Impact of whole herd vaccination against PRRSV-1 on sow performance on a one-site farm in Serbia

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INTRODUCTION

PRRS is considered to be one of the most costly diseases in pig production[1]. However, vaccination with new PRRSV-1 modified live virus vaccines has shown to improve sow and pig performance under field conditions[2,3]. This study aimed to investigate sow performance after implementation of a whole herd vaccination programme on a farm in Serbia.

MATERIALS AND METHODS

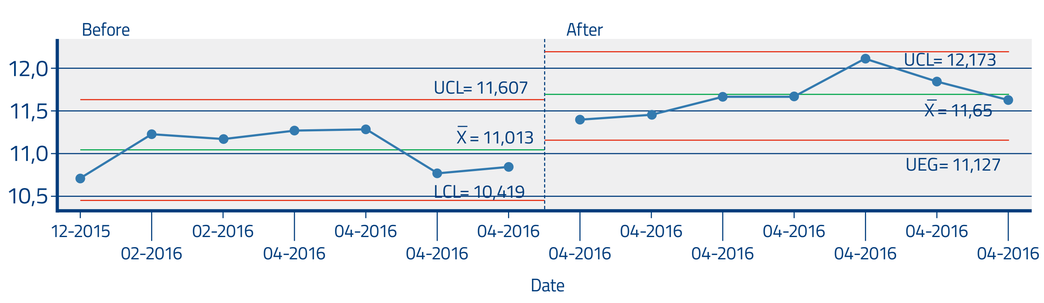
The study was conducted on a one-site farm with 1600 sows. Sows showed an increased rate of irregular returns to oestrus and other reproductive problems. Serological testing revealed antibodies against PRRSV in all stages of production and PRRSV was detected by PCR in aborted foetuses. PRRS vaccination was not implemented prior to the start of this study.

Vaccination started with double mass vaccination of the breeding herd, including gilts over 150 days of age, with ReproCyc PRRS EU® and single vaccination of piglets from 17 days until end of nursery with Ingelvac PRRSFLEX EU®. Breeding stock was revaccinated every 3 months and vaccination of piglets was continued in every batch at around 3 weeks of age. Performance data of sows was collected over a period of 7 months after implementation of the vaccination programme and compared with the same period one year before.

RESULTS

PRRS vaccinated sows had a significantly higher farrowing rate and significantly more live-born piglets per litter ($p < 0.001$). The return to oestrus rate ($p=0.093$) and number of abortions ($p=0.067$) did numerically improve after implementation of vaccination.

Figure 1. Live born piglets per litter before and after implementation of PRRS vaccination presented in an I-MR chart created with Minitab 17 for Statistical Process Control



The number of stillborn and weaned piglets per litter, as well as the pre-weaning mortality did statistically not differ between the observation periods. However, results of pre-weaning mortality were influenced by piglet diarrhoea as a possible consequence of a lack of vaccine supply (*E.coli* / *Clostridium perfringens* type C) at the end of the observational period.

Table 1. Performance before and after the implementation of PRRS vaccination

Parameters	Before (12/ 2015 – 07/2016)	After (12/2016 – 07/2017)
Return to oestrus rate (%) 1. US	6,8	5,3
Farrowing rate (%)	82,5	84,9
Live-born piglets/litter (n)	11,1	11,65
Dead-born piglets/litter (n)	0,9	0,8
Pre weaning mortality (%)	8,5	8,1
Weaned piglets/litter (n)	10,48	10,8

DISCUSSION AND CONCLUSION

The results show an overall positive impact of whole herd vaccination against PRRSV on the performance of the sows.

REFERENCES

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