ABSTRACT

Economically Important Viral Pathogens in Swine Populations of Trinidad and Tobago, West Indies.

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Currently, there is little or no published information from Trinidad and Tobago (T&T) on the past or current status of swine viral diseases, the levels of circulation of viruses in swine or the types of viruses present. The objectives of this study were as follows: 1) to look for evidence for the presence of selected high priority viral pathogens in pigs and 2) to identify and characterize the circulating viruses and assess their zoonotic implications.

Current and historical evidence for clinical signs of disease in pigs was collected using a questionnaire. Convenience sampling was carried out where blood samples (309) were collected from pigs in small and large scale farms throughout T&T. Serum samples were tested for the presence of antibodies to Swine Influenza A virus (SwIV), Porcine Parvovirus (PPV), Porcine Circovirus Type 2 (PCV-2), Transmissible Gastroenteritis virus (TGEV), Porcine Respiratory Coronavirus (PRCV), Porcine Reproductive and Respiratory Syndrome virus (PRRSV) and Classical Swine Fever Virus (CSFV) using commercial ELISA kits and the circulating strains of SwIV were identified by Haemagglutination Inhibition testing (HIT).

Antibodies against SwIV were detected in a total of 147 out of 309 serum samples (47%). Out of a total of 26 farms, 14 were serologically positive for SwIV antibodies. HI testing on a selection of the ELISA positive samples revealed high titres against the A/sw/Minnesota/593/99 H3N2 strain and the pH1N1 pandemic strain. Antibodies against PPV were detected in 85 out of 309 serum samples (28%). Eleven out of 26 farms were serologically positive for PPV antibodies. Antibodies against PCV-2 were detected in 213 out of 309 samples tested (69%). Twenty-five out of the 26 farms were serologically positive for PCV-2 antibodies. No antibodies were found in any of the tested pigs to PRRSV, TGEV, PRCV or CSFV.

Keywords: Porcine Circovirus Type 2; Porcine Parvovirus; Seroprevalence; Swine; Swine Influenza Virus; Trinidad and Tobago.