

## Herd BVD outbreak persisted during the years, until definitive control with a new vaccination plan in 2016

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**“The fact that the outbreak continued for so long may be partly due to the initially not sensitive enough laboratory tests used, which allowed PIs keeping the herd in a very intense virus challenge, together with the use of vaccines and vaccination protocols, that did not induce protection.”**

### Background

Dairy farm with 105 milking cows in Lugo, Galicia, Spain. It was a BVD-negative farm, aware of biosecurity, applying BVD-Ag-analysis to all bought animals. Good managed farm, with genetically high value cows, producing and selling embryos.

### Preliminary Indication

Since 2010 a BVD-free herd, and this status was demonstrated again early 2015 (it was a required analysis to be able to sell embryos).

A few months after (December 2015) a clinical outbreak started, with 30% decrease in milk yield, watery diarrhea among the adult cows; diarrhea that became bloody some days later. Analysis for BVD were negative. Antibiotics did not help.

Diarrhea spread to dry cows and young stock herd; 7 days after, an abortion outbreak involving 6-7th month pregnant cows were observed. From the abortions, a BVD-Ag positive result was obtained.

### Further Development

A vaccination program was implemented against BVD with a monovalent inactivated vaccine, every six months, but no boosters were applied, and the new animals introduced to the herd were not vaccinated, nor tested for BVD. Since then, all calves were analyzed for Ag (ear tag samples).

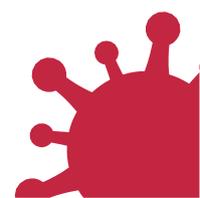


During more than 4 years, new PIs were continuously found, and clinically problems were steady observed.

The veterinary consultant changed. The herd was reviewed all PIs animals culled until no new PI more was detected. Vaccination plan was changed observing the booster after first vaccination and the vaccination of every new introduced animal. During 2015 and 2016, seroconversions occurred again in the youngest animals.

### Treatment Applied

The vaccination protocol was changed again switching to a live double deleted vaccine against Type 1 and Type 2 on the whole herd (animals > three months old), in the second half of 2016.



## Result

No more cases of diarrhea or abortions have occurred since then, and production has recovered. The search for PI animals using the ear ELISA technique at birth continues.

The economic consequences of the BVD outbreak were very high: less milk yield, abortions, deaths, 12 PIs culled. Costs in treatments for >4,000€.

## Questions

Q1: Which is the most probably reason for not being able to control the BVD outbreak during the years?

1. Because of the biosecurity problems.
2. The herd had contact with outside animals.
3. Because not sensitive enough techniques together with an incomplete vaccination program was implemented.

Q2: Was the economic loss relevant in this herd?

1. Yes, it was. Very important losses can be attributed to this BVD outbreak.
2. No, it wasn't. The outbreak did not influence relevantly milk yield, nor health status of the animals.
3. Yes, it was, but just during the first year after the virus entrance in the farm.