

Reducing disease risk and improving food safety in smallholder pig value chains in Vietnam

Funded by the Australian Centre for International Agricultural Research (ACIAR)



A meat-vendor in Hanoi, Vietnam prepares her pork (photo: ILRI/Andrew Nguyen).

The issue

In Vietnam, pork makes up 75 per cent of meat consumed, with its production delivering substantial benefits to the smallholders who supply 84 per cent of the market. However, pork contains high levels of pathogens, an issue causing growing concern among the public, and policymakers alike, as they seek to better manage food safety, and animal diseases in pork value chains.

Due to their very nature, smallholder pig value chains are vulnerable to breakdowns in food safety. However, research by the International Livestock Research Institute (ILRI) and partners shows that these systems can be efficient, and deliver safe meat, provided that appropriate risk management approaches are developed and implemented.

The opportunity

Based on perceptions that industrialization will improve productivity, profitability and food safety, Vietnamese policymakers currently favour industrial pork production systems, as opposed to the more prevalent, smaller-scale systems. There remains however, strong interest in better understanding food safety in smallholder pig value chains, whilst also developing, testing and promoting incentive-based risk management approaches that are pro-poor.

Risk management

In Vietnam, risk management can be as problematic as risk assessment. The dominant model is 'command control regulation' with food safety assurance provided through inspection, and punishment for violations. Studies by ILRI and others have shown that approaches such as these are seldom effective in managing disease in the smallholder sec-

tor and informal markets.

Alternatively, interventions that are based on harm reduction, and incentives whereby market actors gain tangible benefits from changes in practice may be more successful in improving food safety. Incentives vary from a price premium for retailers of safety assured pork, to adoption of improved practices in order to increase social status.

Although early results are promising, there is as yet limited evidence for large-scale adoption in informal markets of developing countries and this project provides an opportunity to develop stakeholder led solutions to pork safety.

Key questions

The project addresses three research questions:

1. What are the human and economic costs of pork-borne diseases in smallholder pig value chains in Vietnam? What are the critical points/opportunities for risk management?
2. What is the added utility of risk-based approaches to food safety and pork-borne disease (that focus on human health impacts) compared with the current hazard-based approaches (based on the presence of pathogens in pork)?
3. What is the most appropriate role for incentive-based innovations in improving management of human and animal health risks in these smallholder pig value chains?

Implementation and partnerships

This project is funded by ACIAR, and will be coordinated by ILRI. Reflecting a multi-disciplinary approach, the project will bring together expertise in smallholder pig systems, risk analysis, socio-economics, value chain assessment, veterinary epidemiology, and public health. The core partners with ILRI are the Hanoi School of Public Health (HSPH) and the Hanoi University of Agriculture (HUA).

Anticipated results

The project aims to quantify and analyze the impacts of animal and human health risks in smallholder pig value chains, and identify where and how to better manage these risks.

Through engagement in the project and exposure to the evidence generated, we anticipate changes in knowledge, attitudes and practice among policymakers and implementing partners. These changes will lead to more support for smallholder pig systems, and better management of risk, resulting in direct benefits to producers, value chain actors and consumers.

A third area of impact anticipated is through capacity building in the staff and students of HSPH and HUA for applying risk-based approaches to food safety, and for decision-making. Short courses on risk analysis will also be developed and given to medical, and veterinary food safety and disease professionals.

The project has an expected end-date of May 2017.

Box: Key facts about the pork industry

- 97% of pork in Vietnam is sold through wet markets
- 80% of pork produced comes from farmers with <100 pigs
- 65% of agricultural households in Vietnam keep pigs
- Women have highest involvement in pig production and retail
- The Vietnamese pig population is growing at 5% per annum
- 90% of pork sold in Hanoi doesn't meet microbial safety standards
- 43% of consumers have concerns about pork safety or quality
- Eating pork in Hanoi is not associated with illness: eating vegetables is
- Supermarkets have more hygienic practices, but worse pork safety
- Economics models show that even under the most pessimistic scenarios, traditional pork production and sale will dominate for the next decade

(Data extracted from the Project on Improving the Competitiveness of Pig Producers in Vietnam)

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