

Impact of whole herd vaccination against PRRSV-1 on sow and pig performance on a two side farm in Serbia



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INTRODUCTION

PRRS is considered to be one of the most costly diseases in pig production causing respiratory disease, slower growth and increased mortality in growing and finishing pigs¹. 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 investigated the impact of whole herd vaccination with those new vaccines on sow and pig performance on a two side farm in Serbia.

MATERIALS AND METHODS

The study was conducted on a two side farm with 1250 sows on one place and two separate finishing units. On the one hand, piglets in nursery and fatteners showed respiratory symptoms and reduced growth performance. On the other hand, reproductive problems in sows and gilts were detected. In the serological screening all categories were positive for PRRSV antibodies. However, PRRS was not considered to be of significant impact on farm performance. Therefore, no PRRS vaccination was implemented prior to the start of this study. Study started with double mass vaccination of all sows, boars and gilts older than 150 days with 2 ml of ReproCyc PRRS EU® and single vaccination of all piglets older than 17 days until end of nursery with 1ml Ingelvac PRRSFLEX EU®. The breeding stock was revaccinated every 3 months and the vaccination of piglets in the farrowing unit at around three weeks of age was continued according to the weekly rhythm of production. Performance data, regularly recorded on monthly basis by the farm, was collected over a period of about 8 months and was compared to the same period one year before (table 1). Data collection includes reproduction data (farrowing rate in %, number of live, dead born and weaned piglets), growth performance and losses in nursery and finishing units.

RESULTS

Table 1 shows the performance before and after the implementation of the PRRS whole herd vaccination program. PRRS vaccinated sows performed better resulting in an increased farrowing rate, more live born and weaned piglets per litter. At the same time PRRS vaccinated pigs showed better ADG and lower mortality in nursery as well as higher ADG and better FCR in fattening.

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

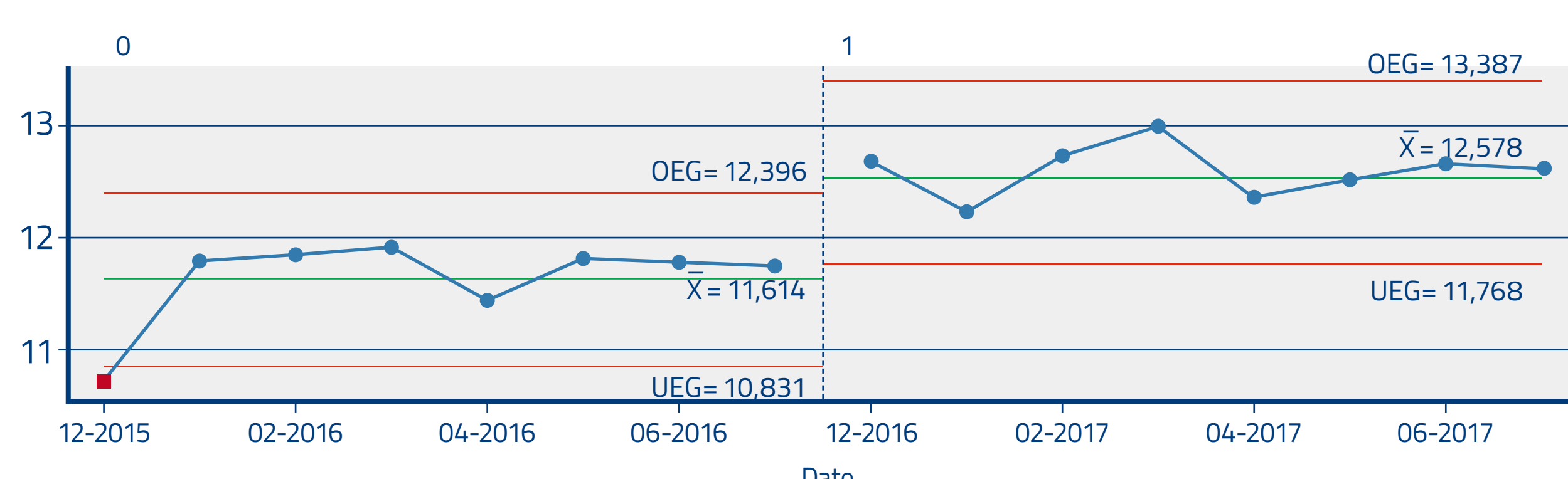


Table 1. Performance before and after the implementation of PRRS vaccination

Parameters	Before (12/ 2015 – 07/2016)	After (12/2016 – 07/2017)
Farrowing rate (%)	73,85	75,86
Live-born piglets/litter (n)	11,6	12,6
Dead-born piglets/litter (n)	0,6	0,7
Weaned piglets/litter (n)	10,4	11,2
ADG Nur (gram/day)	380	398
FCR Nur	2,1	2
Mortality Nur (%)	3,8	2,7
ADG Fat (gram/day)	711	735
FCR Fat	3,6	3,2
Mortality Fat (%)	2,8	2,8
Days in Nur	64,7	58,6
Age at slaughter (day)	210,7	195,7
Total weight at slaughter	113,6	110,9

DISCUSSION AND CONCLUSION

The results show an overall positive impact of PRRS whole herd vaccination on the performance of sows and pigs. The return on investment was 3.71:1 per pig.

(Feed costs: 202.3 €/ton; carcass price: 1.75 €/kg; carcass yield: 80%; Med. costs before: 7.6 €/pig; Med. costs after: 8.7 €/pig; PRRS vac. costs: 1.27 €/pig).

REFERENCES

- Rosow K.D, 1998, *Vet Pathol.* 35: 7-20.
- Stadler et al. 2016, *Vaccine* 34: 3862-3866.
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Figure 2. Weaned piglets per litter before and after implementation of PRRS vaccination presented in an I-MR chart created with Minitab 17 for Statistical Process Control

