

The effect of Ingelvac MycoFLEX® sow vaccination on suckling piglets sero-prevalence in a farrow-to finish farm in Taiwan



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INTRODUCTION

Mycoplasma hyopneumoniae (Mhyo) causes the enzootic pneumonia in pig. Clinical signs of Mhyo infection including dry cough, retarded growth, and reduced performance result in economic losses. Vaccination is a common approach to control Mhyo in pigs. Sow vaccination is not popular in Taiwan because lacking related information. Lin et al. reported sow Mhyo vaccination increased sero-positive rate in sows and piglets¹. The objective of this study is to evaluate the effect of Ingelvac MycoFLEX® sow vaccination on suckling piglets sero-prevalence in a farrow-to finish farm in Taiwan.

MATERIALS AND METHODS

This study was conducted in a 500 sow level, farrow-to-finish single site farm which suffered severe respiratory problem in pre-weaning piglets. Early vaccination at 7 days of age against Mhyo was implemented but no significant improvement observed. They decided to try Mhyo sow vaccination after discussion with veterinarian. One batch of piglets from non-vaccinated (NV) and another batch from vaccinated sows (VX) were included in this study. The two batches of sows shared same vaccination/medication program and management, except an additional vaccination of Ingelvac MycoFLEX® (Boehringer Ingelheim Animal Health) 1 dose (1 mL) in VX group at 4 weeks pre-farrowing. Serum samples of 10 piglets in each group were collected at 1, 2, 3, 4 weeks of age. Commercial enzyme-linked immunosorbent assay (ELISA) kit (IDEXX M. hyo Ab Test) was used to evaluate sero-prevalence in suckling piglets. The methods and procedures of ELISA test were followed manufacturer's instructions. Boxplot analysis of ELISA titers was done using Minitab 17.

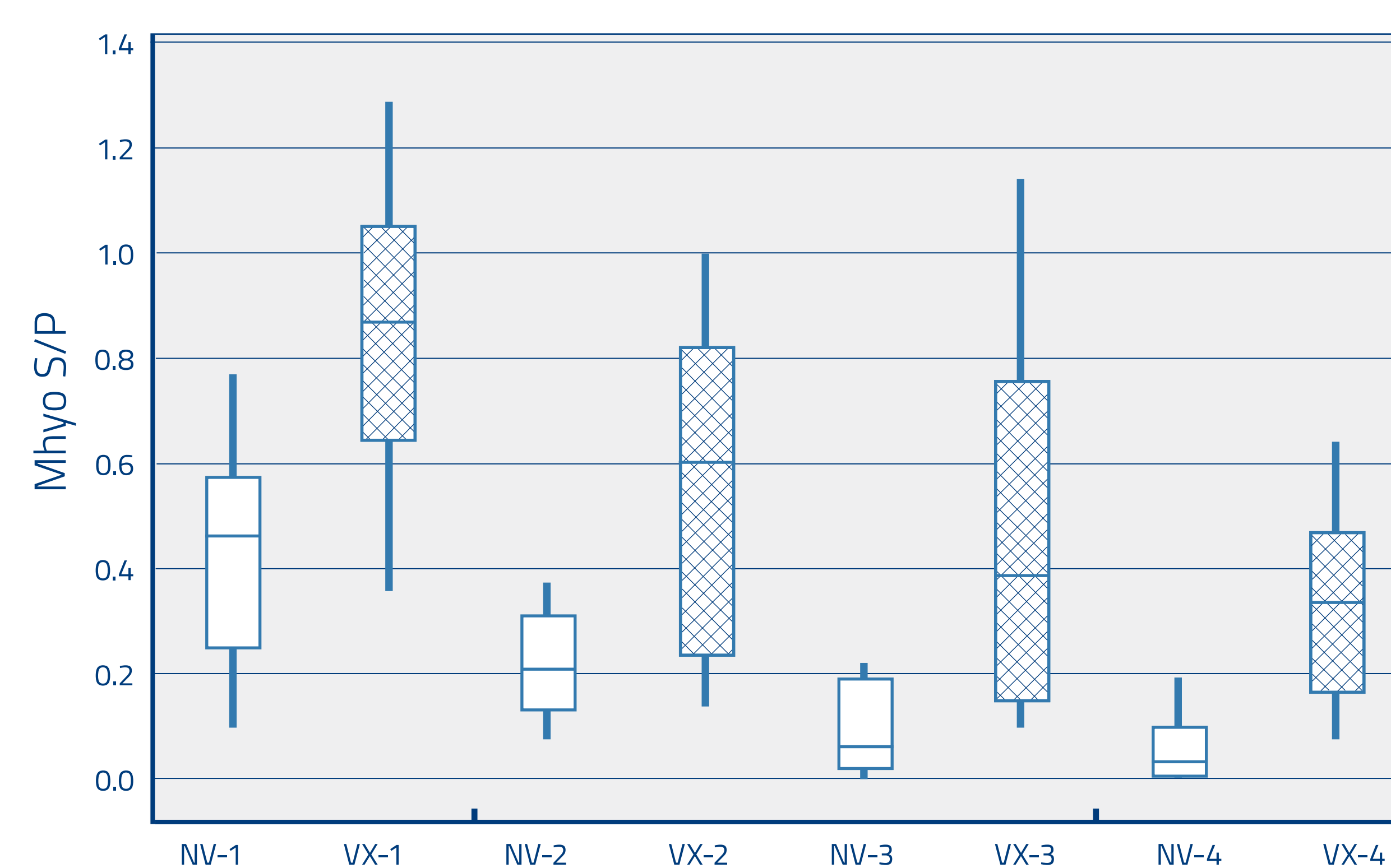
RESULTS AND DISCUSSION

The NV piglets were sero-positive only at 1 week of age with 60% prevalence. The prevalence in VX piglets were 80%, 70%, 50%, and 40% in 1, 2, 3, 4 weeks old groups, respectively (Table 1). Overall, the distribution of Mhyo S/P ratios in VX group was higher than in NV group at all ages investigated in this study (Figure 1). The incidence of respiratory symptoms was reduced in the VX piglets according to the feedback by producer.

Table 1: Sero-prevalence (%) of NV and VX piglets at 1, 2, 3, 4 weeks of age

Group	1w	2w	3w	4w
NV	60	0	0	0
VX	80	70	50	40

Table 1: Boxplot chart of overtime Mhyo ELISA S/P ratio in NV (□) and VX (▣) groups



CONCLUSION

Respiratory symptoms in suckling piglets is still a problem in Taiwan, especially in farrow-to-finish single site farm. Some veterinarians suggest early Mhyo vaccination. However, recent studies indicated early Mhyo vaccination resulted in negative impact to pre-weaning piglets such as lower weaning weight^{2,3}. Pre-weaning respiratory problems on piglets maybe due to unstable sow herd under the infection chain thinking. In this study, sow vaccination with Ingelvac MycoFLEX® improved the maternal antibodies. Sow vaccination could be the solution to stable sow herds for producing healthier piglets.

REFERENCES

1. Lin et al., The 7th APVS, 2015.
2. Satoshi. The 7th APVS, 2015.
3. Naito et al., Allen D. Leman Swine Conference, 2012.

