Performance improvement after using Ingelvac® PRRS MLV against EU type infection

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INTRODUCTION

PRDC (Porcine Respiratory Disease complex) is one of the most important disease in the swine industry. PRDC can be caused by viral and bacterial pathogens as well as environmental, management, and genetic factors[1]. Porcine Reproductive and Respiratory Syndrome virus (PRRSv) is the most common primary pathogenic agent involved in PRDC[1]. PRRSv can predispose pigs to more severe bacterial infections like Pasteurella multocida[2]. In Korea, Only type II of PRRS virus has been isolated from 1994 to 2000 but type I virus is emerging recently[3].
In this study, we evaluate the efficacy of Ingelvac® PRRS MLV (Type II PRRSv based vaccine) piglet vaccination in a grow-finish farm infected with Type I PRRS virus and secondary bacteria.

MATERIALS AND METHODS

The field observation was conducted on a two-site production farm with 500 sows. Pigs are weaned at 21 days of age, and transferred to the nursery house. At about 70 days of age pigs are transferred to the grow-finish farm. In this study, pigs in group 'A' are vaccinated with FLEXcombo® (CircoFLEX® and MycoFLEX®) at 3 weeks of age. In group 'B', pigs are vaccinated with FLEXcombo® at 3weeks of age like group 'A' and vaccinated with Ingelvac® PRRS MLV at 7weeks of age. All the pigs were transferred to grow-finish farm at 10 weeks of age. Group 'A' is composed of three batches of pigs and group 'B' is same. In the grow-finish house, Group 'A' and 'B' pigs were raised in each house and other factors like ventilation, management, feeding, water, lights were given to them in the same way. During the study, necropsy was implemented, and samples were tested by PCR and culture. Mortality and clinical signs were evaluated in the grow-finish farm from 70 days of age up to slaughter.

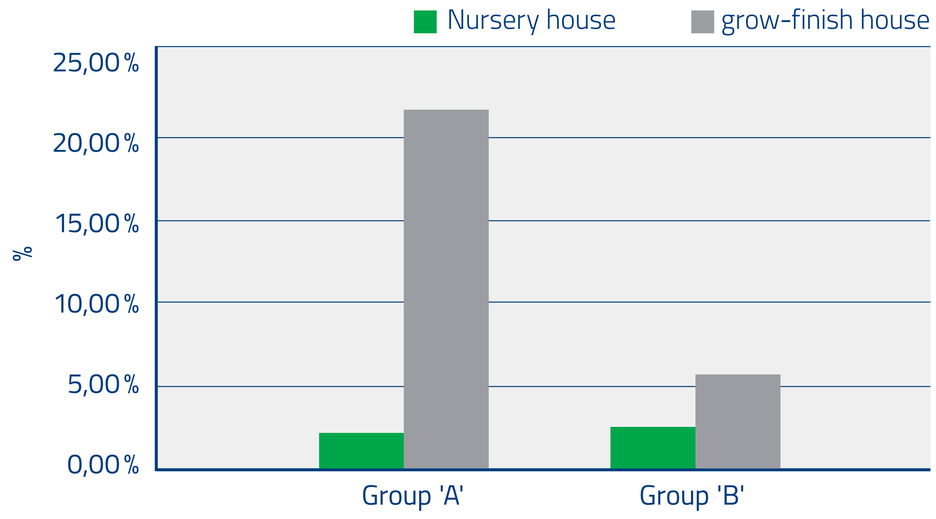
RESULTS

Between group 'A' and 'B', there is a difference in mortality and clinical signs. (Table 1, Graph 1).
Clinical signs in the grow-finish house included coughing, depression and acute death in group 'A'. Clinical signs and mortality dramatically decreased in grow finishing stage in group "B" after implementation of vaccination of 7 week old pigs with Ingelvac® PRRS MLV.

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

	Group 'A'	Group'B'
Nursery house	1.75 %	2.17 %
Grow-finish house	21.73 %	5.78 %

Graph 1: Mortality in 'A' and 'B' group for each stage.



PCR and culture test results of 7 lungs and lymph nodes tissues in group 'A' were revealed to be EU type of PRRSv and Pasteurella multocida.
In terms of clinical signs, the number of pigs that shows coughing and anorexia in group 'B' decreased less than half of that in group 'A'.

DISCUSSION AND CONCLUSION

In this study, we were able to demonstrate that after implementing Ingelvac® PRRS MLV vaccination to the nursery pigs at 7 weeks of age in group 'B', pigs in group 'B' showed better performance in the grow-finish house compare to group 'A' associated with not only mortality but also clinical signs.
In group 'A' and 'B', other factors like ventilation and feeding system were maintained in the same way except PRRS vaccination. The season when we have started this observation was July in summer, so stress from high temperature and humidity can also affect the pigs. On the contrary, the prevalence of clinical signs like coughing that is associated with respiratory diseases from environmental stress factors is much lower than winter season. Observation was started due to relatively high possibility of PRRSv infection as a main cause. Secondary infection of *Pasteurella multocida* was also found in the lung tissue. To control PRDC effectively in this field case, control of PRRSv was more important than *Pasteurella multocida*. Because primary infection of PRRSv can induce an invasion of secondary bacterial infection like *Pasteurella multocida* or Glasser's diseases by attacking alveolar macrophages in the lung[4].

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