

The impact of discontinuing PRRS MLV vaccination in piglets in the single site farm in Thailand



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INTRODUCTION

Modified live virus (MLV) vaccines are widely used in PRRS control strategies, and have been shown to reduce clinical signs and production losses¹. The VR2332-based vaccine is the most widely considered method to control the fatal disease in Thai swine farms. As a results of herd stabilization by the VR2332 based virus vaccine, the productivity has improved after implementing the control strategies.

During stable pig performance, some farms have planned to expand their pig business. In order to reduce production cost, farmers had tried to stop vaccination against PRRSv in piglets. The aim of this study was to investigate the effect of terminating PRRS MLV vaccination in the nursery unit in a high pig density area in Thailand.

MATERIALS AND METHODS

The farm is a farrow to finish farm with 1,700 sows in the western area of Thailand. Farm is positive for PRRS, MH, PCV2, PED,CSF,APP and PRV. Farm has been stabilized sows herd with VR2332 based virus vaccine for 8 years.

In the farrowing unit, piglets were vaccinated against PRRSv at 2 weeks, CSF at 3 weeks and PCV2-MH at 4 weeks. The weaning age is 26-28 days. The nursery losses observation was done during batch No.1 to batch No.22 year 2015. Batch No.11 – Batch No.22 stopped piglets vaccination by PRRS MLV.. Due to high losses in nursery, farmers decided turn to piglets vaccination again since Aug 2015 until up to date (data not show). A total 13,038 pigs were evaluated in this study. There are 6,130 of the piglets in batch no. 1-10 were vaccinated with VR2332 based virus vaccine (MLV group) and 6,908 pigs of batch no.11-22 were not vaccinate (NVC group). To evaluated the impact of stopping vaccination against PRRSv, a Total losses; Mortality, Culling rate were compared between the groups by Chi Square test, OpenEpi.Version3 and the trend of nursery losses was analyzed by SPC-Individual chart; (Minitab 16.2.3, State collage PA USA).

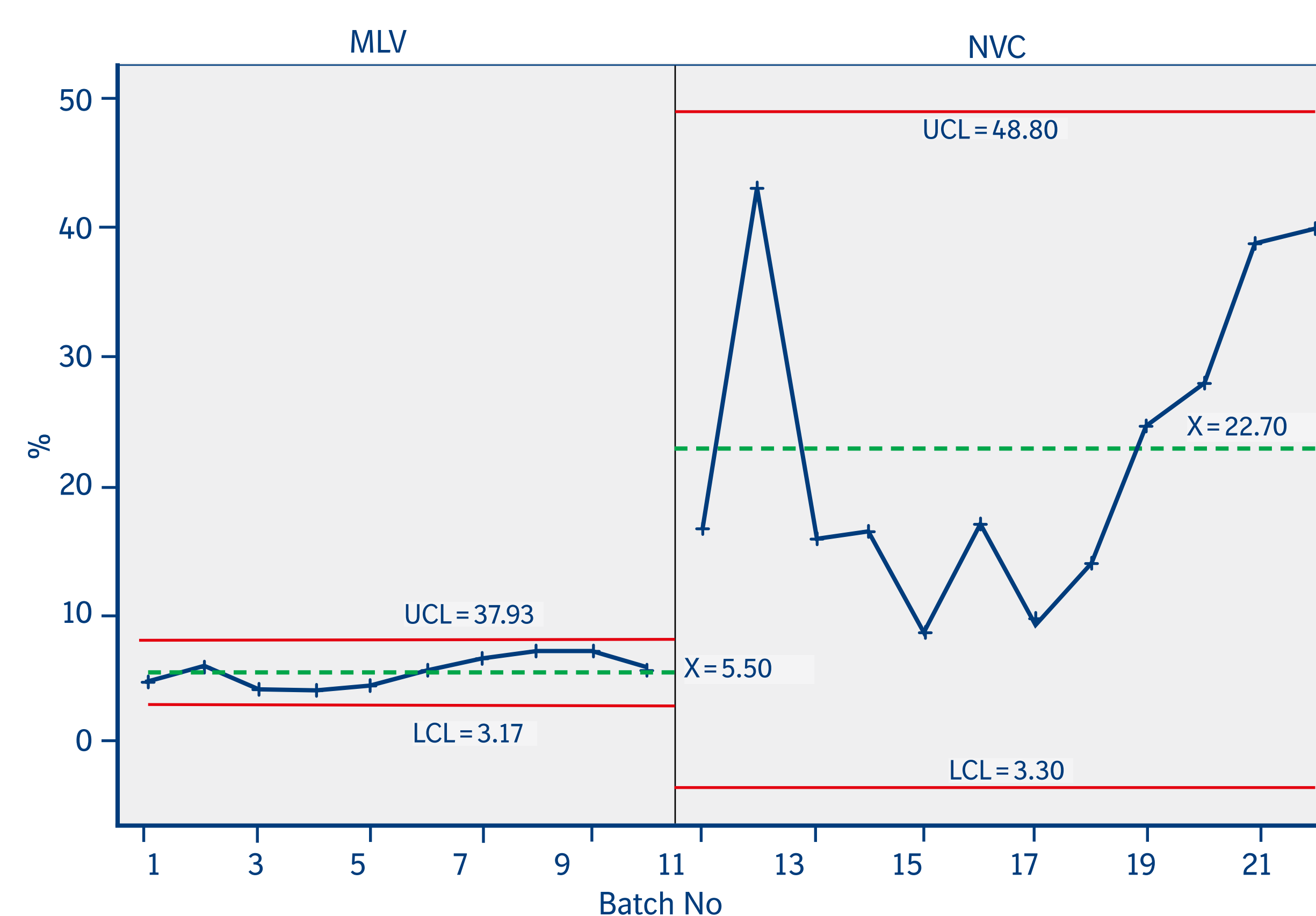
RESULTS

The total loss in nursery is summarized in table 1. When the farm discontinues PRRS MLV in piglets, the mortality and the culling rate in nursery were increased up sharply (figure1). The cost was calculated automatically by the computer program and means overall economic value.

Table 1: Evaluation of Nursery losses with and without PRRS vaccine.

	MLV	NVC	P-value
Pig number (N)	6,130	6,908	
Avg Weight-in (kg)	7.18	7.35	
Avg Weight-out (kg)	29.9	28.81	
% Total loss	5.51	22.70	< 0.001

Figure 1: SPC I chart for the total loss in Nursery period.



DISCUSSION

Based on the mortality change, stopping PRRS MLV vaccination resulted in big economic loss in this farm. The benefit-to-cost ratio between non-vaccinated and vaccinated is 7.03:1 based on the mortality alone. Stopping PRRS MLV vaccination especially in single site farm, can be elucidated, results to higher PRRSv load and can be shed to the other production sites.

REFERENCES

1. Cano JP, et al .vaccine.2007 (25)4382 – 4391.

