

# Understanding food safety awareness and practices along smallholder pig value chains in Vietnam using participatory approaches

Sinh Dang-Xuan<sup>1</sup>, Fred Unger<sup>2</sup>, Hung Nguyen-Viet<sup>1,2,3</sup>, Reinhard Fries<sup>4</sup>, Phuc Pham-Duc<sup>1</sup>, Tongkorn Meeyam<sup>5</sup>

<sup>1</sup> Center for Public Health and Ecosystem Research, Hanoi School of Public Health, Hanoi, Vietnam; <sup>2</sup> International Livestock Research Institute (ILRI), Hanoi, Vietnam; <sup>3</sup> Swiss Tropical and Public Health Institute, Basel, Switzerland; <sup>4</sup> Institute of Meat Hygiene and Technology, Freie Universität Berlin, Germany; <sup>5</sup> Veterinary Public Health Center for Asia Pacific, Faculty of Veterinary Medicine, Chiang Mai University, Chiang Mai, Thailand



## Introduction

Pig production plays an important role in both food supply and economic development in Vietnam. The presence of harmful bacteria may occur at any stage from input at the farm to household consumption, potentially causes negative effects to human health. Hygienic practice helps to prevent and control microbial cross-contamination in the food value chain, which implies many relevant actors and stakeholders. This study aimed to assess the food safety awareness and practices of involved key actors along the smallholder pig value chains in Hung Yen, Vietnam using participatory approaches.

## Methods

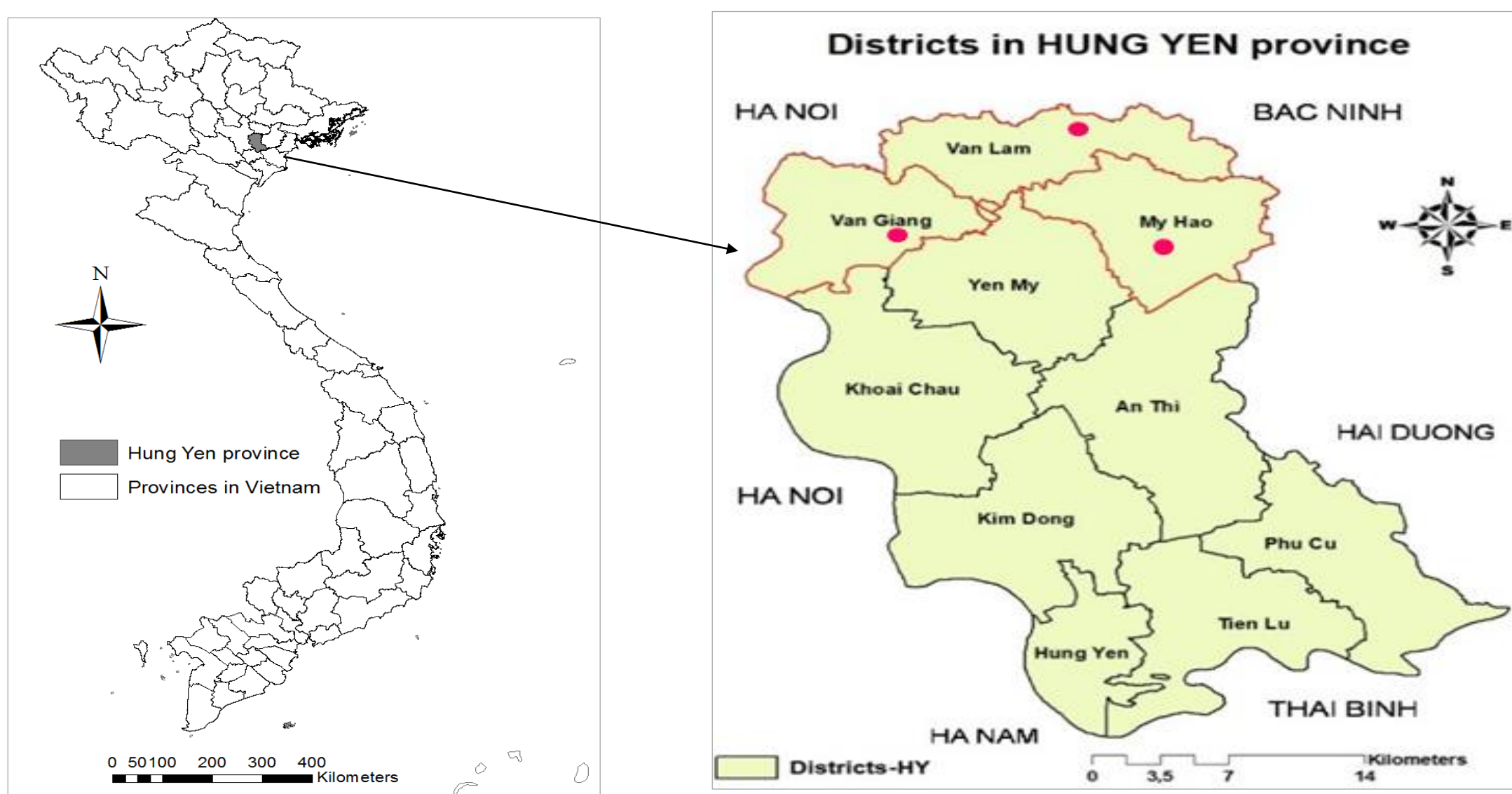


Fig 1. Study location, Hung Yen province and 3 studied districts

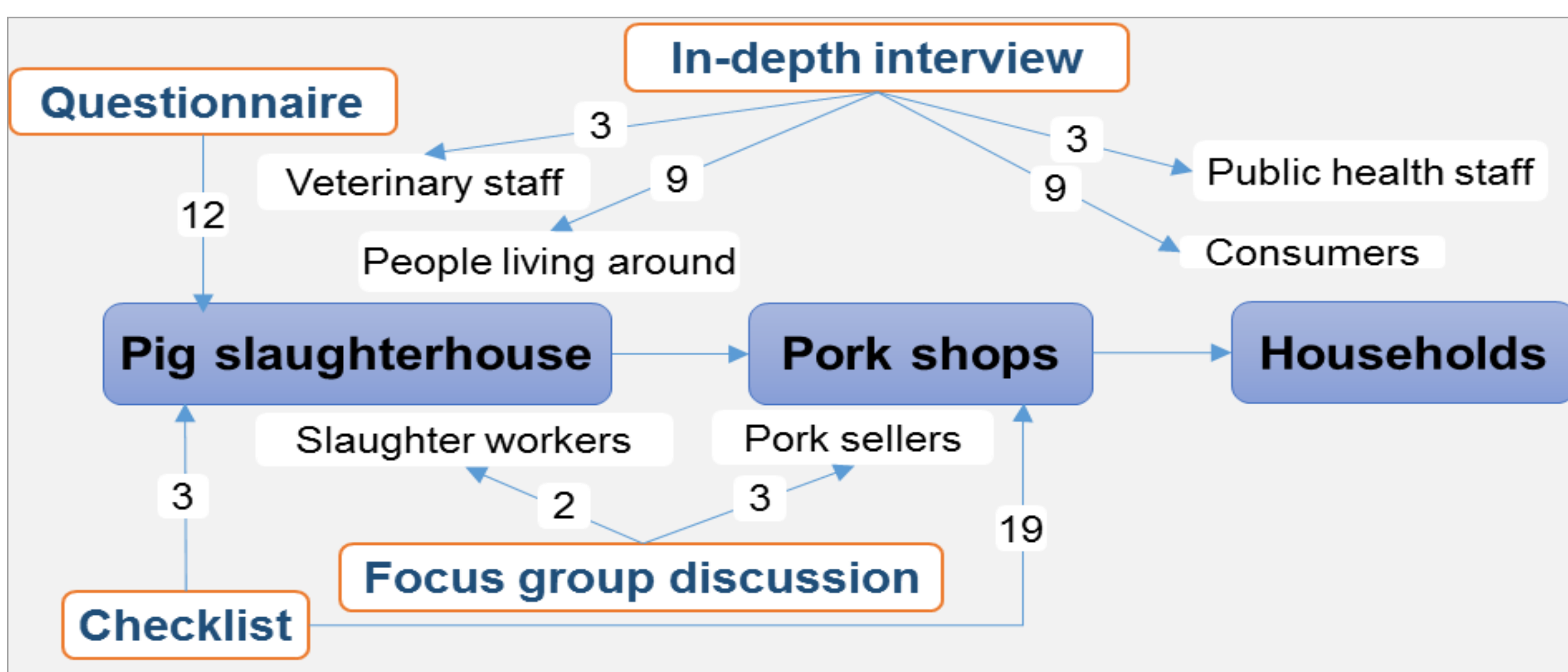


Fig 2. Study scope and number of interviews and participants

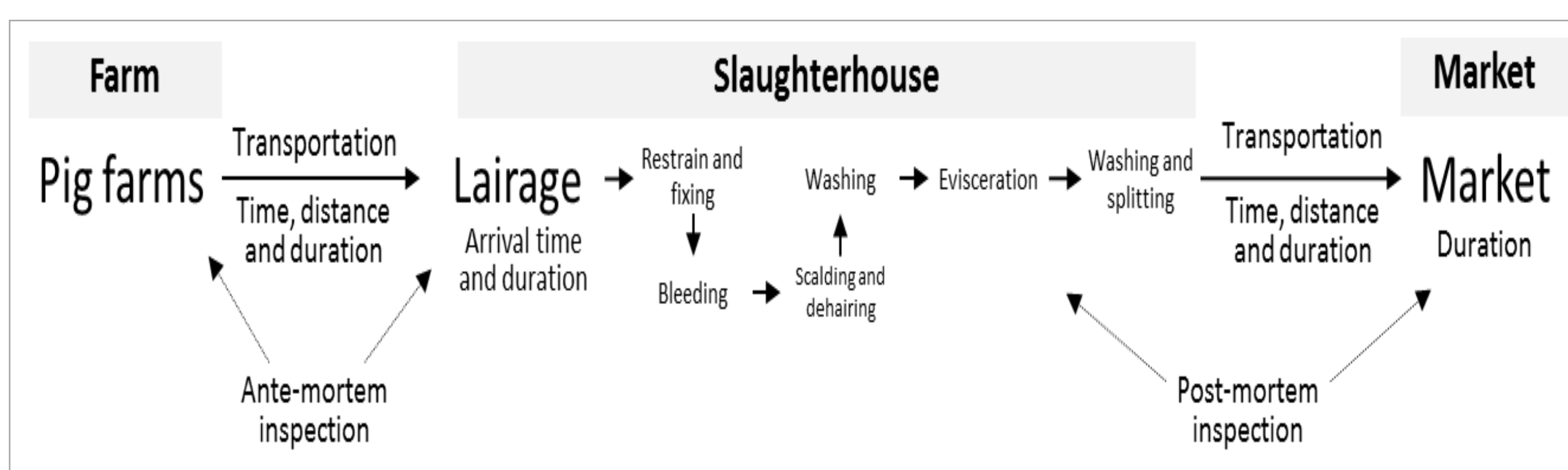


Fig 3. Scheme on the pig production chain in Hung Yen province



Fig 4. In-depth interviews with vet staff (left), focus group discussion with slaughterhouse groups (center) and with pork seller groups (right)



Sinh Dang-Xuan Email: [dxs@hspsh.edu.vn](mailto:dxs@hspsh.edu.vn) • HSPH, Hanoi, Vietnam • +84 969 813 048 (mobile)  
<http://aghealth.wordpress.com> • [www.ilri.org](http://www.ilri.org)

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## Results

### Food safety practices

**Slaughterhouse workers:** Limited applied regulations, standard operation procedure (SOP) or rules: “internal rules” are applied

Table 1. Ranking given to potential risks to microbial contamination on carcass by slaughterhouse workers (Ranks 1-9)

Potential risks	FGD1	FGD2	Average
Feces on live pigs	1	3	2
Punctured intestine	2	2	2
Water source	3	1	2
Feces on the bleeding area	2	4	3
Wash intestine at slaughter area	2	5	3.5
Feces in lairage	1	7	4
Boots at all places	6	7	6.5
Cloths	5	8	6.5
Transport vehicle	7	9	8

**Pork sellers:** preferred and used wood surface tables, use cloth to dry pork, clean equipment, hand or table, rarely used masks or protective caps.

**Advantages of having a slaughterhouse around:** providing jobs, creating business opportunities, convenience to buy fresh pork nearby

**Veterinary and public health staff:** emphasized the gap between existing legislation and food safety practices.

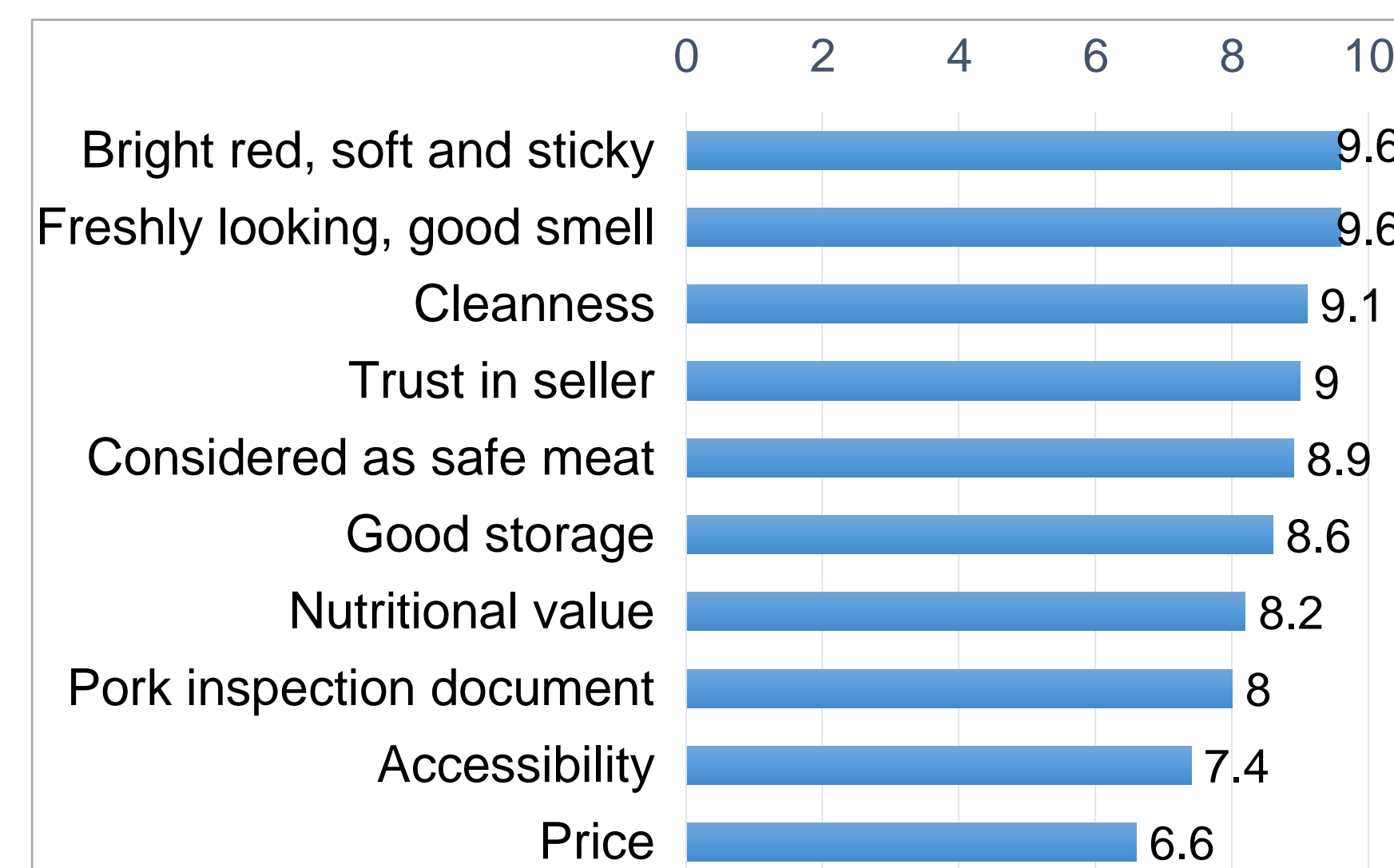


Fig 5. Ranking importance of pork selection criteria by consumers (ranks: 1-10)

### Food safety awareness

**Pork seller:** Pork quality was strongly related to the slaughtered pig and the manner of slaughtering.

**Slaughter workers and pork sellers:** not too worried about pig diseases, since they trust the pig companies and the control measures applied there.

**Consumer:** Less safe pork might have a strange color, smell bad, or look wet.

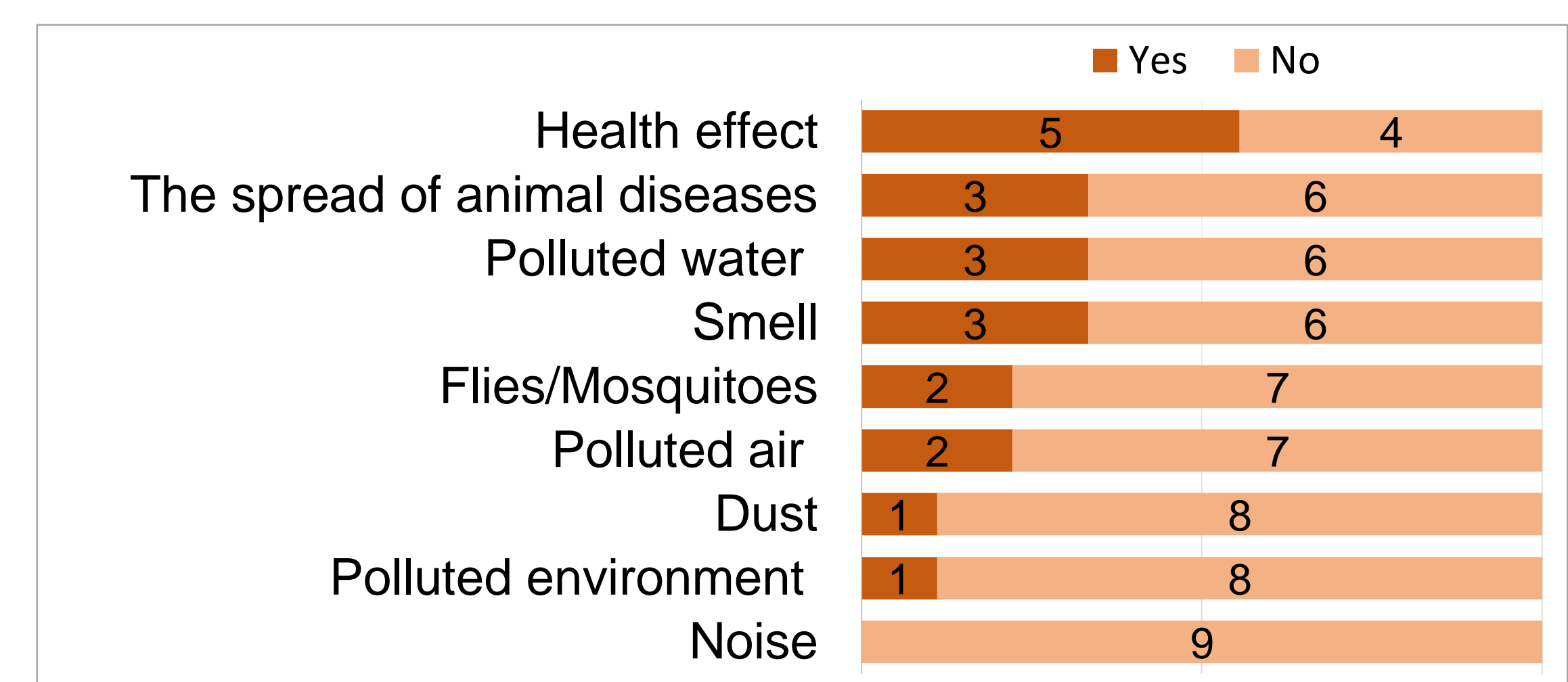


Fig 6. Responses on the disadvantages of the slaughterhouse's presence

## Conclusions

- Practices in pig slaughtering and market: Performed under the basic manual handling with simple and limited hygienic measures.
- There is a need for improved standards and targeted training for related groups, e.g. slaughterhouse workers & pork sellers.
- Consumers ranked sensorial criteria of meat and trust highest when buying meat, price was ranked lowest.
- Focus and improving collaborative mechanisms between veterinary and public health sectors needs also be focused.
- Mechanism to reduce the gap between law and practice needed.

