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Formatting

Tina Smith Graphics
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CD-ROM

David Brown
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Logo Design

Ruth Cronje, and Jan Swanson;
based on the original design by Dr. Robert Dunlop

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PCV2 viremia and performance in vaccinated and unvaccinated animals inside a long-term vaccinated herd with Ingelvac CircoFLEX®.

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Introduction and Objectives

PCV2 vaccination has been established in many herds globally. The aim of this study was to study the viremic dynamic and the performance in vaccinated and unvaccinated animals in herd that used PCV2 vaccination since more than a year.

Materials and Methods

The study was conducted in a 2,000 sow head multi-site production system. Site 2 (2000 nursery places) and site 3 (finishing with 3200 fattening places) are on the same site in this trial. Routinely all pigs in the system are vaccinated at 3 weeks of age (one day before weaning) with Ingelvac CircoFLEX®. For the study, a group of 400 vaccinated pigs was compared to 423 pigs that were left unvaccinated as control group. Pigs on trial were located in the same nursery room and transferred at eleven week-old to the same finishing barn (separate pens). Therefore, potential exposure to microorganisms and environmental stresses would be similar for both groups. At 3, 11, 15, 19 and 28 weeks of life twenty animals were randomly blood sampled in each group. PCV2 qPCR was performed using primers previously described¹.

Pigs were individually weighed at start and at 101 days of the fattening period. Average daily gain (ADG) was calculated and culls (animals < 75kg at 101 days) and mortality recorded.

Results

Viremia were significantly higher in unvaccinated animals at 15 and 19 weeks of life ($p < 0.001$). No viremia was detected in the vaccinated animals during the trial (Fig.1). Starting with the onset of viremia at week 15 the mortality started to rise in the unvaccinated group. Unvaccinated pigs showed typical clinical signs and pathological lesions of PCVD.

Performance parameters of both treatment groups are summarized in table 1.

Discussion and Conclusions

This study confirms that vaccination effectively protects pigs and reduces PCV2 viremia, in this case even to levels below the detection limit. At the same time it underlines that continuous PCV2 vaccination is necessary to control PCVD. Even when only a small group of pigs was left unvaccinated, clinical PCV2 associated disease reappeared, mortality increased and PCV2 viremia rose to detectable and relevant levels. These findings are in line with previous reports^{2,3} and demonstrate that stopping PCV2 vaccination puts a farm at high risk and can cause significant productive losses.

Figure 1. PCV2 DNA copies for each tested group.

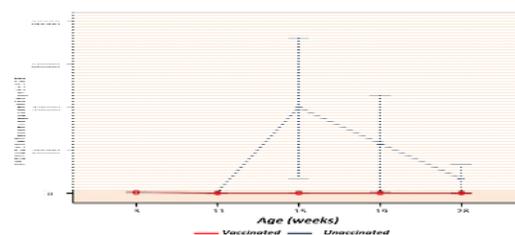


Table 1. Performance parameters

	Control	CircoFLEX
Mortality (%)	3.43%	1.8%
Culls (%)	4.6%	1.8%
ADG (g/day)	700	716

References

1. Fenaux et al. 2004. J Virol. 78. 6297
2. Kristensen et al. 2011. Proc Emerg Dis, p. 104
3. Edler et al. 2008. Proc Lemman Conf Rec.Res., p.10.