Epidemiology of pig zoonoses in smallholder pig farms in Laos

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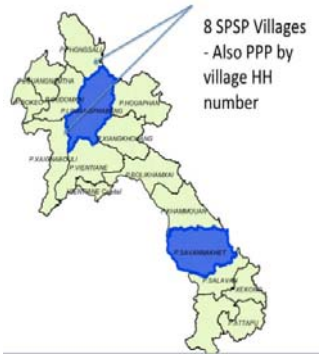
Introduction

A cross-sectional study was conducted to investigate the epidemiology of two main pig zoonoses in two provinces in Laos: Northern upland (Luang Prabang) and Southern lowland (Savannakhet). Lowland Southern provinces tend to employ more intensive pig production systems and Savannakhet has an increasing number of commercial pig systems near the Thai border.

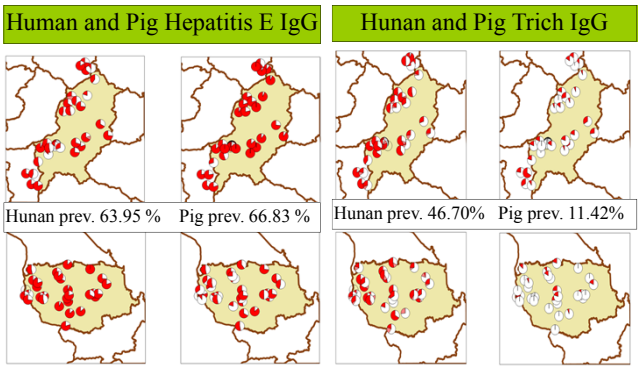
Materials and methods

- Thirty villages were selected in each province (weighted according to human populations). From each village 15 pigs were sampled from 15 randomly selected households and one person per selected household was randomly sampled and interviewed.
- Using a similar study design 8 villages of the ACIAR-SPSP project were included in this study
- Data entry and handling using a web based program: *SurVet*, data analysis done with *Stata*
- Risk factor analysis for pathogens with prevalence at village level greater than 10% was then performed.



Results *or* Results & Discussion

- A high percentage of both pigs and pig farmers were seropositive for Hepatitis E, however, humans were more likely to be seropositive in the Northern Province, whilst pigs were more likely to be seropositive in the Southern Province.
- Pigs that were kept in free-range scavenging systems in Northern Province appear to have reduced odds of Hepatitis E.
- Pigs from households that dispose manure into water sources were more likely to be seropositive for both *Trichinella* and Hepatitis E and this may present a further route of human exposure.
- Humans that were involved in the slaughtering of pigs were more likely to have evidence of Hepatitis E exposure, whilst those which handled raw meat or offal were more likely to have been exposed to *Trichinella*; suggesting these are high risk activities for these zoonoses.



Conclusions

The study highlights the need for continued surveillance of pig zoonoses and communication between livestock owners and veterinary and public health authorities in order to control the disease in the Lao PDR. The reported prevalence's for Trichinella and Hepatitis E in human and pigs demonstrate the PH relevance of the investigated diseases.

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