Efficacy of 3FLEX® for the control of PRRS infection in the nursery at a Jeju island swine farm

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INTRODUCTION

PRRS infection is still one of the most serious diseases that causes huge economic loss even many control methods are implemented[1].
The purpose of this study is to evaluate 3FLEX® vaccination to control PRRSv infection in the nursery and to compare the efficacy when vaccinated separately or as 3FLEX®, in the combination with FLEXcombo®.

MATERIALS AND METHODS

The study was performed in a farrow to finish one site farm of 200 sows.

The farm used already FLEXcombo® (CircoFLEX® + MycoFLEX®) in piglets at 21days of age. Weaned piglets at 40 ~ 70 days of age suffered from PRRSv, so we decided to add Ingelvac® PRRS MLV to the vaccination schedule.

PRRS MLV vaccination schedules were 3FLEX (CircoFLEX® + MycoFLEX® + Ingelvac® PRRS MLV) or FLEXcombo (CircoFLEX® + MycoFLEX®) + Ingelvac® PRRS MLV separately per group and evaluated separately. Groups A (20 pigs) and B (19 pigs) served as controls with FLEXcombo vaccination only. Group C (23 pigs) received FLEXcombo® + Ingelvac® PRRS MLV separately and finally group D (23 pigs) received 3FLEX.

Evaluated parameters were weights, average daily weight gain (ADG) and mortality of each group over a period of 2 weeks starting with weaning at 32 days of age. Before starting the study, diagnostics of blood samples was implemented with the veterinary medicine college laboratory in Jeonbuk National University.

RESULTS

Before the start of the study, this farm suffered from decreased productivity. Pigs in groups A and B showed symptoms of a PRRS infection with apathy, reduced appetite, fever and reduced weight gain. 3 pigs in group A and 1 pig in group B group died and both groups needed immediate medications (Ceftiofur, Prednisolone and Sulpyrine). The investigation of blood samples demonstrated PRRS at the age of 40 days. After medication, there was no additional mortality in pigs of groups A and B over the 2 weeks experimental period. No pigs died in groups C and D. In addition, there were no clinical symptoms of PRRS and pigs grew well.

Results of investigated parameters are listed in table 1.

Table 1: Basic data and performances of 4 groups.

Group	A	B	C	D
Experiment period	32 ~ 46 days of age (2 weeks)			
Pigs number	20	19	23	23
Avg. Weight 1st day of experiment (kg/pig)	7.4	7.1	7.6	7.6
Died pigs	3	1	0	0
Left pigs	17	18	23	23
Avg. Weight last day of experiment (kg/pig)	14.5	14.2	15.2	15.7
ADG (g/pig)	509	512	544	574
Daily feed intake (g/pig)	672	635	684	684
FCR	1.62	1.31	1.26	1.19

Additional PRRS vaccination (group C and D) substantially increased performance with regard to mortality, ADG and FCR and there was an additional benefit in ADG and FCR when using 3FLEX instead of separate injection of FLEXcombo® and the PRRS vaccine.

DISCUSSION AND CONCLUSION

PRRS positive swine farms usually try to stabilize the PRRS infection by regular sow vaccination (every 3 months). Sow vaccination may prevent vertical transmission of PRRS from sow to piglets but cannot prevent horizontal transmission in nursery or grow-finishing. To control clinical disease in pigs after weaning, a piglet vaccination has to be applied. Additional PRRS vaccination in piglets has demonstrated high efficacy in controlling PRRS in piglets with 3FLEX® being the most effective and economic schedule. Beside demonstrating best production data it saves labor and reduces stress for the piglets by reduced number of injections compared to separate injections of FLEXcombo® and Ingelvac® PRRS MLV.

REFERENCES

1. Darwich, L., Diaz, I. and Mateu, E. (2010) Certainties, doubts and hypotheses in porcine reproductive and respiratory syndrome virus immunobiology. Virus Res. 154:123 – 132