

Are beef cows more prone to the infection? Possible bias in BVD fetal infection capacity due to bovine breed

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“We observed 50% of PI births in the case of the Rubia Gallega breed, whereas this percentage was 20% in the Holstein herd. Is it possible that BREED influences the likelihood of breeding a PI fetus?”

Background

Mixed beef/dairy farm with 70 milking cows and 8 mamma beef Rubia Gallega breed cows.

Two separated buildings: for the dairy herd, and for the rearing animals together with the beef herd. Outdoors barns for the dry cows and for the near to calving heifers.

Preliminary Indication

A seroconversion in the herd were determined by the routinely analyses performed by the Official Veterinarian

Services affecting the young herd (rearing heifers and calves) but not the adult cows.

Further Development

All animals in the young stock herd (dairy and beef) as well as all calves <6m were sampled for BVD-Ac testing, and the negative animals retested for BVD-Ag if female. Just one male was negative to BVD-Ac, and immediately culled.

Further analyses on the calves revealed 6 PI animals.

Treatment Applied

No treatment and no vaccination was performed, considering the course of this BVD infection absolutely subclinical.

Result

Segmenting the herd by breed (beef or dairy), we had 8 pregnant beef cows versus 15 pregnant Holstein animals. From these cows, we detected 4 beef PI calves and 3 Holstein PI calves. This makes an incidence of PI births of 50% in Rubia Gallega breed and of 20% in Holstein. Both incidence rates are very high, but is it also possible that the breed shows a genetic sensibility to BVD infection?.

Questions

Q1: Was this BVD outbreak subclinical?

1. Yes, it was. No symptom was observed at the dairy herd, although some abortion was observed among the beef cows.
2. No, it was not. A severe outbreak was observed in the beef herd.
3. **Yes, it was. No symptom was observed at the beef herd or at the dairy one.**

Q2: Why does the veterinarian suggest a bias due to the bovine breed during the BVD infection?

1. Because much more abortions were observed in the beef herd when compared to the dairy one.
2. **Because much more PI calves were observed in the beef herd when compared to the dairy one.**
3. Because a higher mortality was observed in the beef herd when compared to the dairy one.