Food safety performance in animal sourced food value chains

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CGIAR COVID-19 Hub  
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WHO’s report: Global estimates of foodborne diseases

- **31 foodborne** hazards causing diarrheal disease agents, invasive infectious disease agents, helminths and chemicals etc.
- Estimated global burden these 31 hazards **was 33 million** DALYs
  - Comparable with burden from Malaria, HIV and TB
- **Almost 1 in 10 people fall ill** every year from eating contaminated food and **420 000 die** as a result
- **Highest burden** observed for **Africa** (East and Central SH Region) followed by **South East Asian** (region II)

http://www.who.int/foodsafety/publications/foodborne_disease/fergreport/en/
Food safety Vietnam

- **Food systems are rapidly changing** in many developing countries including Vietnam, 4-5% growth of livestock sector
- These changes are associated with **more consumption of risky animal food**
- **Pork is most important meat** diet for Vietnamese (similar in Laos, Thailand and Cambodia)
- Most of this is **produced, slaughtered and sold in traditional** markets
- **Food safety** has become an increasing **concern** (consumers & policymakers)
- Concerns include contamination with **chemical and microbiological** hazards
- **Little information on the actual risks** or how to manage them.
- Vietnam has a **modern food safety law**, but challenges exist:
  - Limited resources for surveillance
  - Weak enforcement
Food safety performance tool  **Aim & pillars:** Safety, scalability and societal concerns

**Aim:** Allow rapid assessment of food safety outcomes in value chains

**Safety:** Core of the tool using a **risk-based approach** to provide robust assessments of food safety outcomes food commodity (e.g. pork).

A value chain may provide safe food but have little potential for scaling (e.g. niche products)

**Sustainability and scalability** assessment of the value chain.
- **Business performance** (e.g. market share, expected trends, potential for change) and supply chain **governance** (e.g. trust and interventions).

**Societal concerns**
- **supplementary to pillar 1 and 2** such as **gender** and equity, **cultural norms** etc. which may synergize or trade-off with food safety.
How the tool was used

• **Qualitative** (focus group discussions, FGD, key informant interviews, KII)
  - > 500 KII and 12 FGD
  - Content: Business scale & trends, trust, governance, KAP, intervention (perception)
  - Farm to fork

• **Quantitative** (biological sampling and observational checklist) using a probabilistic sampling design to ensure representativeness.
  - >700 samples collected across different pork value chains

• **Value chains** (Sep 2018 – May 2019):
  - Traditional/wet market (all sites)
  - Street food, Hanoi
  - Canteens, Hanoi
  - „Boutique“ food chains, niche but emerging, Hanoi
  - Supermarket/convenient stores, Hanoi
  - Native pigs, Hoa Binh, „safe by nature“

*Photo credit: Chi N/ILRI and BacTom 2018*
Key results

Safety:

– **Poor food safety outcomes** across all retail types

– Value chain actors **incorrectly perceive** chemical **hazards** as more important than microbiological

– **Poor hygiene was blamed** as the main reason leading to foodborne disease, **but this perception wasn’t** necessarily translated into better practice
Key results

Scalability/sustainability:

– Business of *pork value chain slowly recovers* from ASF, rather minor affect of COVID-19
– Overall *trust* levels on food safety *decrease from rural to urban* areas
– Trust was *lowest with social media* and highest with TV and local radio
– Traditional markets and slaughter *will continue to provide most pork* and should continue to be a focus
Key results

Societal norms:
– Women seem more cautious about chemical residues in pork/food than men.
– Women also worry more about foodborne disease more frequently than men.
– Man more in favour of purely technical interventions than woman

Chosen value chains for intervention based on results from FS performance:
✓ Small-scale traditional sector
✓ Indigenous pork value chain
Food safety intervention at slaughter - example

Avoid floor slaughter

Change of workflow (clean/dirty)

Posters to support behavior change

• Marked decrease of coliforms; investment 100 -1500 USD
• COVID-19 concerns help to convince butchers and retailers to use disinfectant

*Photo credit: Sinh DX/Chi N ILRI 2020
Way forward:

✓ **Scaling** of interventions including cost benefits and policy support at slaughter (on-going) but also retail (re-designed) & farm (on-going)

✓ **Risk communication** (all VC actors) (Nov 20)

✓ Research on **COVID-19 and retail** (traditional)
  - **COVID-19 Impact & concerns** e.g. to support practice change in retailers (on-going)
  - **Understanding harms and benefits** of formal and informal markets across a range of criteria: health, nutrition, livelihoods, accessibility
  - Understanding **health risk** from those markets (opposed to presence of hazards)
  - Identification of **risk mitigating, scalability** and **practices** at these
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