

# Herdsure® Disease Information Sheet

## Bovine viral diarrhoea (BVD)



### Introduction

Bovine viral diarrhoea (BVD) is a disease caused by bovine pestivirus. Infection in non-pregnant animals results in diarrhoea, reduced conception rates and immuno-suppression. Infection in pregnant animals can result in abortion, the birth of stunted calves or calves born with 'persistent infection' (PI). Infection during the first third of pregnancy can compromise the development of the foetal immune system and the calf is unable to eliminate the virus. When the calf is eventually born, it produces large amounts of virus throughout its life. The calf may appear normal or be stunted but it is likely to succumb to fatal mucosal disease later in life. If PI animals come into contact with breeding cows, the cycle of infection continues with the creation of more PIs. Avoiding infection of the unborn calf and the detection and removal of PI calves from the herd are critical to the control and eradication of BVD in cattle.

### Protocols

Below are details of each protocol and the actions required. The Herdsure Management System is designed to ensure that this is a simple and clear process to follow by providing automatically generated sampling prompts and submission forms. Samples are returned to the laboratory using business reply labels, supplied by Herdsure. All blood samples should be collected in green top blood tubes. Herdsure also supplies pots for bulk milk samples.

■ **Entry** - Herds with no history of disease enter Herdsure at Level 1 while those with a known history enter at Level 2.

#### ■ Dairy Herds

##### **Level 1 - Establishing health status**

A 25ml milk sample from the bulk milk tank is collected for an antibody test. If the results are positive the herd proceeds to level 2. If the results are negative all breeding bulls plus a statistical number of youngstock are blood tested for BVD antibody. If results are negative the herd progresses to level 3.

##### **Level 2 - Improving health status through disease reduction strategies**

An initial PI search starts with a bulk milk PCR test. The test is validated for up to 300 contributors. If the results are positive then individual milk or blood samples are taken. These are pooled in 10's for testing. Cattle contributing to positive pools will then be blood tested for antigen. Following this dry cows and youngstock over 30 days old are tested in pools of 10. Positive pools undergo individual antigen testing and this can be carried out on blood samples already submitted. All identified PIs must be removed from the herd. Calves are tested for virus for a 12 month period following the removal of the last PI. If the results are negative then the herd can progress to level 3.

##### **Level 3 - Monitoring and maintaining health status**

To monitor for freedom from disease the bulk milk is tested for BVD antibody every 3 months. A yearly blood test for antibody from a statistical number of youngstock aged 9-18 months is also carried out.

#### ■ Beef Herds

##### **Level 1 - Establishing health status**

Blood samples are collected from 10 adult cows, irrespective of herd size, plus all breeding bulls and tested for antibody. If results are positive the herd enters Level 2. If results are negative a statistical number of youngstock are tested for BVD antibody and if these results are negative the herd enters Level 3.

##### **Level 2 - Improving health status through disease reduction strategies**

A PI search is carried out on all stock over 30 days. Samples can be pooled in groups of 10 for virus testing and cattle submitting to positive pools should be blood tested for antigen. This can be carried out on the blood sample already submitted. All PIs identified must be removed from the herd. Calves are tested for virus for a 12 month period from the removal of the last PI. If all the results are negative the herd can progress to level 3.

##### **Level 3 - Monitoring and maintaining health status**

To monitor for freedom from disease a yearly blood test for antibody from a statistical number of youngstock aged 9-18 months is carried out.

## Biosecurity

The farmer and veterinary surgeon should work together to ensure good biosecurity. Results from previous years before joining the scheme must be declared. For herds seeking CHeCS accreditation the veterinary surgeon must confirm that appropriate biosecurity and management measures have been implemented.

■ **Farm boundaries** - It is important to prevent cattle from straying on or off the farm and nose-to-nose contact over fences or walls. For herds wishing to undergo or maintain CHeCS accreditation, installation of double fencing with a 3 metre gap between scheme cattle and neighbouring cattle is required.

■ **Cattle, sheep and camelids** - These animals should not graze together unless the disease status of the co-grazers is known. Cattle must not be grazed on pasture previously grazed by non-accredited cattle until a period of 2 months has elapsed. The same grazing restrictions apply to accredited cattle if slurry or manure collected from non-accredited cattle has been used on the pasture.

■ **Colostrum** - Colostrum from non-Herdsure herds, or from herds of a lower health status, must not be brought into a herd whose status is known.

■ **Equipment** - Equipment such as drenching guns, surgical instruments and hypodermic needles must not be shared with cattle from another herd. Equipment, machinery, livestock trailers and handling facilities that are shared between Herdsure cattle and other livestock must be cleaned and disinfected before use.

■ **Delivery and pick-up points** - These should be at a site isolated from other cattle on the farm. People entering the premises to handle cattle, or their products, should wear protective clothing and footwear. This must be clean and disinfected before and after contact with the cattle. Disposable protective clothing can be used as an alternative. Other visitors to the farm should be kept away from direct contact with the cattle.

■ **Isolation facilities** - 'Bought-in' cattle can be a dangerous source of new infection. Suitable facilities must be provided for all added animals, and must prevent contact with other stock. A dedicated building or paddock that prevents contact may suffice. An isolation period must be observed for purchased stock and appropriate testing carried out as specified in the protocol. Only when both the isolation period and the requisite tests have been completed, with results indicating freedom from infection, can these animals enter the herd. Breeding bulls should not be used for a period of 9 weeks following purchase to reduce the risk of virus shedding in semen following transient infection.

■ **Embryo transfer** - It is important to ensure that embryos are sourced from herds of equivalent or higher health status than the recipient herd.

■ **Shows and sales** - If any cattle come into contact with those of a lower health status then they must go into isolation and be tested on their return to the farm.

## CHeCS Accreditation



Herdsure provides the option for a herd to become BVD disease free accredited. Herds will be eligible to apply for CHeCS accreditation provided they achieve negative results with appropriate animals tested and comply with defined biosecurity rules.

Herds entering Level 3 direct from Level 1 will be eligible for BVD accredited status after 12 months testing at Level 3, provided all test results are negative.

Herds entering Level 3 from Level 2, following a PI search, will be eligible for BVD accredited status after 24 months testing at Level 3, provided all test results are negative.

Herdsure issues Certificates of accredited health status and can issue individual animal sale cards if requested.

For further information on CheCS please visit [www.chees.co.uk](http://www.chees.co.uk)