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Thank you to **IDEXX Laboratories** for their financial support to reproduce the conference proceeding book.

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based on the original design by Dr. Robert Dunlop

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Efficacy of Ingelvac CircoFLEX® in a herd with subclinical PCVAD

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Introduction

Porcine circovirus type 2 (PCV2) infection can result in clinical or subclinical forms of porcine circovirus associated disease (PCVAD).¹ Ingelvac CircoFLEX®, a porcine circovirus type 2 (PCV2) vaccine, has been reported to significantly improve performance of vaccinated pigs in both clinically² and subclinically³ affected herds. The objective of this study was to confirm the efficacy of Ingelvac CircoFLEX®, a porcine circovirus type 2 (PCV2) vaccine, in a herd affected by subclinical PCVAD.

Materials and Methods

A 3-site production system negative for PRRS virus and positive for *Mycoplasma hyopneumoniae* was used in this evaluation. Peak PCV2 viremia occurred around 18 weeks of age without clinical expression of PCVAD (increased mortality). Two 1200-head barns of pigs were utilized (half vaccinated at 3 weeks of age, half non-vaccinated) with pen being the experimental unit. Treatment groups were balanced by sex and barn distribution. The barns each consisted of 40 pens housing 30 pigs/pen. Treatment groups were alternated by pen and pen weights were collected at 3, 12 and 22 weeks of age. Ten pigs were randomly selected and identified for serial blood sampling from each treatment group at 3, 6, 10, 18 and 22 weeks of age and submitted to the BIVI Health Management Center for testing.

Results

Pig groups were considered clinically normal throughout the evaluation. PCVAD was confirmed histologically and by qPCR in individual pigs at 10, 14 and 17 weeks of age confirming the presence of subclinical PCVAD. There were no differences between the two treatment groups for pig placement weights or week 3-12 ADG. Vaccinates had improved week 12-22 and week 3-22 ADG compared to non-vaccinated controls (P=0.01, Table 1). Vaccinated pigs had significantly reduced PCV2

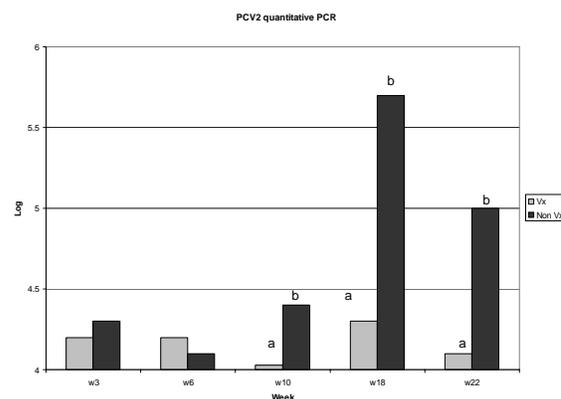
qPCR viral loads at 10, 18 and 22 weeks of age (P<0.0001; Figure 1).

Table 1. LS means for pig performance

Item	Vaccinates	Control
wk3-12 ADG, lbs/day	1.12	1.11
wk12-22 ADG, lbs/day	2.05 ^a	1.99 ^b
wk3-22 ADG, lbs/day	1.62 ^a	1.58 ^b

^{ab}Means with different superscripts in the same row are significantly different (P=0.01).

Figure 1. PCV2 quantitative PCR results



^{ab}Means with different superscripts are significantly different (P<0.0001).

Conclusions

The presence of PCV2 infection in growing pigs may have a negative impact on performance even when we do not observe clinical manifestations of the disease. Vaccinates had significantly higher ADG which was associated with significant reductions in PCV2 viral load. Consistent with previously reported findings in a subclinically affected herd³, significant biologic improvements were achieved by controlling the subclinical impact of PCVAD by vaccination with Ingelvac CircoFLEX®.

References

1. Oppriesnig T, 2007. J Vet Diag Inv,19:591-615.
2. Cline G et al. Proc IPVS 2008: 17.
3. King D et al. Proc AASV 2008:159-161.