

Comparison efficacy of Type I and Type II PRRS vaccine in Thai commercial farm



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INTRODUCTION

Porcine Reproductive and Respiratory Syndrome (PRRS) is the most economic impact of swine disease for pork producers. PRRS vaccines have been considered to be the most useful tool to control this fatal disease¹. Considering type of vaccine strain aligned with farm's epidemiology is the universal recommendation over the world. The objective of this study was to observe the nursery performance comparing the 2 different type PRRS vaccines, type I and type II in the same farm.

MATERIALS AND METHODS

The retrospective study was observed in 2,400 sow, single site production system with 3 separated units. In the year 2013–2014, all sows and piglets implemented Type I PRRS vaccine in Unit 1 while Unit 2 and 3 applied by Type II vaccine (VR2332 based vaccine). The year 2015 PRRS Type II vaccine was implemented in all units by quarterly sow mass vaccination and piglets vaccination at 2 weeks of age. There are no other significant farm's management change in during the study period. The nursery performance (Total loss, Average daily Gain; ADG and Feed conversion rate; FCR) of Unit 1 were compared from 2014 and 2015 by Chi Square test, OpenEpi.Version3 and the trend of nursery losses was analyzed by SPC-Individual chart; Minitab16.2.3

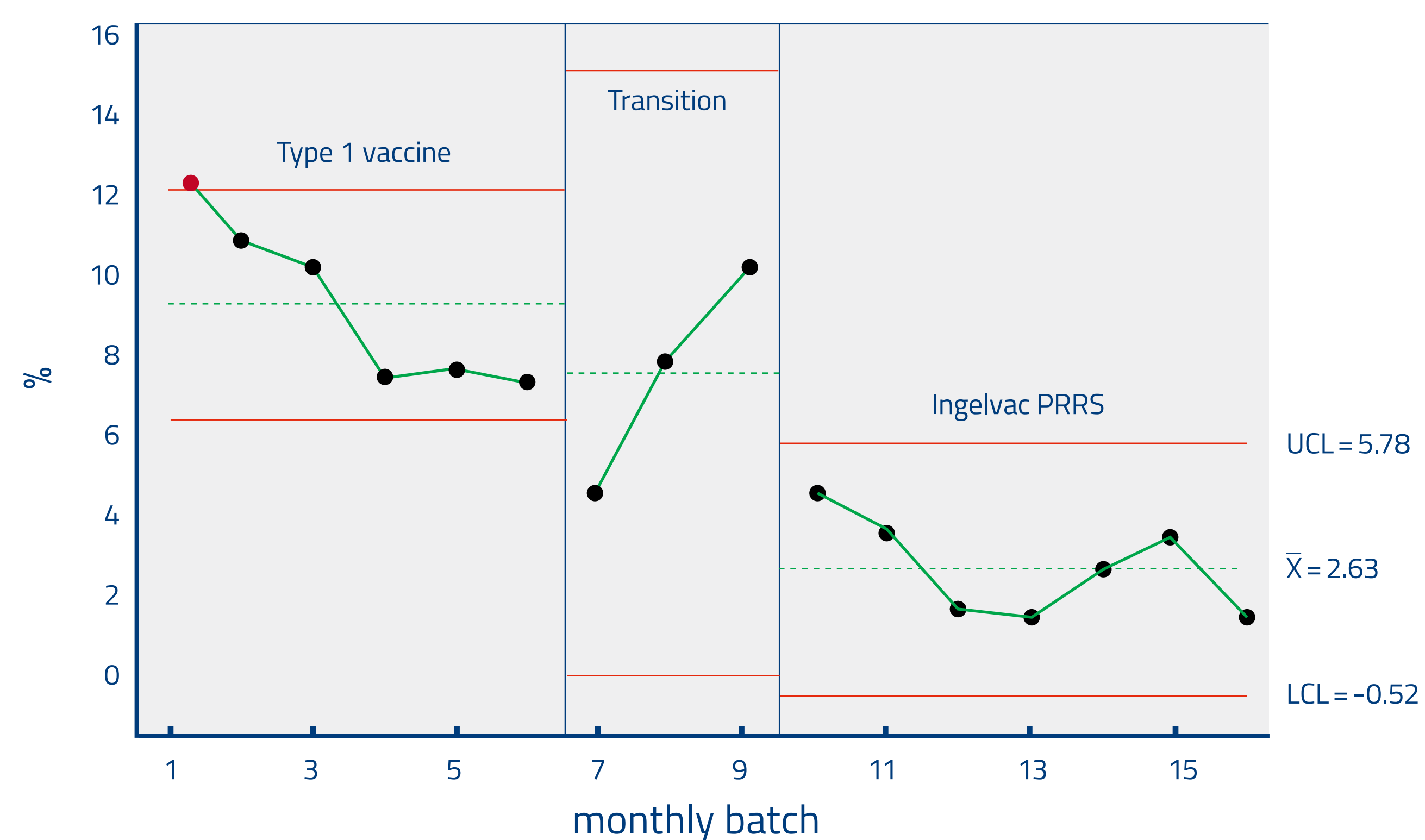
RESULTS

The overall of nursery performances were summarized in table 1. The nursery performance was improved since implemented Type II vaccine. There are significant differences of the Total loss, Average daily gain and Feed conversion rate between 2 PRRS vaccines. The trend of % nursery loss was shown in figure 1. The nursery losses reduced from 9.5% to 4.1% after pigs received PRRS Type II vaccine.

Table 1: Evaluation of Nursery pigs with two different PRRS vaccines.

	Type I	Type II
Pig number (N)	6,384	11,533
Avg Weight in (kg)	6.7	6.8
Avg Weight out (kg)	22.1	24.4
ADGW (g/d)	333.9	374.6
FCR	1.59	1.44
% Total loss	9.25	4.1

Figure 1: SPC I charts of the Total loss in Nursery period.



DISCUSSION

The results of this study demonstrated poor efficacy performance using Type I vaccine in the farm positive for PRRSV type II compared to a VR2332 based vaccine. There was a spike of total loss during 6th–9th month caused by the PED break during suckling period then influenced to nursery loss. This also marks the importance of considering appropriated vaccine type to control PRRS problems in farm which expressed by the nursery loss. In this farm, PRRS type II vaccine (VR2332 based vaccine) improve the farm performance as the national standard and provide better efficacy than PRRS Type I vaccine.

REFERENCES

1. Murtaugh et al, 2013. Immunological interactions of PRRSV and pigs. International PRRS Symposium. P42.

