Social Consequences of the Changing Landscape for Mixed Livestock Production Systems

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Outline

• The Changing landscape
• Mixed Crop-livestock Production Systems
• Stylized Development Paths & Case Studies
• Summary & conclusions
The Changing Landscape
Interlocking ‘Drivers’ of Change

- Growing & changing demand for meat & milk products in DCs
- New technologies in production and processing
- National and international market liberalization and integration
Opportunities and Threats

• Expanding markets – opportunities for livestock producers

• Demanding markets (product quality and food safety) – exclusion of some producers from market (and sector!)
Initial conditions:
1. Agricultural / livestock sector in the economy
2. Resource endowments (land, labour, capital)
3. Economic-institutional framework
Responses to the Changing Landscape

**Production systems:**
1. Extensive production systems
2. Mixed crop- livestock production systems
3. Intensive production systems
Responses to the Changing Landscape

**Production systems:**

1. Extensive production systems
2. **Mixed crop- livestock production systems**
3. Intensive production systems
Mixed Crop- Livestock Production Systems

Crop-Livestock Farms
Characteristics

- Predominantly small farms
- Livestock contribute to:
  - income
  - food
  - draught
  - savings
  - insurance
  - social status
- (Informal) traders
- Processors / wholesalers / retailers
## Predominance of Small Farms

<table>
<thead>
<tr>
<th>Farm size class (ha)</th>
<th>No. of farms w/n class (mio)</th>
<th>Prop’n of farms w/n class (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1</td>
<td>334.0</td>
<td>73.2</td>
</tr>
<tr>
<td>1-2</td>
<td>53.3</td>
<td>11.7</td>
</tr>
<tr>
<td>2-5</td>
<td>40.3</td>
<td>8.8</td>
</tr>
<tr>
<td>5-10</td>
<td>13.8</td>
<td>3.0</td>
</tr>
<tr>
<td>&gt;10</td>
<td>14.8</td>
<td>3.3</td>
</tr>
<tr>
<td>Total</td>
<td>456.1</td>
<td>100</td>
</tr>
</tbody>
</table>

Remark: variations of ‘average’ farm size:
- SSA: 1.6 ha.
- Asia: 1.6 ha.
- China, Bangladesh: <1/2 ha
- LAC: 67 ha.

Source: Von Braun, 2005
Mixed Farms and Livestock Production

Mixed farms contribution to total livestock output (%) – world regions

Small mixed farms contribution to total livestock output (%) – selected countries
Employed persons /1000 litre of milk output - small (informal) / large (formal) ratio

Share (% out of total) of informal employment and marketed milk
Impact of the Changing Landscape on Mixed Systems

Three Stylized Pathways of Livestock Sector Development
‘Stylized’ Development Pathways

1. Positive, equitable livestock development path
2. Livestock sector stagnation / involution
3. Positive but in-equitable development path
1. Positive & Equitable Path

- Growth leads to broad-based rural production and rural-to-urban processing and distribution systems
  - consumption linkages
  - production linkages

- Decentralized rural industrialization, exploiting rural labour and entrepreneurial skills
2. Stagnation / Involution

- Rural production systems are disconnected from growing markets
  - weak / no production linkages
  - weak / no consumption linkages

- Anti-agriculture ‘biased policies’
  - macroeconomic
  - sector policies
  - infrastructural

Case study: Zambia dairy
3. Positive but Inequitable Path

- Small modern sector benefiting from LCL
  - production linkages
  - concentration of production
  - food safety/quality

- Large traditional sector excluded from benefits of LCL
  - weak production linkages
  - consumption linkages
  - at the extreme, forced out of the sector

**Case study: Brazil dairy**

**Share of formal/informal marketed milk**

1990

- Formal: 6%
- Informal: 33.7%

1998

- Formal: 56.5%
- Informal: 43.5%

**Graph**

- Milk production
- Milk trade

**Table**

<table>
<thead>
<tr>
<th>Year</th>
<th>Formal (%)</th>
<th>Informal (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>6</td>
<td>33.7</td>
</tr>
<tr>
<td>1998</td>
<td>56.5</td>
<td>43.5</td>
</tr>
</tbody>
</table>
Summary

Drivers

1. Positive pathway

- Large farms
  - ↑
  - ↓
- Small farms
  - → Formal supply chain
  - → Urban consumers

2. Stagnation / involution

- Small subsistence farms
  - ↔

3. Inequitable pathway

- Large farms
  - → Formal supply chain
  - → Urban consumers
- Small farms
  - → Informal supply chain
  - → Rural consumers

out of business
Summary & Conclusions
Summary

• (Small) Mixed farms are and will remain pervasive
• (Small) Mixed farms significantly contribute to livestock output & rural employment
• LCL different impacts on mixed farms possible:
  ▪ positive, equitable development path
  ▪ stagnation / involution
  ▪ positive but inequitable development path
Conclusions

- Small mixed farms can be competitive
- Large & small farms / supply chains can co-exist
- Smallholder based (livestock) industrialization is possible
- Equity & growth are not mutually exclusive
- ‘Equitable’ livestock technical & institutional policies
References & Further Reading


For more information please visit the PPLPI website:
www.fao.org/ag/pplpi.html
Thank you!

A Living from Livestock
Pro-Poor Livestock Policy Initiative