Overview of large ruminant industry

Laos
• 1.2 million cattle, 1.5 million buffaloes

Cambodia
• 3.4 million cattle, 0.7 million buffaloes

In both countries ownership is smallholder dominated

(Population resources 2011)

Key constraints

› Low productivity due to low input/output management
  - Limited targeted nutrition
› Poor reproductive performance
  - Limited selective mating, early weaning, target feeding
› High risk of disease
  - Transboundary Animal Diseases (FMD, HS)
  - Fascioliosis, Toxocariasis
  - Others (Anthrax, Blackleg…)

In this talk…

› Overview of industry in Laos and Cambodia
› Regional demand for beef
› Can we meet the meat demand?!
› Update on recent research
› Key opportunities
› Future research needs
Regional demand for beef

› Growing middle class changing dietary habits
› Increasing domestic beef consumption
› By 2020 regional demand projected to grow:
  - 3.1% per annum in China (73 kg/capita/yr)
  - 3.0% in South-East Asia (30 kg/capita/yr)
  (Delago 2003)

› Where is this beef going to come from???

Can we meet the meat demand?!

› Significant progress in improving production at the smallholder level
› However, further research is required to addressing key constraints at
  - Smallholder level
  - Supply chain
  - Value chain

Significant opportunity for both Laos and Cambodia to increase beef production

› Direct impacts on
  - Food security
  - Rural poverty
  - Gender and education
  - Livelihoods
  - Business opportunity
  & development

Update on recent research

32 traders in northern Laos surveyed Jan & Feb 2011

› Information collected on supply chain
  - Species purchased (cattle or buffalo)
  - Purchase prices
  - Sex (male or female)
  - Age groups (0-2, >2-8, >8 years)
  - Body condition score (skinny, medium or fat)
  - Transport method
  - Traders’ issues
2011 Trader survey

- 32 traders purchased 8,796 cattle and buffalo sourced from 16 districts in 4 northern provinces
- Prices for animal classes were established to allow a farm gate valuation

Cattle transiting through Cambodia enroute to southern Vietnam from Thailand 2012

Large ruminant transport in Cambodia 2012

Farm gate valuation (Million USD)

<table>
<thead>
<tr>
<th>Region</th>
<th>Cattle</th>
<th>Buffalo</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Laos</td>
<td>$60.5</td>
<td>$167.1</td>
<td>$227.6</td>
</tr>
<tr>
<td>Laos</td>
<td>$239.3</td>
<td>$675.6</td>
<td>$914.8</td>
</tr>
</tbody>
</table>

2011 data

<table>
<thead>
<tr>
<th>Species</th>
<th>Sex</th>
<th>Age (years)</th>
<th>Body Condition Score</th>
<th>n Traders</th>
<th>n Large ruminants</th>
<th>Price based on n traders or estimated</th>
<th>Mean price (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>Male</td>
<td>0 to 2</td>
<td>Skinny</td>
<td>0</td>
<td>0</td>
<td>Estimated</td>
<td>50.00</td>
</tr>
<tr>
<td>Cattle</td>
<td>Male</td>
<td>0 to 2</td>
<td>Medium</td>
<td>5</td>
<td>1</td>
<td>68.40</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Male</td>
<td>0 to 2</td>
<td>Fat</td>
<td>0</td>
<td>0</td>
<td>Estimated</td>
<td>75.00</td>
</tr>
<tr>
<td>Cattle</td>
<td>Male</td>
<td>&gt;2 to 8</td>
<td>Skinny</td>
<td>3</td>
<td>14</td>
<td>309.11</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Male</td>
<td>&gt;2 to 8</td>
<td>Medium</td>
<td>23</td>
<td>873</td>
<td>256.17</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Male</td>
<td>&gt;2 to 8</td>
<td>Fat</td>
<td>12</td>
<td>268</td>
<td>267.53</td>
<td></td>
</tr>
<tr>
<td>Cattle</td>
<td>Male</td>
<td>&gt;8</td>
<td>Skinny</td>
<td>1</td>
<td>30</td>
<td>342.47</td>
<td></td>
</tr>
</tbody>
</table>
Supply chain

Multiple people involved with variation between links

Top 5 trader issues and suggestions

**Key issues**
- Supply unable to meet demand
- High competition
- Price fluctuation
- Poor access to source (road infrastructure - wet season)
- High taxes, levies & movement fees

**Suggestions for ensuring supply**
- Assistance for smallholder production
- Increase forage grazing resources
- Disease prevention and control
- Ensure local supply (cf. export quotas)
- Review taxes, levies & movement fees

Trader product sale prices

<table>
<thead>
<tr>
<th>Product</th>
<th>n Traders</th>
<th>Price per kg (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat</td>
<td>27</td>
<td>3.75</td>
</tr>
<tr>
<td>Bones</td>
<td>27</td>
<td>1.89</td>
</tr>
<tr>
<td>Heart</td>
<td>26</td>
<td>3.34</td>
</tr>
<tr>
<td>Intestine</td>
<td>27</td>
<td>2.56</td>
</tr>
<tr>
<td>Kidney</td>
<td>27</td>
<td>3.24</td>
</tr>
<tr>
<td>Liver</td>
<td>27</td>
<td>3.38</td>
</tr>
<tr>
<td>Lungs</td>
<td>26</td>
<td>2.16</td>
</tr>
<tr>
<td>Skin (cattle)</td>
<td>26</td>
<td>1.00</td>
</tr>
<tr>
<td>Skin (buffalo)</td>
<td>23</td>
<td>1.16</td>
</tr>
<tr>
<td>Stomach</td>
<td>12</td>
<td>3.01</td>
</tr>
<tr>
<td>Blood</td>
<td>2</td>
<td>1.00</td>
</tr>
<tr>
<td>Fat</td>
<td>1</td>
<td>0.12</td>
</tr>
<tr>
<td>Feet (each)</td>
<td>3</td>
<td>1.49</td>
</tr>
<tr>
<td>Intestinal fluid</td>
<td>8</td>
<td>1.42</td>
</tr>
</tbody>
</table>

Regional perspective

- Many issues apply to multiple countries, provinces, districts
- However, due to high variation between regions localised solutions and strategies will be needed
Key opportunities

› Expand on current knowledge and scale out to wider communities
› Integrate smallholder production with value chain knowledge
› Increase transboundary disease control with value chain knowledge

Future research needs

› Study profitability of traders within value chain
› Identify components of the value chain requiring improvement and further efficiency
› Define market requirements and new opportunities
› Integrate disease control with market needs

Questions