



IMMUNOLOGY & VACCINOLOGY

IMM-O46

LIMITATIONS OF USING HISTORICAL COMPARISON TO ASSESS VACCINE EFFICACY AND THE VALUE OF DIAGNOSTIC DATA

J. V. Wielen¹, A. Verhaegen², J. Allison³.

¹ De Varkenspraktijk, Oss, Netherlands; ² Zoetis B.V., Capelle ad IJssel, Netherlands; ³ Zoetis, Parsippany, United States.

Introduction

For many producers the only practical way to assess the impact of any change is by comparing the performance of successive batches of pigs. This example illustrates the potential limitations of this approach as well as the value of diagnostic data in aiding interpretation.

Material and methods

A Dutch farrow-to-finish farm (850 sows, 5000 finishers), changed its routine vaccination against PCV2 and *M.hypopneumoniae* from Ingelvac®Circo/MycoFLEX combination to Suvaxyn®Circo+MH RTU, primarily to reduce the labour of product mixing. The last batch of finishers vaccinated with Ingelvac (n=384) and the first group vaccinated with Suvaxyn (n=384) were compared. Blood samples were taken every 4 weeks for serology and pools were used for PCV2 qPCR. The respiratory distress index (RDI) was evaluated during the finishing period using sound monitoring (Soundtalks SOMO) and lung scores were checked at slaughter. Occurrence of clinical signs, anti-infective use and mortality were recorded.

Results

Neither group showed evidence of PCVAD or PCV2 viremia, but serology showed exposure of the Suvaxyn group to PCV2 in mid-finishing. There was no evidence of exposure in the Ingelvac group. Slaughterhouse checks showed gross lesions of enzootic pneumonia in the Ingelvac group, but the potential pathogen isolated was *Manheimia varigena*. The RDI during finishing was also higher in this group (peak 14.53); whereas there was no evidence of enzootic pneumonia in the Suvaxyn group and the peak RDI was 9.86.

Other parameters were similar and overall the producer considered the performance of both vaccines satisfactory.

Conclusion

Even using consecutive batches on the same farm, differences in disease challenge may impact the validity of historical comparisons. Regular diagnostic monitoring will at least help identify these and facilitate overall interpretation. Differences in RDI assessed using sound monitoring correlated with differences in lung lesions at slaughter and the technique appears interesting for the future.