

## **Different porcine reproductive and respiratory syndrome (PRRS) vaccine regimes and its effect on pig immunity status at Southeast Asia pig farms**

### **ABSTRACT**

Porcine reproductive and respiratory syndrome (PRRS) is a disease characterised by late-term reproductive failure in sows and gilts, and respiratory problems in piglets and growing pigs. In this study, 240 sera were collected from four farms that had been practicing different PRRS vaccination regime for more than a year and vaccinations were done at 2 months before sampling. Fifteen sera samples from four age groups: sows, growers, weaners and piglets were collected from each farm and analysed using IDEXX PRRS X3 ELISA for PRRSV antibodies. Pooled serum samples were tested by using nested-PCR that enable the differentiation of Type I and Type II PRRSV. Out of 80 pooled serum samples, none were positive for PRRSV indicating all age groups were not viraemic after vaccination. Results by ELISA test showed all the farms were seropositive for PRRS. ELISA testing showed no significant difference between the farms except for Farm B which practised whole herd US MLV vaccination. Farm B showed significantly lower ( $p < 0.05$ ) S/P ratio in their piglet, grower and sow groups which suggest there was low virus circulation in herd. Farm A which practised US MLV on sow was the only farm found to have seronegative status in their weaners. Data indicates PRRS MLV vaccination will not cause viraemia post four weeks vaccination and whole herd MLV vaccination may help to reduce virus circulation in PRRS endemic farm.

**Keyword:** Porcine reproductive and respiratory syndrome (PRRS); Pig immunity; Southeast Asia pig farms; PRRS vaccination regime