, visit the website: bvdfree.org.uk email: help@bvdfree.org.uk or call the BVDFree.uk helpline on 0333 241 3113.