

Comparison of serological and virological response following vaccination of pigs with either Porcilis® PCV M Hyo or a mixed combination vaccine against PCV2 and *Mycoplasma hyopneumoniae*

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INTRODUCTION

Porcilis®PCV M Hyo is the first ready to use (RTU) PCV2/ *Mycoplasma hyopneumoniae* (M. hyo) vaccine in the European Union. The aim of this study was to compare the use of RTU PCV2/M. hyo vaccine to an X-combo procedure of a single circo and M. hyo vaccination in a Dutch closed pig farm with a history of PCVAD and M. hyo problems. Pigs were sampled at multiple time points during the trial to compare PCV2 viral efficacy as well as M. hyo and PCV2 serological responses. Both of these measures are important to understand the infection dynamics in vaccinated and infected herds and it provides essential information for the correct interpretation of diagnostic tests results.

MATERIAL AND METHODS

The trial was conducted in a farm with 170 sows in a two week batch production system. Three (3) week old piglets from six batches were randomly allocated to three groups and were vaccinated as follows: P-Porcilis PCV M Hyo (n=266), X-combo (n=262), C-saline controls (n=268). Pigs from different groups were commingled throughout the study.

In batch 1, 3, and 5 blood samples were taken from about 10 pigs/treatment at 3, 10, 18 and 22 weeks of age. Samples were tested for M. hyo (Idexx Elisa) and PCV2 (ORF2 Alphasisa, MSD-AH; log₂ titer). PCV2 viremia was tested with qPCR determining percentage of viremic pigs and average viral load (Log₁₀ DNA copies/μl). PCV2 positive pigs were also categorized as shortly or persistently (>1 positive of 4 samples) viremic.

CONCLUSIONS

The results demonstrated a field infection with PCV2 and M.hyo during the trial. Vaccination significantly reduced PCV2 viremia incidence persistently in viremic pigs and viral load. This reduction was higher in Porcilis PCV M Hyo than X-combo pigs. In addition, Porcilis PCV M Hyo induced a better humoral immune response against PCV2 and M. hyo compared to the mixed combo vaccine. Finally, serological test results suggest that there are differences across PCV2 and M. hyo combination vaccines that may affect the overall vaccine efficacy.

