Performance improvement after implementation of 3FLEX® with partial depopulation in a Korean farm

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INTRODUCTION

Porcine Reproductive and Respiratory Syndrome virus (PRRSv) is one of the most important diseases in Korea. Together with PCV2 and M. hyo it is a primary pathogen causing PRDC. PRRSv, PCV2 and M .hyo can be easily controlled by piglet vaccination. In Korea however, PRRS is usually controlled by other methods like Herd closure, depop/repop rather than vaccination for piglet. Recently, some farms in Korea started using PRRS vaccine in piglets to control PRRS in nursery and grower-finishing pigs. To obtain best results, the interval between vaccination and infection should be 4 to 5 weeks so that early infection of PRRS after weaning is more difficult to control than late infection at more than 50 days of age.

The purpose of this study was to obtain a PRRS non-infection period for 4 weeks after vaccination by partial depopulation of the nursery and to evaluate the efficacy of an additional PRRS vaccination of piglets to control PRRS for the whole production period.

MATERIALS AND METHODS

The field observation was conducted on a one-site production farm with 150 sows. Pigs are weaned at 25 days of age, and transferred to the nursery house. At about 53 days of age pigs are transferred to the grower house and at about 120 days of age to the finisher house. In this study, pigs in group 'A' are vaccinated with FLEXcombo® (CircoFLEX® and MycoFLEX®) at 3 weeks of age. In group 'B' and 'C', pigs are vaccinated with 3FLEX® (CircoFLEX® , MycoFLEX® and Ingelvac® PRRS MLV) at 3 weeks of age. Before implementing a partial depopulation, pigs in the nursery house were transferred to the grower house (group 'A'). During the depopulation, newly weaned piglets were raised in the farrowing house for 4weeks (group 'B') and were then transferred directly to the grower house. After finishing partial depopulation of the nursery, newly weaned piglets were transferred to the empty, clean nursery (group 'C').

During the study, necropsy and blood sampling were implemented, and samples were tested by PCR and ELISA. Mortality and clinical signs were evaluated in the nursery, grower and finisher house.

RESULTS

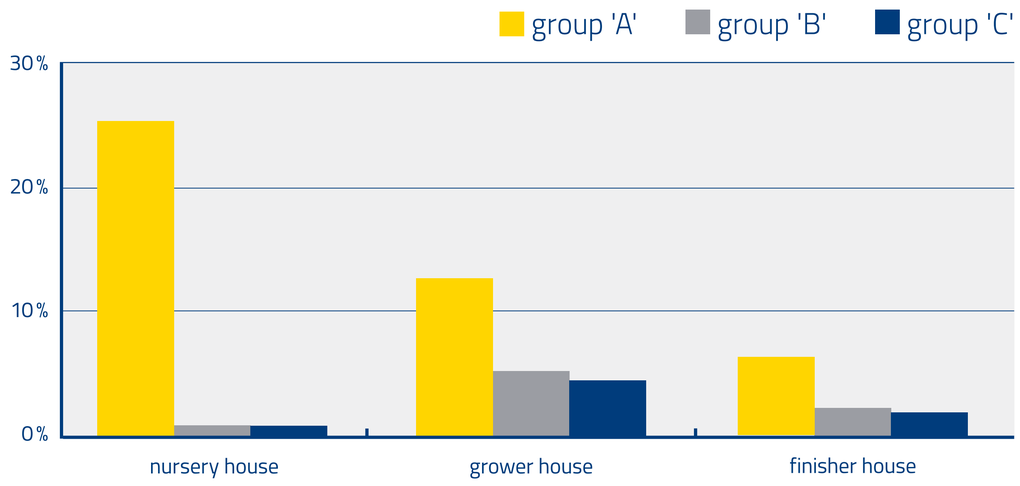
By comparing results of 3FLEX® ('B','C' groups) and FLEXcombo® ('A' group), we found a difference in mortality (Table 1, Figure 1).

Clinical signs in the nursery included coughing, reduced growth rate and depression in group 'A' (Picture.1). After partial depopulation, there were no clinical signs in the nursery in group 'C' (Picture 2). PCR results of lung tissue in group 'A' revealed NA type of PRRSv. PRRS PCR positive results of blood samples in group 'A', were only found in blood samples of pigs 40 day of age or older.

Table 1: Mortality in 'A','B' and 'C' group for each stage

	FLEXcombo® (group 'A')	3FLEX® (group 'B')	3FLEX® (group 'C')
Nursery house	25.49 %	1.31 %	1.29 %
Grower house	12.72 %	5.31 %	4.35 %
Finisher house	6.03 %	2.34 %	1.82 %

Figure 1: Mortality in 'A', 'B' and 'C' group for each stage



Pictures: Group 'A' (left) and 'C' (right). Depression, reduced weight gain and coughing were main symptoms in group 'A' in the nursery but no more in group 'C'.

DISCUSSION AND CONCLUSION

In this study, we were able to demonstrate that after implementing partial depopulation, nursery pigs showed better performance and that group 'B' pigs that had been transferred directly to the grower house, showed better performance against PRRS infection compare to group 'A'.

Partial depopulation of the nursery was able to control PRRSv in the nursery resulting in an improvement within a short period of time. However, in the grower house, there were still many pigs infected with PRRSv so that mortality was still high and could only be controlled by using 3FLEX® . So, in farms with early PRRSv infection in the nursery, partial depopulation can be useful to control the continuous infection of PRRS. Partial depopulation is an important tool that can be used together with vaccination to control PRRS especially in cases of early infection after weaning.

REFERENCES

1. FA Zuckermann (2014) Proc 23rd IPVS Congress, Cancun, Mexico, p. 47