An outbreak of BVD in a Vaccinated Herd

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Rebecca is Large Animal Clinical Manager at Axe Valley Veterinary Practice Ltd. She is graduated from the Royal Veterinary College in UK. She has grown up on a farm in Summerset, and has always shown a keen interest in large animal surgery, in youngstock management, and also, in farmers' education. e. She likes sports, Reading and travelling. She had the new initiative to organize veterinarians' meetings to share experiences, new knowledge and to enhance efficiency in the Practice.

HISTORY AND BACKGROUND

This is a farm with 200 Holstein cows, housed all year round and milked three times a day. Its average lactation yield is 12000 kg. Officially, it is said to be a "closed" herd. However, in fact, it is not totally closed, with allowed transfer of living animals.

PREVIOUS BVD TESTING ON THE FARM

March 2015, they begun with tagging and testing system (T&T) all newborn calves and testing the bulk milk tank yearly. In that year, 6 PIs were found, while remaining the bulk milk tank negative. In April 2016, the whole herd was vaccinated with Bovela.

In January 2017, a T&T positive calf was born from an antigen negative dam and it was concluded that the dam was not fully protected before service, more than a vaccine breakdown. April and May 2017 two heifers' calves were T&T inconclusive (retest again), and farm workers had doubts if those heifers were vaccinated 1m before service.

June and November 2017, three additional T&T positive calves were detected, all three coming from negative mothers.

CONFRONTING THE RESULTS

Based on these (bad) results with new PI animals in the farm, despite a general protecting vaccination with Bovela, the farmer was thoroughly asked for vaccination protocols and the animal herd reviewed. Although they always argued that the farm was a closed herd, they had recently brought in a group of pregnant heifers!!! Animals were antigen negative and presumed to be vaccinated.

However, this fact could not be definitively confirmed. No more PIs were born 2017. However, April 2018 one calf, born from the first heifer already with a T&T history, was T&T positive. This heifer, mother of the last calf, was antigen positive: so, it was a false negative T&T diagnosis of this calf!

The diagnostic sensitivity of the T&T method was discussed with the technical team responsible for this, (NML). We implemented a young stock screen in non-vaccinated animals, to test BVD circulation, when, suddenly, June 2018, the bulk milk tank resulted positive!!! In the same month, another calf was positive. Additionally, the last Tuberculosis testing detected on low reactive heifer. This animal resulted to be BVD antigen positive!!! This heifer received an “inconclusive” T&T result, but it was never retested…

Rebecca and farmer reviewed then all previous T&T results and assured that all animals which needed to be retested were retested and found that an additional inconclusive animal remained in the herd. Even more, they found that a T&T positive calf were yet in the herd!!

October 2018, a new positive bulk milk tank was determined: all milking cows were examined in 20 pools of 10 animals. One pool was positive, and all 20 cows individually antigen tested. One PI primiparous cow was observed (almost 4y old), and subsequently culled).

Since then, the bulk milk tank has been quarterly negative and not more T&T positive calve has been found.

FINAL DIAGNOSTICS AND CONTROL ACTIONS

A whole herd vaccination was implemented on farm in 2016. Any animals that were T&T positive for BVD and had positive blood PCR antigen test, were immediately culled. Strict biosecurity has been put in place for incoming stock to be isolated and tested.

DISCUSSION AND CONCLUSION

With a strict T&T control protocol and a general vaccination since 2016, implemented with an annual control in youngstock screen, a huge improvement in the number of pneumonia cases has been observed. Fertility data are not available from the time before 2017, but the impression is that conception rate has also improved.

The most important lesson to learn from this experience is that BVD can be a challenge!! It is required to question and question again everything that you are told by the farmer. And looking at historical data (on reliable figures!!) is essential