Re-emerging Trichinella seroprevalence in Ban pigs raised by ethnic minorities of Hoa Binh province

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Introduction

Trichinellosis has a serious impact on public health and agricultural systems in lesser developed areas where pigs are raised for consumption under traditional husbandry (1). Despite several studies of the disease among humans and pigs being documented (3 & 4), no information is available on the present Trichinella sero-prevalence in indigenous pigs in Hoa Binh province, North Vietnam. The aim of this study was to investigate the Trichinella sero-prevalence in indigenous pigs and to improve management and safe pork consumption for the ethnic group in Hoa Binh province.

Materials and methods

The study was conducted in 2018 in Da Bac district which has the highest pig population among all districts of Hoa Binh province. 352 indigenous pigs from six selected communes were sampled along with data collection of pig raising, age, and gender. All serum samples were tested for Trichinella antibodies using excretory/secretory antigen (AG)-ELISA.

Results

Of the 352 indigenous pigs, 48 were positive (13.6%; 95% CI: 35.3 - 60.6) in all communes. The result did not show any significant difference of seroprevalence among selected communes (P = 0.39) and between two types of pig keeping: roaming and semi-free roaming pigs (P = 0.79). Sero-prevalences were higher in female (17% positive, 35/205) compared to male pigs (8.8% positive, 13/147) (OR = 2.12; 95% CI: 1.07 - 4.17; P = 0.029). Pigs older than 6 months of age were more likely to be seropositive than pigs less or equal 6 months, with 19% (29/152) and 9.5% (19/200), respectively (OR = 2.24; 95% CI: 1.20 - 4.18; P = 0.011).

Discussion and conclusions

The study provides the first data on Trichinella seroprevalence in indigenous pigs from ethnic minorities in Hoa Binh province. The roaming/semhygienic conditions of pig management is poor and can be a risk factors for the circulation of parasitic disease in indigenous pigs (2). Trichinellosis may pose a serious threat to pig production/consumption in indigenous pigs. The inhabitants living in these areas should be made aware of the risk of disease and work towards making pork safer for the consumption. The farmers must be encouraged to adopt adequate livestock-management practices. In addition, continued surveillance of Trichinella infection, including reinforcement of meat inspection, and in other animals is recommended.

Ban pigs in Hoa Binh province, Vietnam (photo credit: ILRI/Hanh Le)

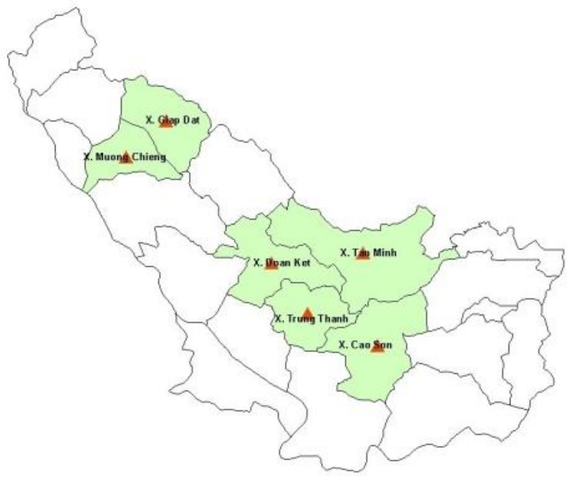

Fig 2. *Study map showing sampled communes in Da Bac district of Hoa Binh province*

Acknowledgments

This study is funded by the Federal Ministry of Economic Cooperation and Development Germany (BMZ), co-funded through CGIAR Research Program on Agriculture for Nutrition and Health (A4NH), and implemented by the International Livestock Research Institute (ILRI) and National Institute of Veterinary Research (NIVR).

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Regional symposium on research into smallholder pig production, health, and pork safety

Hanoi, 27-29 March 2019