Comparison of performance of nursery pigs vaccinated against PCV2 with different commercial vaccines in a large production system in Hungary

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INTRODUCTION

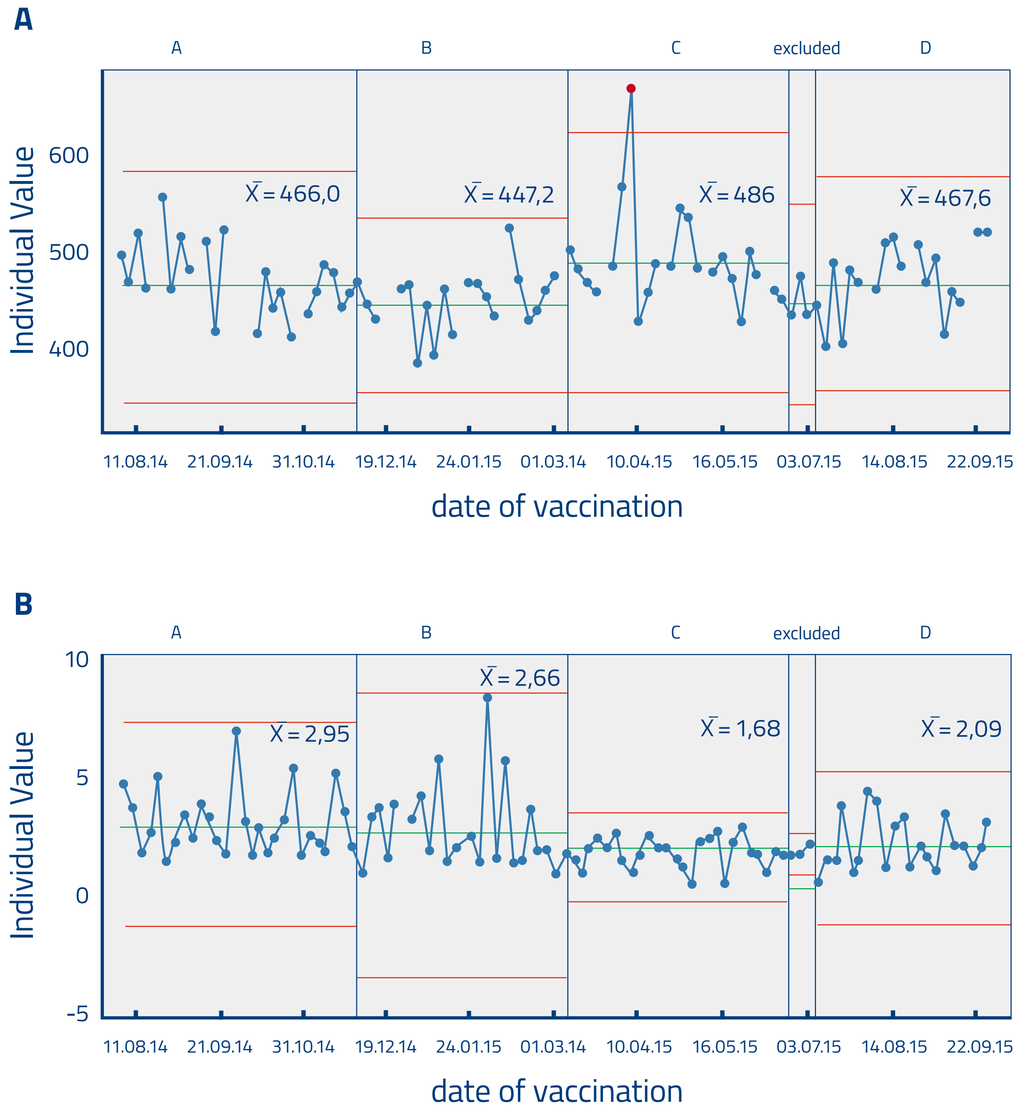
Vaccination of pigs against PCV2 has shown to improve performance in clinically affected, but also in sub-clinically infected herds[1]. Several commercial vaccines are available on the market, which have individually proven to be effective against PCV2 and therefore improve pig performance[1]. However, reliability of this improvement may differ between vaccines[2] and a reduction in batch-to-batch variation is economically beneficial under commercial conditions[3]. This study aimed to compare the efficacy of different commercial vaccines against PCV2 in a large pig production system in Hungary.

MATERIALS AND METHODS

The study was conducted at a farrow-to-finish system with 2,800 sows. Due to insufficient space in nursery, an additional site 2 is in use. Pig performance was analysed between weaning and transfer to the fattening barns (table 1). The farm vaccinated piglets before or latest on the day of weaning with four different commercial vaccines, using each vaccine for several month one after another (table 1). Performance data of pigs was reported for every batch separately. Data was presented and analysed by the use of process control charts with Minitab 17.

Figure 1: I-MR chart of average daily weight gain (A) in gram / day and mortality (B) in percent in nursery split by vaccine groups. Mean values of consecutive groups within the treatments are indicated with green lines and $\bar{x}$; red lines are indicating the upper and lower control limits.

A



B

RESULTS

Batches vaccinated with vaccine C had the highest weaning weight, average daily weight gain, weight at end of nursery and lowest mortality when compared to the other groups (table 1, figure 1). A clear reduction in variation in mortality was seen during the period pigs were vaccinated with vaccine C, which was significantly reduced, compared to vaccine A and B (figure 1B; $p \leq 0.018$).

Table 1: Overview of study groups

vaccine	period	# batches	# pigs	mean weaning weight (kg ± SD)	mean weight out (kg ± SD)
A	11.08.14 – 29.11.14	28	24080	7.50 ± 0.60	27.76 ± 2.0
B	07.12.14 – 07.03.15	25	23827	7.11 ± 0.50	26.23 ± 1.97
C CircoFLEX®	15.03.15 – 20.06.15	26	23673	7.77 ± 0.62	28.47 ± 1.54
D	17.07.15 – 03.10.15	21	17707	7.37 ± 0.59	28.10 ± 1.80

DISCUSSION AND CONCLUSION

Beyond the overall better results in performance in nursery batches vaccinated with vaccine C, special consideration was given to the clear reduction in variation in mortality. Therefore the decision was to continue PCV2 vaccination with vaccine C.

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