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The U.S. Government's Global Hunger & Food Security Initiative

Low prevalence of *Cysticercosis* and *Trichinella* infection in pigs in rural Cambodia

Safe Food Fair Food Cambodia
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Introduction

Cysticercosis and trichinellosis are important parasitic pork zoonoses that are expected to be endemic among pigs in Southeast Asia. Both can lead to serious illnesses in humans.

In **Cambodia, the majority of pigs are raised extensively**, a potential risk factor for both diseases.

Pork is the most importance source of meat and risky consumption habits may exist. While sporadic outbreaks in humans have been reported, data in pigs are scarce.

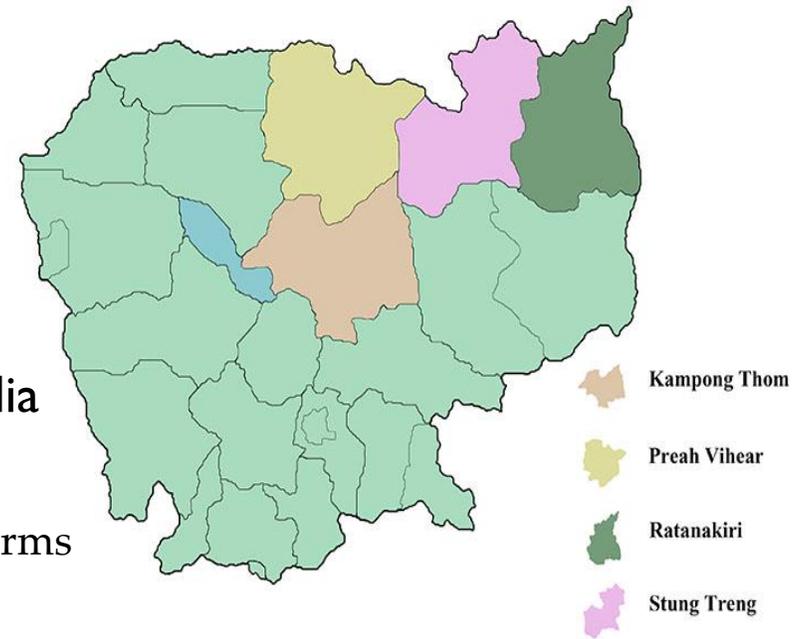


Methods

- This study was conducted in **4 provinces** in north-eastern Cambodia (**Kampong Thom, Preah Vihear, Ratanakiri and Stung Treng**)
 - ✓ Potential high-risk provinces for these zoonosis with many small-scale farms keeping indigenous and free roaming pigs
- **242 pig blood samples** were collected from **139 households**
- **Household interviews** (pig raising, food safety and consumption habit).
- Serum samples were analysed with **ELISA** for cysticercosis (AG apDia) and trichinellosis (Antibody, Thermofisher)

Related activities:

- Training on Hands-on meat inspection (Oct 2018, Hoa Binh) and on pig dissection (Dec 2019, Vientiane), each one trainee from NAHPRI



Results

Both parasitic **zoonoses occur** in the surveyed areas with higher prevalence's for cysticercosis.

- ✓ **Positivity** for **porcine cysticercosis** was **11.2%**, varied by province being **highest** in **Preah Vihear** with about **1 in 3 pigs positive**.
- ✓ Positivity for **trichinellosis** was lower with **2.5%**.

Poor pig management (rooming & access to human feces) increased the risk for porcine cysticercosis while feeding food waste those for trichinellosis



Knowledge of interviewees on cysticercosis was **moderate** but **poor** for trichinellosis.

Man were **more aware** of **cysticercosis**, and **consuming undercooked pork** to a **greater extent**.

Discussion and conclusions

Seroprevalence of porcine *Trichinella* infection and cysticercoses in the studied farms was **low to moderate**

✓ Lower than in Southern Laos but slightly higher than in Vietnam (Cysticercosis)

The occurrence of both zoonoses, observed risk factors aligned with poor knowledge of interviewed household members indicates the **need for targeted intervention** in the high-risk areas. This may include:

✓ **promoting deworming** of pig and **awareness campaigns in consumers**

✓ capacity building in **meat inspection**

Further studies in other areas of Cambodia, ideally pigs and humans, **are suggested** to get a better understanding of the distribution of both diseases.

Cysticercosis ELISA only genus specific, **research for more specific diagnostic method suggested.**



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