

BETTER PERFORMANCE OF PIGLETS BORN FROM GILTS VACCINATED WITH THE MIXED USE OF ERYSENG® PARVO AND UNISTRRAIN® PRRS AND CHALLENGED WITH A HETEROLOGOUS PRRSV STRAIN

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INTRODUCTION

The efficacy of the combined administration of ERYSENG® PARVO and UNISTRRAIN® PRRS against the Porcine Reproductive Respiratory Syndrome (PRRS) was evaluated in this study by assessing piglet performance during lactation after a heterologous PRRSV challenge.

MATERIALS AND METHODS

Twenty six-month-old gilts, clinically healthy and free from antibodies against PPV, *E. rhusiopathiae* and PRRS, were randomly assigned to a vaccinated group (n=10) and a control group (n=10). Animals in the vaccinated group were vaccinated following the recommended protocol; they were immunised intramuscularly with ERYSENG® PARVO (2 ml/dose) and revaccinated three weeks later with the combination of ERYSENG® PARVO and UNISTRRAIN® PRRS (2 ml/dose, the freeze-dried tablet of UNISTRRAIN® PRRS was reconstituted with ERYSENG® PARVO). Vaccination and revaccination were done seven and four weeks before mating, respectively. Animals in the control group received PBS using the same strategy as the vaccinated group.

At ninety days of gestation, all the gilts were inoculated intranasally with 1 ml PAM culture lysate containing $10^{6.39}$ CCID₅₀ of a pathogenic PRRS strain. After farrowing, the piglets which had been born were monitored until weaning (28 days of age). The number of weaned piglets, piglet weight and average daily gain (ADG) were assessed to evaluate piglet performance. The piglets were weighed at day 0 and 28 postpartum and the Mann-Whitney U test ($p < 0.05$) was used to analyse the data. The ANOVA test ($p < 0.05$) was used to analyse the weaned piglets record.

RESULTS

The number of weaned piglets was statistically different between groups (106 in the vaccinated group vs. 68 in the non-vaccinated group). So the mean percentage of weaned piglets increased in the vaccinated group as shown in Figure 1.

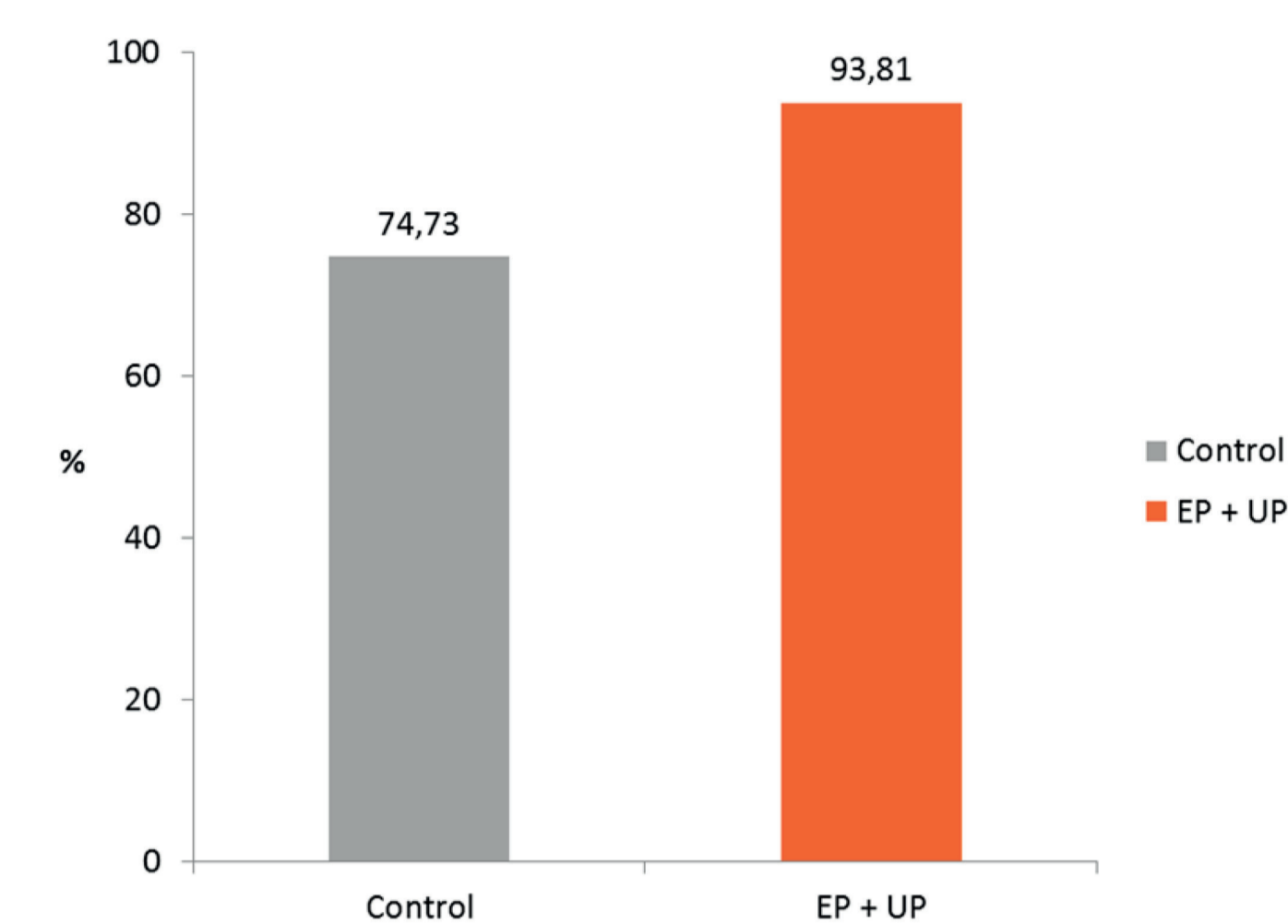


Figure 1. Percentage of weaned piglets after PRRSV challenge.

The mean piglet weight was significantly higher in the vaccinated gilts at partum (1.36 ± 0.07 kg vs. 1.22 ± 0.04 kg) and at weaning time (6.64 ± 0.54 kg vs. 5.91 ± 0.43 kg) compared to the non-vaccinated group.

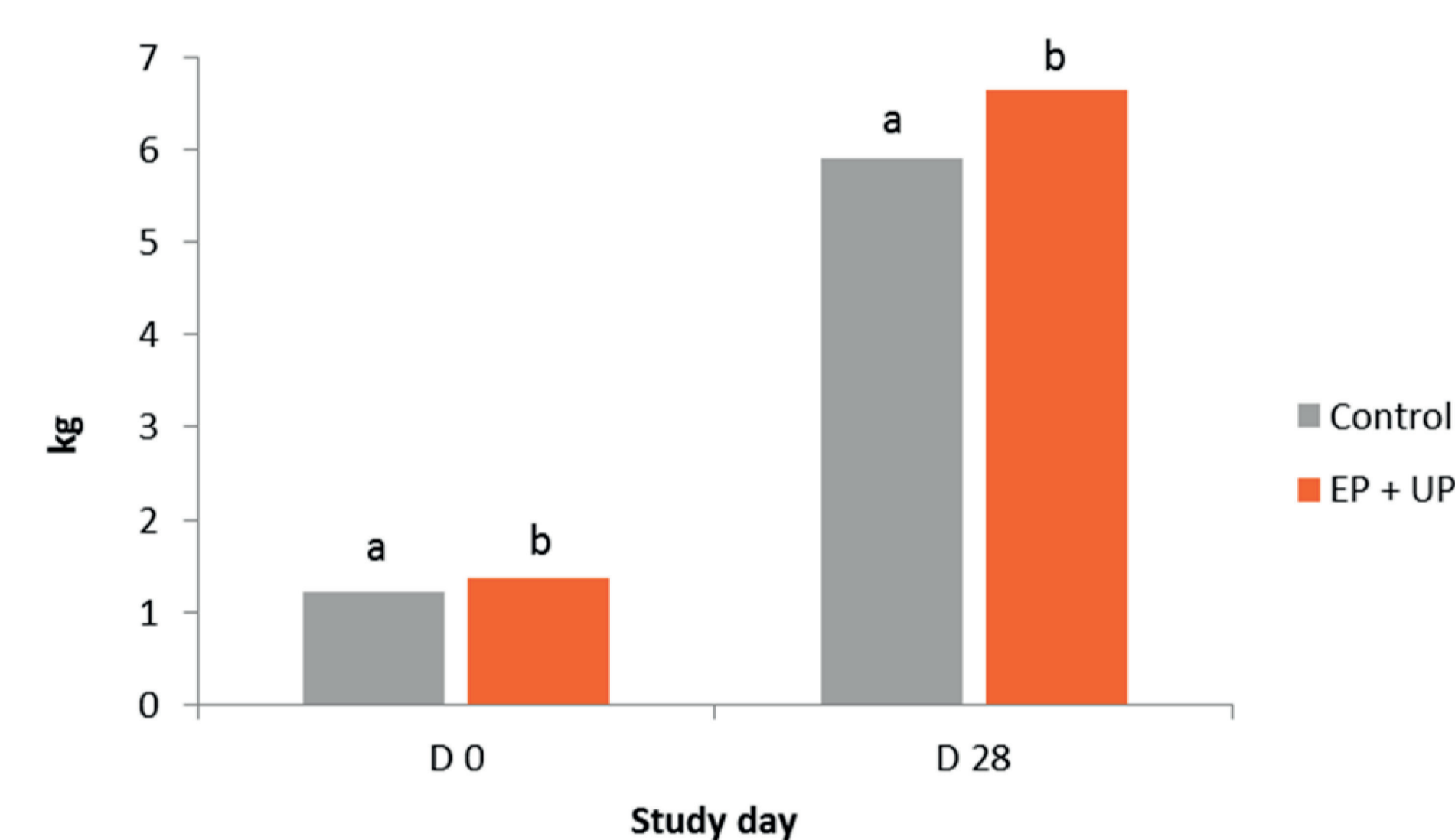


Figure 2. Piglet weight during lactation (D0 partum; D28 weaning). ^{a,b} Different superscripts indicate statistically significant differences between groups ($p < 0.05$).

The average daily gain (ADG; g/piglet/day) was also significantly higher in the vaccinated gilts than in the control group (187.96 ± 16.64 vs. 167.40 ± 16.85).

CONCLUSIONS AND DISCUSSION

After gilt infection, piglets from the vaccinated gilts were heavier when weaned and grew faster than piglets from the control gilts. Overall piglet performance was significantly better in piglets born from vaccinated gilts with the combined administration of ERYSENG® PARVO and UNISTRRAIN® PRRS.

The results obtained allow the conclusion to be drawn that the efficacy in terms of piglet performance after a PRRS challenge with the combined use of the two vaccines is comparable to that of UNISTRRAIN® PRRS administered alone (1).

REFERENCES

1. Fenech et al. 2013. Proceedings ESPHM 2013, p.191