



Tropentag, September 14-16, 2010, Zurich

“World Food System —
A Contribution from Europe”

Risk Assessment in the Pork Meat Chain in two Districts of Viet Nam

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Abstract

Pork occupies an important place in the diet of the Vietnamese population. Most people buy and sell meat in informal markets (called wet markets) where there is little safety and quality regulation. As part of a larger project on competitiveness of smallholder pig production in Viet Nam, we carried out a comparative risk assessment to identify and characterise hazards present in representative pork meat chains. The study addressed all levels (“from stable to table”) of food supply chains in the districts of Ha Noi (urban environment) and Ha Tay (transition from urban to rural environment) in northern Viet Nam. We used Participatory Risk Analysis, allowing rapid and participatory assessment of hazards in resource-constrained environments. Different tools were used in this pathway approach to identify practices and hazards at production, slaughter, transport, sale and consumption, including:

- Observational check lists and questionnaires ;
- Participatory rural appraisal;
- Rapid diagnostic tests for several pathogens in pork meat, including several bacteria, different parasites and antibiotic residues.

The collected data were evaluated to assess hazards as well as risk amplifying or mitigating practices.

The farms scored moderately well on measures of biosecurity, good hygienic practice and reduction of zoonoses transmission. Farmers reported the occurrence of disease outbreaks in their pigs, but also an adequate coverage with veterinary services and drugs. Slaughterhouses scored low on hygienic practices, suggesting this may be a critical step because of a high likelihood of carcass contamination with faecal bacteria. Applying diagnostic tests on slaughtered pigs and pork meat at selling points, we found six hazards present in pork at concerning levels. We also report on the prevalence of consumer practices around purchase, keeping and preparation of food which are likely to influence risk. Finally, we integrate the findings from the different levels of the chain to assess the risk to consumers and conclude that although there is strong evidence for high levels of hazards in pork, there is less evidence of high levels of risk to consumers of pork meat.

Keywords: Food borne disease, pig production, pork meat, risk assessment