UNDERSTANDING AND ERADICATING BVD

Every two years, the BVDzero Awards, sponsored by Boehringer Ingelheim Vetmedica GmbH, take place to encourage the search for both clinical and subclinical cases of bovine viral diarrhoea (BVD) in cattle herds, to increase the awareness of the disease and help to reduce its prevalence. The awards attract interest and submissions from across Europe. Here, we present an abstract of three Irish case studies submitted to these awards, that have contributed to greater understanding and awareness of the disease

CASE STUDY 1

BVD outbreaks in a small, pedigree beef herd in the west of Ireland: John Gilmore, Farmlab Diagnostics

Background

The farm consists of approximately 30 cows, half being commercial beef cows, the other half are pedigree Charolais cows with replacement heifers being sourced from within the herd. In 2012, the farmer joined the voluntary BVD eradication programme in Ireland on a voluntary basis and subsequently tested under the mandatory Irish national BVD eradication programme in 2013.

Test history

In 2012, 2013 and 2014, testing (via ear notches) identified BVD-positive calves. Eventually, these were all euthanised. A fully-grown adult cow was also euthanised. An early adopter of the Irish BVD scheme, the testing made available through the scheme was invaluable in helping to identify these animals. Eighteen months later, two calves tested positive for the virus. And eight months after that, another one.

Conclusion

The impact on the relatively small (30-head) beef herd was significant and other diseases were also seen, where, typically they would not have been (perhaps due to poor immunity on the farm). Eradicating BVD and staying on top of screening/ testing has helped bring about a marked increase in calf health and, notably, a reduction in calf scour. *Full test data is available for the three years 2012-2014.*

CASE STUDY 2

BVD outbreak, Skryne, Co. Meath: Liam Carroll, Pat Farrelly and Partners

Background

Father-and-son-run, 50-suckler cow herd with all progeny kept as replacements or finished for beef. Tight spring-calving window around the start of March. Closed herd for 10 years. Runs on two main blocks of land and Al used for breeding. Been in the BVD eradication scheme since 2013.

History

The end of April 2016 saw a very small calf born and fed colostrum but died the next day. The calf was tagged and tested and was BVD-positive. The rest of the herd calved problem-free and all remaining calves were negative. To rule out BVD, the dam of the calf that died was tested, although she had tested negative as a calf. It was confirmed she was not a persistently infected (PI) animal.

Conclusion

Shows the impact of BVD getting into a naïve herd, even though the spread of virus was limited. Deer were identified as a possible source of infection, but more likely was a neighbouring beef herd where nose-to-nose contact was possible. Although a member of the BVD scheme, the neighbour had some older cattle of unknown BVD status. Vaccination is now used routinely and for peace of mind as losing animals that represent the future of the herd is too significant and slows down herd expansion plans. *Full test data is available.*

CASE STUDY 3

Investigation into BVD outbreak in a dairy herd: Joris Somers, University College Dublin (UCD) Veterinary Hospital

Background

In early 2013, five calves suffering from neurological problems were born. Some were referred to the UCD Veterinary Hospital but all ended up being euthanised. Only 50% of the herd had calved by this point. Post-mortem revealed lesions and abnormalities associated with late-term BVD exposure. Tissue tags were taken.

The 110-cow herd was dried off on November 1 and land is in four blocks, with milking cows close to the farm. The farm is worked by father and son and a relief milker. Apart from the relief milker, there are few visitors to the herd. It is an open herd, with bought-in animals not tested or quarantined. BVD vaccine was not used at this time.

Outbreak

- Two neurological calves presented to UCD Veterinary Hospital.
- Five neurological calves in total.
- One blind calf with bilateral grey opacity of the cornea was seen during the visit.
- Six to eight calves relatively small at birth.
- Two smaller calves seen in the calf house on the day of the visit.
- Two cases of diarrhoea this year, improved after five days.
- Two positive ear notch tissue sample BVD results out of 44 calves born:
 - First calf isolated after 10 days, when result was known;
 - Second calf was born on the day of the visit. This calf was notably small and was isolated together with first calf directly after birth

Based on blood testing, it was confirmed that active BVD was present on the farm, among the youngstock group.

Conclusion

Biosecurity and lack of testing was a problem on the farm and has been dealt with. Further PIs were identified, and the farmer wanted to isolate these and rear them. Upon realising this was not possible, they were culled. Bulls of known status only are bought now.