

Chatsirin Nakharuthai 2008: Significance of Swine Influenza Virus on Porcine Respiratory Disease Complex. Master of Science (Veterinary Microbiology), Major Field: Veterinary Microbiology, Department of Veterinary Microbiology and Immunology. Thesis Advisor: Associate Professor Porntippa Lekcharoensuk, Ph.D. 93 pages.

Porcine respiratory disease complex (PRDC) is one of the most important diseases affecting swine industry worldwide. The disease causes by various pathogens including swine influenza virus (SIV). In this paper, we study an influence of SIV on PRDC by surveying SIV infection in piglets with respiratory symptoms. A total of 106 samples including nasal swab and lung suspension from sick piglets were collected from 30 farms of medium size in the central and eastern parts of Thailand during August 2006 to February 2007. Samples were inoculated onto MDCK cells and SIV infection was confirmed by an immunofluorescent assay (IFA) and RT-PCR specific for M gene. Out of 106 samples, three pigs from three different farms were found to be SIV positive in all assays. The positive samples were further identified as H3N2 subtype by RT-PCR using specific primers for hemagglutinin (HA) and neuraminidase (NA) genes. The SIV infection has been found only 2.8% of the swine suffering from respiratory distress suggesting that SIV may not be the major pathogen of PRDC in the central and eastern parts of Thailand. However, SIV was presented in three out of 30 farms (10%) indicating that prevalence of SIV in these regions is considerable. Since, pigs are vulnerable to infection of both human and avian influenza viruses, it is essential for continual surveillance and monitoring of SIV infection in swine population.

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