

# Problems identified with BVD vaccination programmes

**A recent study aimed at understanding vet opinion on BVD control and what is actually happening on-farm has revealed a significant disconnect between the two, according to vet Jonathan Statham who has studied the data.**

The BVD study suggests that although most vets (90%) believe cattle should be vaccinated against BVD, actual uptake at farm level is highly variable—ranging from 10% in Belgium to 36% in the UK, and an EU average of 25%.

“Given that diagnostics and vaccines have been around for almost 20 years, it would not be unreasonable to ask why uptake is relatively low,” says Mr Statham.

Naturally, vaccination levels will vary in countries, where either an established or new eradication programme is running, according to the guidelines of that programme.

As emphasised in the ‘BVD Free’ programme, vaccination alone is not sufficient to guarantee eradication of BVD. That said, many experts agree that surveillance, coupled with persistently

## Identifying BVD in cattle

The signs of BVD are hard to spot which can mean they go unnoticed and are even seen as ‘normal’ for that herd. Unchecked and unseen, this disease can lead to significant economic losses.

BVD causes serious damage when it infects pregnant cows. Foetal death, mummification of the foetus and abortions are possibilities at any stage. If infection occurs at between 30-120 days into the pregnancy, a persistently infected (PI) calf can be born. A PI can be born alive, often seemingly healthy, but will excrete virus into the environment at all times, acting as a source of infection to other cattle before dying months or years later.

To prevent the birth of PIs, the cycle of infection needs to be broken by removing PIs (so that virus is not shed into the environment) and ensuring that the foetus is protected, which can only happen with the correct use of a vaccine.

infected calf (PI) removal and supported by vaccination offers a belt and braces approach, particularly when considering protecting stock.

Data from 2013 shows estimates of exposure levels of cattle to the BVD virus:

- UK: 90% to 95% seroprevalence
- Ireland: 98%
- Germany: 60%
- France: 60%
- Italy: 62%
- Spain: 80%

“We know that exposure is high—many cattle are affected by BVD and even more can be said to be at risk—yet vaccine uptake remains low. Why is this? Surely, for a country such as England where we see our Scottish and Irish neighbours taking great strides forward in BVD control, examining our own approach should be a priority,” argues Mr Statham.

“Perhaps even more concerning is the fact that between a quarter and half the time, vaccines are used incorrectly,” he states. “So, even if animals are being vaccinated against BVD, there is no guarantee that an appropriate level of protection is being delivered.”

A recent student research study presented at a veterinary conference offers some clues as to what goes wrong and where lapses occur.

The study was carried out on 71 farms, split between beef and dairy. It found that:

- 21% of farmers vaccinated using the incorrect dose of vaccine.
- A similar number did not administer the vaccine via the correct route of administration.
- While farmers gave a two-dose primary course, nearly 50% had the wrong interval between doses.
- Critically, vaccine should be given far enough in advance before service to ensure that the unborn calf is protected, yet just 24% of respondents managed to do this.
- 23% of farms did not know their BVD status.

“Timing of vaccine administration is certainly an issue, especially for year-round calving herds. The datasheets state that the existing vaccines should be administered well in advance of serving, up to four weeks in one case prior to serving,” says Mr Statham. “Often this is unrealistic as herds tend to be gathered for all their vaccinations in spring prior to turnout, or in the autumn housed period. Separating out smaller groups for their BVD vaccine boosters at the optimum time ahead of service simply doesn’t happen in many cases.

“There is also still a degree of uncertainty around six-monthly or annual boosters and which vaccines can be administered together.”

The study also revealed that only 28% of producers reported knowing the BVD status of bought-in animals, and very few purchasers insisted that stock were vaccinated prior to coming onto their own unit. Poor biosecurity, especially when it comes to buying in stock is a very real disease risk.

## Know BVD status

It is recommended that producers should always know the BVD status of stock coming onto a unit, especially in-calf animals, and if vaccinated this includes knowing when they were vaccinated, since animals vaccinated after service could still be carrying an infected foetus.

“One of the biggest problem areas, more so in all year around calving herds, is making sure

that heifers receive the correct primary course of vaccine before being served for the first time,” Mr Statham adds.

“These animals also need to be fed into the adult herd booster timing without exceeding the required time interval. On many farms heifers may go 18 months between a primary course and a booster, which removes the benefits of starting the vaccine programme.

“It is also important to realise that just because you vaccinate, BVD could still be a threat to your herd and ongoing surveillance is vital.”

It was also interesting to note that the health of the animals at the time of vaccination was seldom taken into account.

“A sick or immune-compromised animal will not be able to respond well to a vaccine. It is worrying then that there seemed very few incidences of illness being given as a reason not to vaccinate,” he says.

BVD is having a significant impact on cattle production in the UK and worldwide. Industry initiatives such as ‘BVD Free’ have raised awareness of its importance but progress is genuinely challenging, especially in the cattle-dense regions with many cattle movements and shared boundaries. Scotland and Ireland continue to forge ahead with animal health programmes along with more regions in the EU.

Vaccination offers a vital tool in the fight to eradicate BVD, but without careful use of vaccines we will not achieve the return on investment that we all expect.



Vet Jonathan Statham.

*This is the sixth article in the BVD Aware series which is working to support DairyCo, EBLEX and the NFU’s BVD FREE project which has been working with vets and farmers throughout the country to improve disease understanding, diagnosis, surveillance and control.*