Parasitic pig-borne diseases assessment, capacity building, communication and policy engagement

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13th meeting of Vietnam Food Safety Working Group
Hanoi, 17 December 2020
Aim:
To assess and reduce both parasitic pig-borne diseases (PPBD) in ethnic minorities

Specific objectives:
1. To assess the prevalence for both PPBD due to serology and hospital records
2. To determine the perception and awareness of value chain actors including consumers on both PPBD
3. To improve diagnostic capacity to detect PPBD e.g. hands-on meat inspection and laboratory testing.
4. To develop and test promising interventions to reduce both PPBD and promote a brand aligned with the Safe pork project e.g. Safer pork for healthier consumers
5. To build capacity and engage with policymakers to support application of interventions

Timelines:
• Inception: Mar 2018
• Assessment: Jun – Dec 2018
• Intervention: Since Oct 2019
• Impact Assessment: Nov 2020

Assessment: 6 communes
Intervention: 6 + 15 additional communes in Da Bac
Cysticercosis:
1st ranked parasitic FBD worldwide

Trichinellosis:
7th ranked parasitic FBD worldwide

Bệnh ấu trùng sán lợn và bệnh giun xoắn: tầm quan trọng và vòng đời ký sinh trùng
Indigenous (Ban) pork chain in Da Bac District, Hoa Binh
Achievements

**Objective 1:**
Surveys:
Prevalence estimates for both PPBD in pigs (352) and humans (300)

Pigs:
- Trichinella: 13.6%
- Cysticercosis: 1.7%*
  (*confirmed by CDC Atlanta)

Humans:
- Trichinella: 0.6%
- Cysticercosis: 0.8%

Note: Safe Pork Salmonella contamination 41% from FSPT (lowest among all tested PVC)

Very low risk for humans
Achievements

Objective 2:
Surveys:
Awareness/perception on both PPBD, pig owners and volunteers in health centers.

Pig keepers:
Poor knowledge on PPBDs
Free range/semi-free range of pig's common practice

Human volunteers:
Moderate knowledge on PPBDs
Risky consumption practice still exists

Risky practices on farm and in humans still exist
Achievements

Objective 3: Capacity building
Training on improved lab diagnostic (ELISA, muscle digestion), Sep & Oct 2018
Hands-on training on field diagnostic and meat inspection, Nov 2018

1 NIVR researcher (BfR)
17 Trainees
Lab diagnostic for PPBDs

>50 Trainees, Hoa Binh

Training materials shared with OIE regional office
Achievement - Objective 4: Community intervention

1) Follow up positive cases in humans; 2) Awareness campaigns; 3) Strengthen linkages between producer and market; 4) Evaluation

- 07/03/2020
  25 posters hanged at the health station, and communal people’s committee

- 15/09/2020
  Risk communication campaign at village and commune
  > 600 leaflets

- 12/10-20/11/2020
  Local loudspeakers system belong to Da Bac district
  - 208 times, twice a day
  - Coverage: 60%

- 30/11/2020
  Evaluation

Community campaigns reached all 21 communes of Da Bac
Achievements

Objective 5: To engage with policy makers
Inception workshop (March 2018)
Training workshops (Nov 2019, Oct and Nov 2020)
Feedback workshop (18 Oct 2019)
Final workshop (Nov 2020)

Trademark Registration Certificate
Achievements

(international workshops and publications)

Sero-prevalence of human trichinellosis and cysticercosis and associated epidemiological characteristics in communities of Da Bac District, Hoa Binh Province, Vietnam


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Abstract

Trichinella spiralis and Taenia solium/Cysticercus cellulosae are two zoonotic parasites of concern in mountainous provinces of Northwest Vietnam. These parasites have been attributed to a number of recorded outbreaks in humans, though robust prevalence data for each is limited. This study was undertaken to evaluate serological prevalence and behavioral factors associated with T. spiralis and T. solium/Cysticercus cellulosae in communities of Hoa Binh Province. Three hundred residents in six communes of Da Bac District were asked to provide a blood sample and answer a questionnaire to capture demographic information and self-reported behaviors. Trichinella spiralis IgG ELISA (DTRIG0480) and antigens Cysticercus antiguus (Ag) ELISA were used to confirm the presence of T. spiralis and T. solium/Cysticercus. Of the 134 tested indicated two cases of

The occurrence and associated risk factors of Trichinella spp. and Taenia spp. in indigenous pigs in Hoa Binh province, Vietnam

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Highlights

- Trichinella is endemic and cysticercosis is sporadic in indigenous pig population of Hoa Binh
- The prevalence of trichinella infection were higher in females and older pigs
- Risk perception and knowledge of people on food-borne diseases was poor
- Risky practices such as free roaming of pigs or eating raw fermented pork still occur
What is next?

Aligned to the ongoing SafePORK project in Hoa Binh:

Follow-up on Ban pig brand with local authorities and include a Safe Pork label under the Safe PORK project.

Train butchers linked to a Ban pork producer cooperative on more hygienic pork handling and detection of pork parasites
  - Share booklet for hygienic handling and basic guideline for meat inspection
Acknowledgements

- BMZ/GIZ
- CGIAR CRP A4NH
- National partners and authorities
- International partners
- Value chain actors and communities
The International Livestock Research Institute (ILRI) is a non-profit institution helping people in low- and middle-income countries to improve their lives, livelihoods and lands through the animals that remain the backbone of small-scale agriculture and enterprise across the developing world. ILRI belongs to CGIAR, a global research-for-development partnership working for a food-secure future. ILRI’s funders, through the CGIAR Trust Fund, and its many partners make ILRI’s work possible and its mission a reality. Australian animal scientist and Nobel Laureate Peter Doherty serves as ILRI’s patron. You are free to use and share this material under the Creative Commons Attribution 4.0 International Licence.