

TITLE

EPIDEMIOLOGICAL ANALYSIS OF THE PRRS VIRUS IN TWO FARMS IN SPAIN USING BIOPORTAL: CASE REPORT

Victor Rodriguez-Vega¹, Iván Hernández-Caravaca¹, Sebastián Figueras¹, Eugenio Sánchez¹, Gloria Abella¹, Antonio Callén¹

¹ *Boehringer Ingelheim Animal Health Spain*

CONTENT

Background and objectives

Access to molecular techniques allows us to compare the phylogenetic similarities for a better understanding of the PRRSV dynamics.

The objective of this study was to analyze the PRRSV dynamics in two farms.

Materials and Methods

Two 1,800 sow farms were included in this study. Farm A was a historically PRRS positive farm. Farm B, which belongs to the same production system, is 1.35 Km away from Farm A and was PRRS negative. There was a PRRSV outbreak in Farm B in August 2014. In July 2015 the company started a PRRS Control program in both farms including sows and piglets vaccination and the virus monitoring by RT -PCR in sera of 30 due-to-wean piglets and 10 nursery piglets in a monthly basis. ORF-5 was sequenced and Bioportal software was used to compare the sequences.

Results and Discussion

Eighty-one ORF5 sequences were obtained between July 2015 and September 2018. The degree of heterology between field virus sequences obtained in farm A varied from 0.2% to 3.0%. Whilst in farm B, went from 0.2% to 2%. Meanwhile, the heterology between sequences obtained in Farm A and Farm B varied from 18.9% to 19.8 %. Therefore, we assumed that:

- The source of the virus responsible of the first outbreak in Farm B was not Farm A.
- Both farms haven't shared any virus in three years
- No new lateral entrances of viruses have been detected after the starting of the program.
- There was a problem of internal biosecurity with circulation of both resident viruses.
- Some management procedures must be implemented in both farms.

Conclusions

Bioportal is a good tool to understand the PRRSV dynamics and to help us to understand what is going on in the farms in order to modify the PRRS control programs if it is necessary.