

## **CHARACTERISATION OF PORCINE REPRODUCTIVE AND RESPIRATORY SYNDROME VIRUS STRAINS IN SELECTED FARMS IN MALAYSIA**

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### **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. The PRRS virus can be divided into two antigenically and genetically different strains: Type I (European) and Type II (North American). In this study, 120 sera were collected from 12 farms in 6 states in Malaysia for the seroprevalence study. Ten sera from apparently healthy sows/gilts, finishers and growers were collected from each farm and tested using IDEXX HerdChek ELISA for both strains. All the farms tested were seropositive with an overall seroprevalence of 89.2%. Tissue samples were collected and PRRSV isolated were genotyped using nested-PCR (with reported primer pairs targeting ORF7) that enabled the differentiation of Type I and Type II PRRSV by producing different sizes of PCR products. Out of 27 tissue samples collected from 11 farms, 12 were positive for PRRSV. All the PRRSV genomes from the 12 PRRSV-positive tissue homogenates were of Type II PRRSV, whereas no Type I PRRSV was detected. These data indicate that PRRS is endemic in the farms tested with a high possibility of subclinical infections.

**Keywords:** porcine reproductive and respiratory syndrome (PRRS), seroprevalence, PRRSV strain, nested-PCR