Pork value chain in Vietnam: now, future and challenges

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Presentation at a seminar for veterinary students
School of Animal & Veterinary Sciences, Charles Sturt University, Wagga Wagga, Australia
13 March 2014
Outline

1. Livestock in Vietnam

2. Challenges
   - Health & environment
   - Policy

3. One Health and Ecohealth and reflection
To improve food and nutritional security and to reduce poverty in developing countries through research for efficient, safe and sustainable use of livestock—ensuring better lives through livestock

- Develop, test, adapt and promote **science-based practices** that achieve better lives through livestock.
- Provide compelling scientific evidence in ways that persuade decision-makers
- **Increase capacity** amongst ILRI’s key stakeholders and the institute itself.
• Studies the health and well-being impacts of development factors using integrative approaches of Ecohealth/One Health.

• Focus on the link between health and agriculture. infectious and zoonotic diseases. chemical pollution. food safety and nutrition. from lab to the field.

Main research themes

✓ Ecosystem Health / One Health
✓ Food Safety
✓ Health Impact Assessment
Vietnam

- Population: 90 mil (2014 estimate)
- Area: 331.210 km²
- Density: 272/km²
- GDP (nominal): $1.895

- **Buffalo**
- **Cattles**
- **Pig**

<table>
<thead>
<tr>
<th>Year</th>
<th>Thousand heads</th>
</tr>
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<tbody>
<tr>
<td>1995</td>
<td></td>
</tr>
<tr>
<td>1996</td>
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<td>2007</td>
<td></td>
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<tr>
<td>2008</td>
<td></td>
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<tr>
<td>2009</td>
<td></td>
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</tbody>
</table>
Annual Growth in population between 3 periods

- **1995-1999**
  - Pig: 4%
  - Poultry: 7%
  - Buffalo: 1%
  - Cattles: 2%

- **2000-2004**
  - Pig: 6%
  - Poultry: 3%
  - Buffalo: 0%
  - Cattles: 4%

- **2005-2009**
  - Pig: 0%
  - Poultry: 2%
  - Buffalo: 0%
  - Cattles: 3%
**Per capita consumption of meats**

**Meat production per capita in Vietnam**

<table>
<thead>
<tr>
<th>Period</th>
<th>Kg/person/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995-1999</td>
<td>15</td>
</tr>
<tr>
<td>2000-2004</td>
<td>20</td>
</tr>
<tr>
<td>2005-2009</td>
<td>30</td>
</tr>
</tbody>
</table>

- **Pig**
- **Poultry**
- **Buffalo**
- **Cattles**

**Source:** Data of GSO

**kg meat / person**

<table>
<thead>
<tr>
<th>Country</th>
<th>Kg/person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viet Nam</td>
<td>30</td>
</tr>
<tr>
<td>China</td>
<td>70</td>
</tr>
<tr>
<td>D’ped</td>
<td>90</td>
</tr>
</tbody>
</table>

**Source:** Otte. et al. 2010
WILDLIFE SPECIES PERMITTED FOR REARING BY HOUSEHOLDS; SCOPE AND DISTRIBUTION
(Source: GOS)

<table>
<thead>
<tr>
<th>Whole country and eco-regions</th>
<th>Deer (1000 head)</th>
<th>Porcupine (1000 head)</th>
<th>Python (1000 head)</th>
<th>Snake (1000 head)</th>
<th>Squirrel (1000 head)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole country</td>
<td>59.6</td>
<td>38.4</td>
<td>173.1</td>
<td>5.476.5</td>
<td>13.6</td>
</tr>
<tr>
<td>Red river delta</td>
<td>2.3</td>
<td>6.9</td>
<td>0.3</td>
<td>331.2</td>
<td>5.8</td>
</tr>
<tr>
<td>North mountain and Midland</td>
<td>1.0</td>
<td>31.4</td>
<td>0.1</td>
<td>3.874.8</td>
<td>5.4</td>
</tr>
<tr>
<td>North central and Central coastal region</td>
<td>51.3</td>
<td>0.0</td>
<td>0.8</td>
<td>169.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Central Highland</td>
<td>3.4</td>
<td>0.0</td>
<td>0.2</td>
<td>668.0</td>
<td>0.7</td>
</tr>
<tr>
<td>East of the South</td>
<td>1.4</td>
<td>0.0</td>
<td>1.7</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Mekong river delta</td>
<td>0.1</td>
<td>0.0</td>
<td>170.0</td>
<td>433.0</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Other wildlife: swallows. wild pigs. pheasants. crocodiles. monkeys...are also being kept in a number of localities
Health issues:
animal, human and environment
Integrated Crop (V) – Fishery (A) – Livestock (C) (V-A-C) in Vietnam
High levels of hazards
Zoonoses and FBD widespread

Key zoonoses in Vietnam

- H5N1 (HPAI)
- Leptospirosis
- Rabies
- Anthrax
- Streptococcus suis
- Salmonellosis
- Trichinellosis
- Cysticercosis
- ……..

Milk
- Xenobiotics
- Chemicals
- Pathogens
- Allergens

Zoonoses
- Bacterial
- Viral
- Parasitic
- Prion

Manure
- Xenobiotics
- Chemicals
- Pathogens
- Aesthetic

Social conflict
Traffic accidents
Injuries
Environmental degradation
Food safety & “from farm to fork”
Culture and food preference

Raw blood (Tiet canh)

Fermented pork (Nem chua)
Blue ears or Porcine Reproductive and Respiratory Syndrome (PRRS) in Vietnam

- **First wave:** From 12 March to 15 May 2007: 7 provinces (25 districts). Number of pigs effected 31,740. of which 7,296 were culled.
- **Second wave:** From 25 June to 11 December 2007: 14 provinces (40 districts). 38,827 pigs affected. 13,070 pigs culled.
- **Third wave:** From March –July 2008:
- **Forth wave 4:** 23/7/2008: 10 provinces (271,215 pigs effected). 261,854 culled. Total loss was 500 billions VND.
- **Fifth wave:** 4-5/2010: 13 provinces (50,000 effected and 21,000 culled).
A pork supply chain: an example in Nghe An

Legend:
- Green line: Movement of feed
- Pink line: Movement of piglet
- Black line: Movement of live pigs
- Red line: Movement of carcass

Source: Quick interview, July, 2010
Presence of movement roads, ports, rivers.

Presence of local and/or regional live bird/pig markets.
Reflection:
Policy, One Health and Development
Large farm vs. Smallholder?

- Women
- Equity
- Livelihood
- Poverty alleviation
- Environment...

On 16 January 2008 the Prime Minister signed Decision No. 10/2008/QD-TTg approved “Strategy for livestock development to 2020”. This is the responsible and serious result of the collective’s Administrative staff, the scientists, Businesses, Farmers throughout the country. It expresses the concerns of the Government, the ministries -- central and local branches to the livestock section.
Economic Impact of EID


- Rinderpest
  - $30bn
- BSE UK.
  - $10-13bn
- Foot & Mouth
  - UK.
  - $25-30bn
- Foot & Mouth
  - Taiwan. $5-8bn
- Classical Swine Fever.
  - Netherlands $2.3bn
- HPAI. Italy
  - $400m
- Nipah. Malaysia
  - $350-400m
- BSE Japan
  - $1.5bn
- BSE Canada
  - $1.5bn
- Avian Flu Asia.
  - $5-10bn
- Avian Flu.
  - NL $500m
- Avian Flu. NL
  - $5-10bn
- BSE U.S..
  - $3.5bn
- BSE U.S.
  - $1.5bn
- SARS
  - China. Hong Kong.
  - Singapore. Canada
  - $30-50bn
- FMD & HPAI
  - Japan & Korea
  - Billions $$$$
Working together and integrated approach
One Health & Ecohealth

ONE HEALTH
EcoHealth

Human health
Livestock health
Wildlife health
Agroecosystem health

Cultures Societies Economies Institutions

Adapted from EstherSchelling, SwissTPH
Do you want to work internationally (as Australian)?

⇒ http://www.australianvolunteers.com
Vietnam

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Thank you!

Prof. Peter Wynn
Dr Dinh Xuan Tung
ACIAR (John Dillon Award Fellowship 2014)