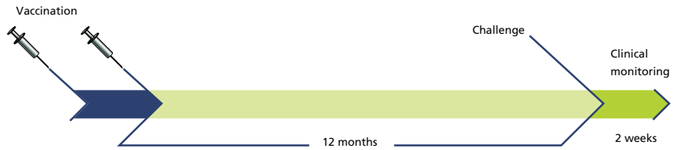
Bovilis BVD prevents cell-free viraemia 12 months post vaccination*

Vaccinated group

- No isolation of the virus in the serum
- Absence of leucopenia
- No febrile response
- Reduced nasal shedding of the virus

Unvaccinated group

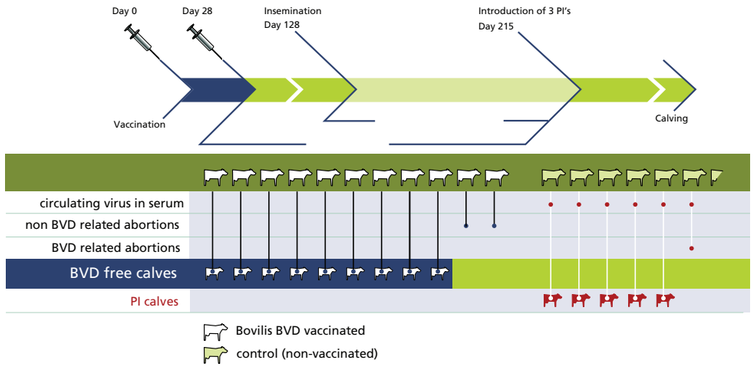
- 100% of calves had detectable cell-free viraemia
- Severe leucopenia was detected in all calves
- Febrile response
- Higher nasal shedding of the virus



*Patel et al WBC Nice 2006. Efficacy of an inactivated Bovine Virus Diarrhoea Vaccine 12 months after vaccination

Bovilis BVD protects the foetus against BVD*

In field conditions, the most important and dangerous source of BVDV is the PI animal. In order to mimic the type of exposure that animals experience in the field, Intervet developed a challenge model based on infection by contact with PI calves.



Vaccination with Bovilis BVD prevents the infection of the foetus while all the foetuses in the control group are infected with BVDV

* Patel, J.R., Shilleto, R.W., Williams, J., Alexander, D.C.S. Prevention of transplacental infection of bovine foetus by bovine viral diarrhea virus through vaccination. Archives of Virology 147:2453-2463 (2002).

Bovilis® BVD

Dose	2ml I/M
Primary course	2 injections 4 weeks apart, given no later than 4 weeks prior to gestation
Booster	Each cow needs one booster per calving interval, as required
Helps prevention of PIs	Licensed to protect the foetus against transplacental infection with BVD virus

Product Information

Bovilis BVD is an inactivated vaccine containing 50 ELISA units (EU) and inducing at least 4.6 $\log_2$ VN units per dose of cytopathogenic BVD virus strain C-86.
Uses: For active immunisation of cows and heifers from eight months of age onwards to protect the foetus against transplacental infection with Bovine Viral Diarrhoea virus.
Dosage and administration: Before using the vaccine allow it to reach ambient temperature (15-25°C).
Shake well before use: Use sterile syringes and needles. Intramuscular injection. 2 ml per animal.
All cattle can be vaccinated from an age of eight months onwards. Can be used during pregnancy.
Foetal protection can be expected if the primary immunisation has been finalised 4 weeks before start of the gestation. Animals which are vaccinated less than 4 weeks before gestation or during the early gestation will not be protected against foetal infection.
Individual vaccination: Basic immunisation: Two vaccinations with an interval of 4 weeks. The second vaccination should be given not later than 4 weeks before the start of the gestation. Revaccination: One vaccination 4 weeks before start of the next gestation.
Herd vaccination: Basic immunisation:Two vaccinations with an interval of 4 weeks. For use in cattle from eight months of age, all animals should be vaccinated. Revaccination: One vaccination every 6 months (see further information).
Contra-indications, warnings, etc: Only healthy animals should be vaccinated. In very rare cases a slight swelling may be observed for 14 days at the site of injection. Also in very rare cases transient mild pyrexia may occur. In isolated cases, allergic reactions including anaphylactic shock may occur. In case of anaphylactic reaction, appropriate treatment such as with antihistamine, corticosteroid or adrenaline is recommended. No information is available on the safety and efficacy of this vaccine when used with any other veterinary medicinal product. A decision to use this vaccine before or after any other veterinary medicinal product therefore needs to be made on a case by case basis. Do not mix with any other veterinary medicinal product. In the case of accidental self injection seek medical advice immediately and show the package leaflet or label to the physician.
Withdrawal period: Zero days. For animal treatment only. Keep out of the reach and sight of children.
Store in a refrigerator (2° to 8°C). Do not freeze. Use broached vials within 10 hours.
Further information: If a herd is vaccinated on the same day, then individuals that are not about 4 weeks pre-gestation may not be protected against foetal infection. Where this is the case, whole herd re-vaccination should be undertaken every 6 months. BVD challenge data in non-pregnant animals shows protection against cell-free viraemia 12 months after primary vaccination.
Legal category: R.O.I. POM(E) Nth. Irl. POM-V. Use medicines responsibly.

Further information is available from MSD Animal Health, Red Oak North, South County Business Park, Leopardstown, Dublin 18, Ireland. Tel: +353 (0)1 2970220

MSD Animal Health

R12-002

BOVILIS® BVD

Protects the FOETUS as well as the COW

Leptavoid™-H is licensed for concurrent use with Bovilis® BVD

MSD Animal Health

BVD – a hidden enemy

Bovine viral diarrhoea (BVD) is one of the most costly infectious diseases in the modern cattle industry.

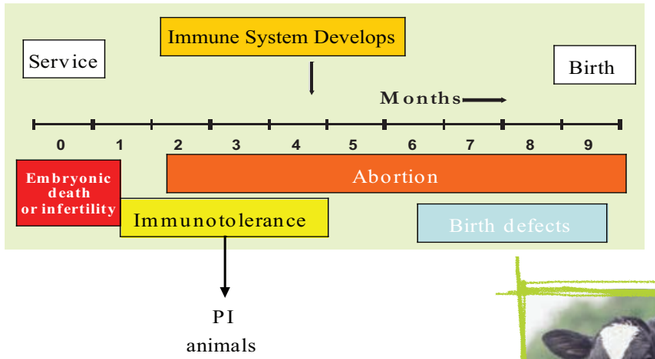
What is BVD?

The negative effects of BVDV infections on reproduction depends on the timing of the infection relative to the stage of gestation. Other clinical manifestations of BVD include diarrhoea, haemorrhagic syndrome and Mucosal Disease. Because the virus causes immunosuppression, the infected animals are highly susceptible to other secondary infections.

Consequences of infection from time of service until day 120 of gestation
Failure to conceive
Embryo mortality
Foetal loss
Persistently infected (PI) calves

Consequences of infection after day 120 of gestation
Abortion
Stillbirth
Foetal malformation

BVD infection during pregnancy



The PI animal is the main source of BVDV infection in a herd

The Key to BVD control

Effective protection for the unborn foetus is critical to successful BVD control. Failure to protect the unborn calf opens the door for transplacental infection by the BVD virus. If this occurs in the first 120 days of gestation a PI (Persistently Infected) animal may be born.

The Persistently Infected animal (PI)

PIs constantly excrete virus, posing a risk to other cattle on the farm. Farmers may be reluctant to cull PIs, yet most PIs die before they become productive and can incur considerable expense such as:

- Feed
- Labour
- Veterinary treatment

BVD can be effectively eliminated from a herd if the animals have been tested for exposure to the virus and PIs removed. It is then essential to vaccinate to prevent new PIs from developing.

The PI Cycle:

- ☒ 20% of PIs survive to over two years old and can enter the adult herd
- ☒ A PI always gives birth to a PI
- ☒ PIs are a continual source of potential infection to the rest of the herd

Successful BVD control involves protecting the foetus from contact with the BVD virus. This can be achieved through good biosecurity, herd surveillance and a sound vaccination plan involving a vaccine proven to deliver foetal protection.

Protecting the foetus

Once PIs have been identified and removed, it is crucial to try and prevent the BVD virus working its way back into the breeding herd. In a country with high cattle movements and generally sub-optimal levels of biosecurity, vaccination has an important role to play.

Since PIs result from infection of the foetus in early gestation, the aim of vaccination is to have maximum levels of immunity at this vital stage in order to protect the foetus against transplacental infection.

Bovilis BVD is licensed to protect the foetus against transplacental infection with BVD virus.

Foetal protection can be expected if the primary course of vaccine is completed 4 weeks before the start of gestation.

Bovilis® BVD

- **Licensed for foetal protection**
- **Conveniently delivered via a 2ml intra-muscular (I/M) injection**
- **Licensed for the active immunisation of cows and heifers from 8 months of age, when MDA is likely to have waned**
- **Flexible range of vial sizes: 5, 10, 25 and 50 dose (25 and 50 dose bottles are PET)**