

Serological response after double vaccination with Mhyosphere® PCV ID of replacement gilts on a breeding farm unsuspected of *Mycoplasma hyopneumoniae* infections

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Introduction

Health monitoring programs on breeding farms often involve serological monitoring of *M.hyo* infections. Vaccination against *M.hyo* is widely used in farms and are mostly applied after weaning, which might influence the results of such programs.

The objective of the current study is to evaluate the serological response after double *M.hyo*-PCV2 vaccination with a novel intradermal vaccine of replacement gilts, on a *M.hyo* unsuspected breeding farm, by two commercial ELISA tests for *M.hyo* antibodies.

Materials & methods

On a breeding farm, unsuspected of *M.hyo* infections, twenty-four young replacement gilts were allocated in 2 groups: a non-vaccinated control group (CON, n=9) and a group vaccinated with Mhyosphere® PCV ID at 3 and 26 weeks of age (VACC, n=15).

Individual blood samples were collected at 3, 8, 26 and 32 weeks of age. Blood samples were analyzed for the presence of *M.hyo* antibodies by CIVTEST SUIS MHYO (HIPRA, all age groups, value >35: positive) and MHYO IDEXX ELISA (Royal GD, 8, 26 and 32 weeks of age, S/P-value >0.4: positive). The relation between both tests was determined based on Pearson correlation.

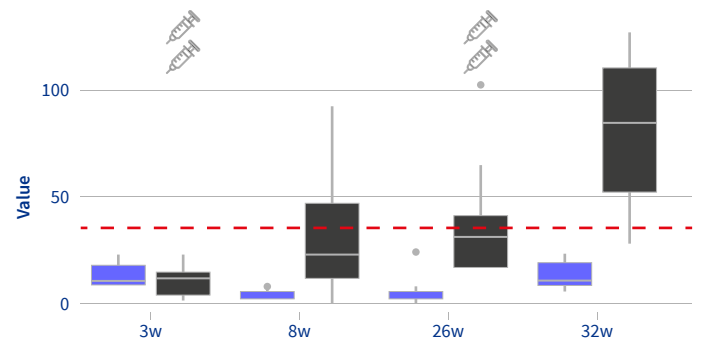
Results

All pigs were serological negative for *M.hyo* antibodies before the first vaccination and the CON pigs remained serological negative throughout the study period.

The percentage positive VACC pigs and mean values (±SD) in the CIVTEST SUIS MHYO (HIPRA) were at 8, 26 and 32 weeks of age, 33% (mean: 37±32.9), 33% (mean: 37±23.9) and 87% (mean: 81±33.1).

In the MHYO IDEXX ELISA (Royal GD), the percentage positive pigs and mean S/P values (±SD) were 0% (mean S/P: 0.09±0.10), 13% (mean S/P: 0.15±0.16) and 67% (mean S/P: 0.63±0.40) respectively. The correlation between both tests was high (R: 0.88, p<0.001).

CIVTEST SUIS MHYO (HIPRA)



MHYO IDEXX ELISA (Royal GD)

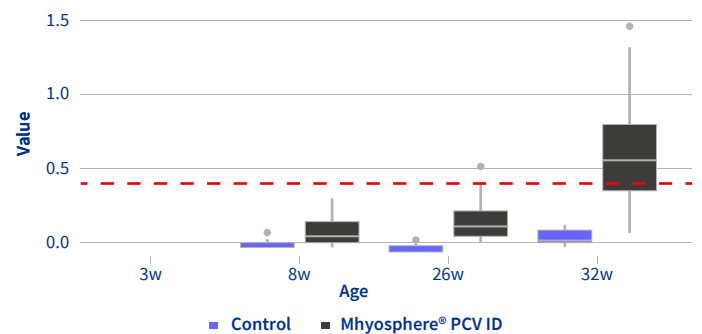


Figure 1. Serology results of the CIVTEST SUIS MHYO (HIPRA, *P*-value >35: positive) and the MHYO IDEXX ELISA (Royal GD, *S/P*-value >0.4: positive). The correlation between both tests was high (R: 0.88, *p*<0.001).

Discussion and Conclusion

Double *M.hyo* vaccination in replacement gilts results in seropositivity on *M.hyo* unsuspected breeding farms.

This needs to be taken into account when using serology-based health monitoring programs. Furthermore, the interpretation of serology results depends on the test used.