Effects of PCV2 vaccines on post weaning pig performance

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Introduction

Vaccination of pigs for PCV2 and *Mycoplasma hyopneumonia* is a routine measure in pig production globally. In many cases vaccination for these two pathogens is done around weaning. Pigs have to cope with many stressors at weaning. At the same time the pig's performance around weaning is critical for the later performance and the degree of variability after weaning has a substantial impact on the variability at the end of finishing. The objective of the trial presented here was to compare two PCV2 vaccines on their impact on piglet performance shortly after vaccination.

Material and Methods

The trial was conducted in a PRRSv negative, 1200 sow farrow-to-finish farm in France. The farm operates in a weekly batch system and weans piglets at about 3 weeks of age. After weaning pigs are kept in a nursery unit on dry feed for about 3 weeks before they are moved to a rearing unit with liquid feed. From weaning to slaughter the mortality rate in this farm is about 4% and the feed conversion rate from weaning to slaughter is at about 2.55. For this trial one day before weaning pigs were included into the study, weighed individually, and piglets of each litter were alternatingly allocated randomly by first pick to either treatment group 1 or 2 and marked individually with an ear tag. In total 1158 pigs of 2 following farrowing batches were included. On the day of weaning the pigs were vaccinated either with Ingelvac MycoFLEX (1 ml) and Porcilis PCV (2 ml, both products according to label instructions, treatment group 1) or with Ingelvac MycoFLEX and Ingelvac CircoFLEX (according to the label, 1 ml of each product, treatment group 2). In the nursery unit pigs of the two treatment groups were kept comingled in pens of 65 to 70 animals and were weighed again individually 14 days after inclusion. Data were analyzed using the statistical software Mintitab® (version 17). Data from the groups were compared using a t-test except losses using a χ^2 test.

Results

At inclusion mean body weights, weight distribution as well as sex ratio and age were comparable for the two treatment groups (Table 1).

For treatment group 1, 4 out of 578 (0,8%) animals died during the trial period whereas for treatment group 2 it was only 1 out of 580 animals (0,2%). The average daily weight gain was significantly different between the treatment groups. This difference was consistent over the 2 repetitions of the trial (Table 2).

Table 1. Numbers, weight and parity at inclusion

	Group 1	Group 2	p
N (at inclusion)	578	580	
Average age	20,30	20,29	0,98
Parity average	2,96	2,93	0,79
Weight at inclusion	5,22	5,22	0,96

Table 2. Performance results of the two treatment groups

	Group 1	Group 2	p
N (at D +14)	574	579	
N Losses	4	1	0,17
Average weight (kg)	8,03	8,25	**0,048 ***
AWDG (g/day)	199,7	216,3	**0,00008 ***

* Values in column are significantly different. P value < 0,05

Conclusion

The findings of this study are in line with other studies that found a difference in local and systemic reactivity between commercial PCV2 vaccines. The results shown here indicate that the choice of PCV2 vaccine has an impact on performance after weaning, which might also impact performance through to finishing.

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