

# Seroprevalence and associated factors of trichinellosis in indigenous pigs and rural communities in Northern Vietnam

Sinh Dang-Xuan<sup>1</sup>, Nga Vu-Thi<sup>2</sup>, Dung Do-Trung<sup>3</sup>, Trang Le-Thi-Huyen<sup>1</sup>, Ngoc Pham-Thi<sup>2</sup>, Fred Unger<sup>1</sup>

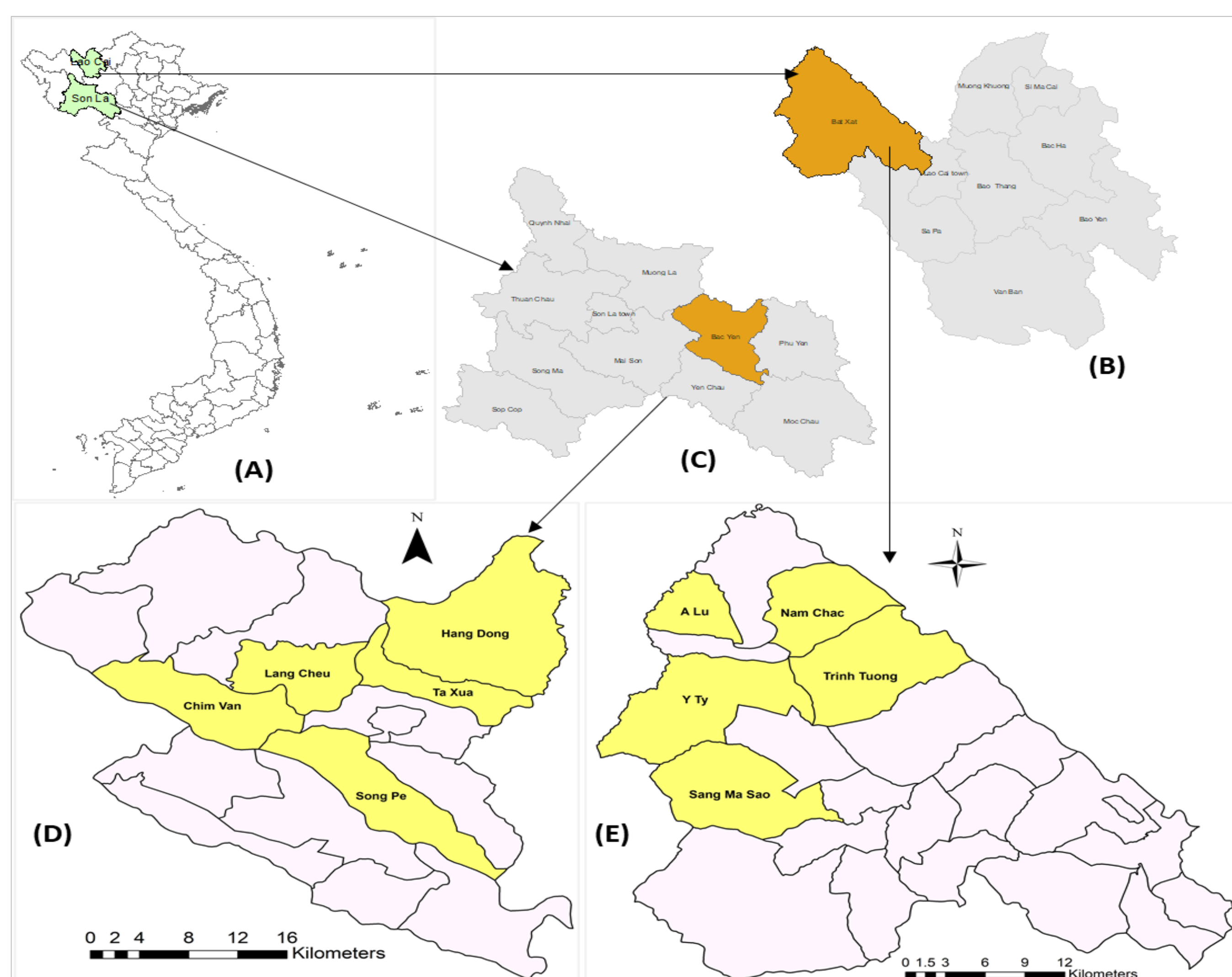
<sup>1</sup>International Livestock Research Institute, Hanoi, Vietnam; <sup>2</sup>National Institute of Veterinary Research, Hanoi, Vietnam; <sup>3</sup>National Institute of Malaria, Parasitology, and Entomology, Hanoi, Vietnam

## 1. INTRODUCTION

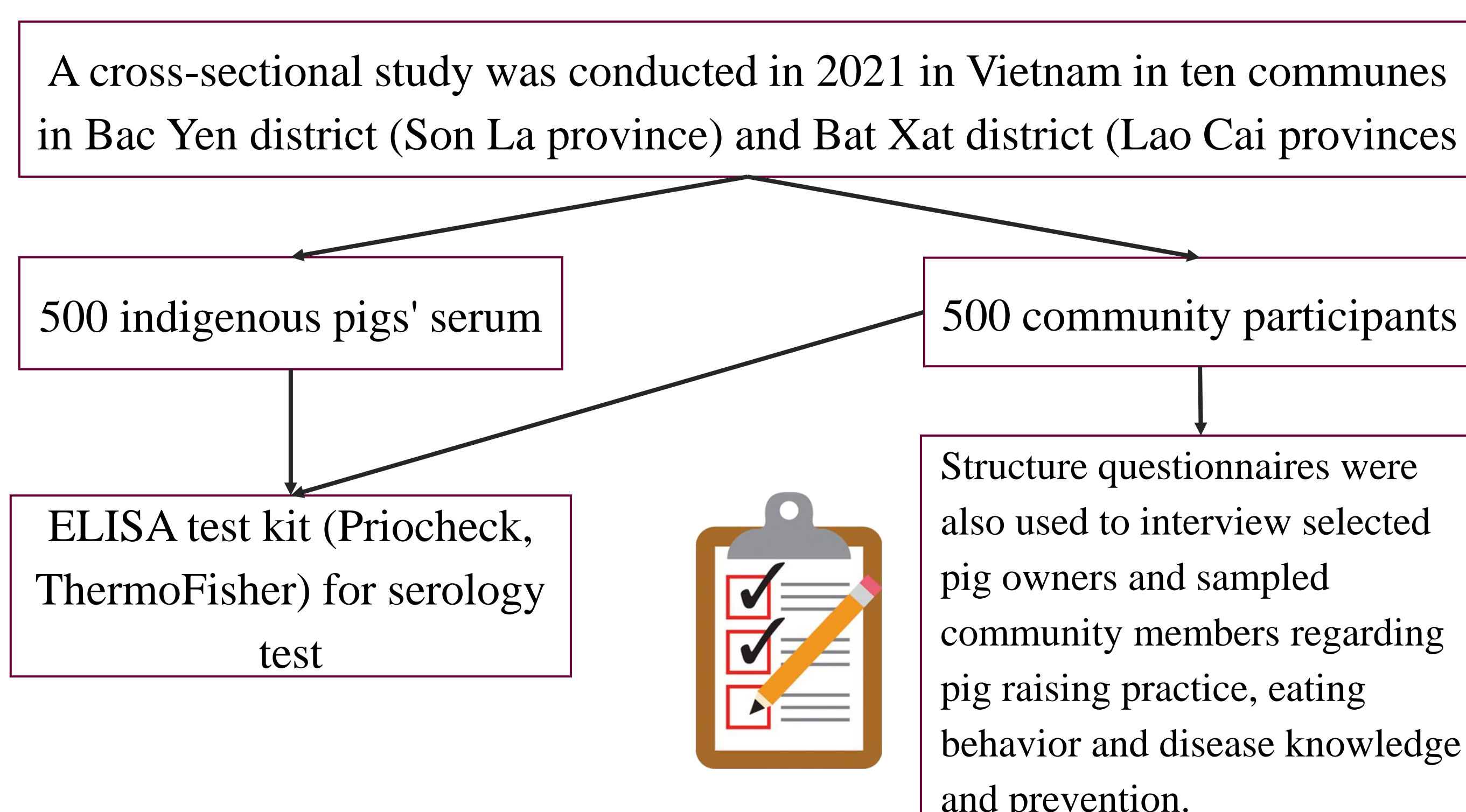
Parasitic pig-borne diseases (PPBD) such as cysticercosis and trichinellosis continues to be a public health burden to LMIC. Both are neglected diseases and expected to circulate to an unknown extent among minority communities and mountainous areas in SEA including Vietnam. Current information on trichinellosis PPBD is scarce. A better understanding of the current situation for trichinellosis is important to assist risk communication and management to further reduce the zoonotic burden of these diseases for the community.

## 2. METHODOLOGY

### Study sites

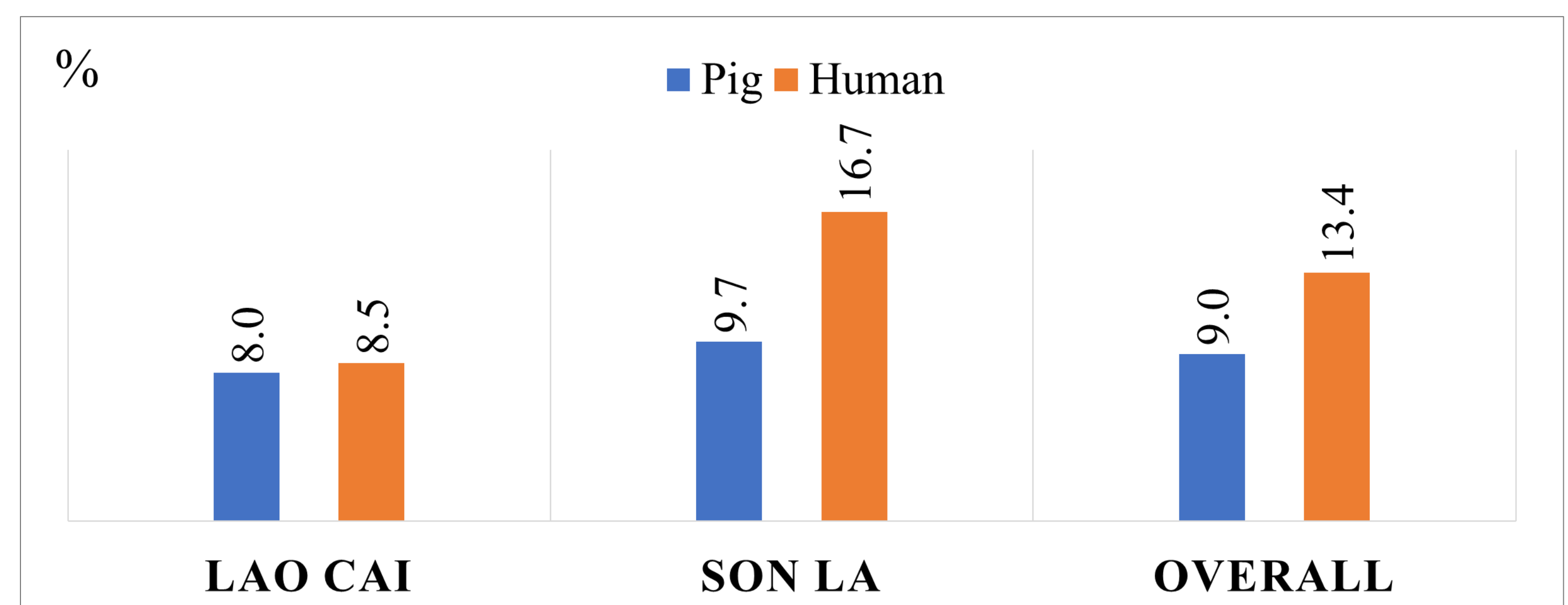


**Fig 1.** Map of study sites in Vietnam and two selected provinces (Son La and Lao Cai (A), two selected districts in Son La and Lao Cai provinces (B and C), and five selected communes in those two districts (D and E).

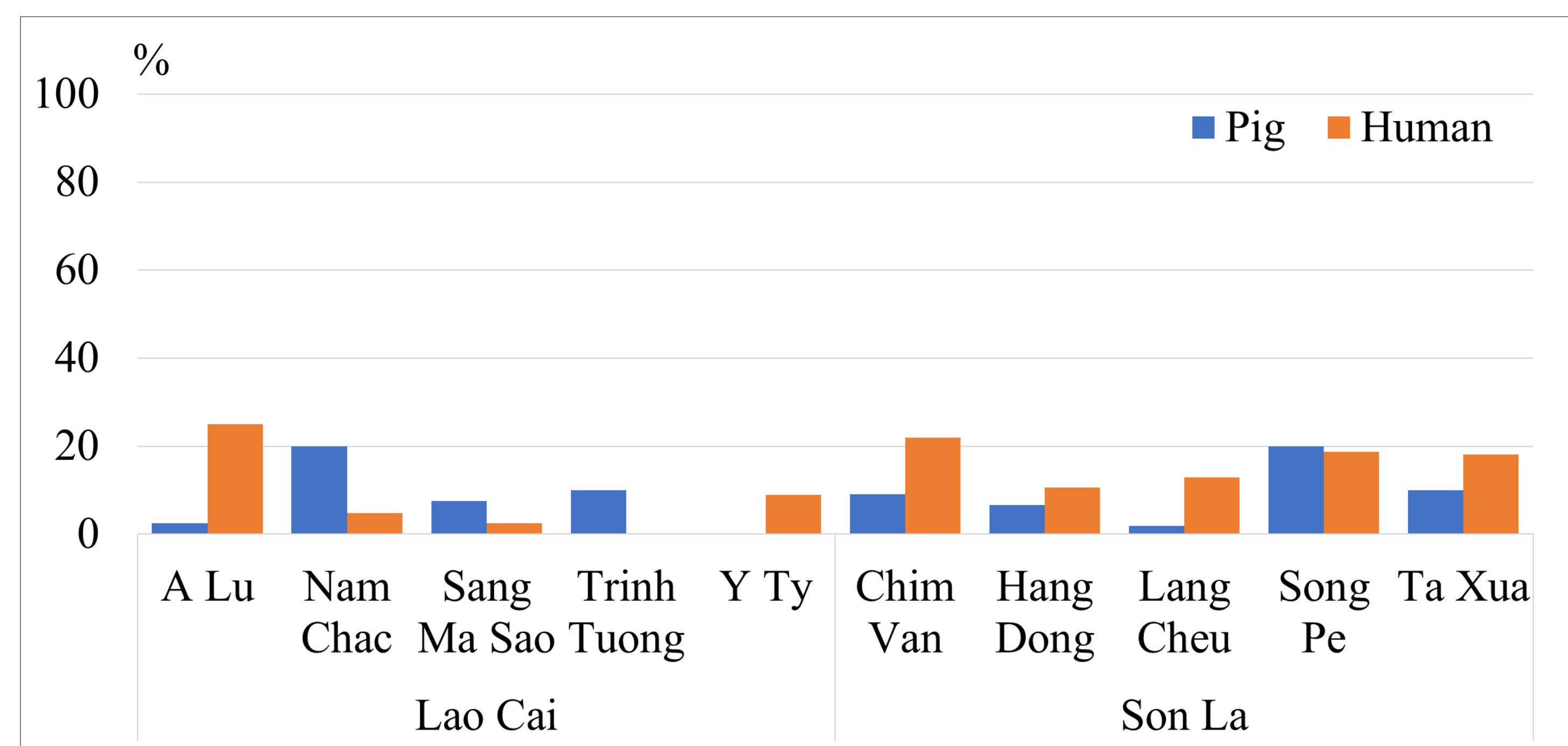


## 3. RESULTS

The result shows that seroprevalence of trichinellosis in indigenous pigs and humans were 9.0% (45/500, 95% CI: 6.7-11.9) and 13.4% (67/500, 95% CI: 10.6-16.8), respectively. *Trichinella* seroprevalence in human was significantly higher in Son La (16.7%) compared to in Lao Cai (8.5%), but not for seroprevalence in pigs.



**Fig 2.** Seroprevalence of trichinellosis in indigenous pigs and rural communities in two provinces (%)



**Fig 3.** Seroprevalence of trichinellosis in indigenous pigs and rural communities in 10 communes in studied provinces

Factors associated with trichinellosis seroprevalence in human were raising pigs' activities ( $p=0.029$ , Fisher test) and eating raw vegetable behavior ( $p=0.007$ , Chi-square test). While factors associated with trichinellosis seroprevalence in pigs were farmer's knowledge about trichinellosis ( $p=0.033$ , Chi-squared test)

## 4. CONCLUSIONS

Seroprevalence in both pigs and humans in northern Vietnam were relatively high, especially in the endemic province, which suggested the possibility of *Trichinella* spp. circulation in the community and indigenous pigs. Animal and public health awareness for the northern communities and pig farmers, i.e., using One health approach, are necessary to improve prevention and control this disease.

Contact: Sinh Dang-Xuan ([S.Dang@cgiar.org](mailto:S.Dang@cgiar.org)); Fred Unger ([F.unger@cgiar.org](mailto:F.unger@cgiar.org))



This publication is copyrighted by the International Livestock Research Institute (ILRI). It is licensed for use under the Creative Commons Attribution 4.0 International License. August 2022