The long-term challenges for livestock sustainability in Africa. What policy and institutional innovations?

Ugo Pica-Ciamarra (FAO)
Take-away messages

• Africa and its livestock sector are anticipated to dramatically change in the coming decades

• The transformation of livestock will pose huge challenges to society

• Policy and institutional innovations are key for a sustainable transformation of the livestock sector
Take-away messages

- Africa and its livestock sector are anticipated to dramatically change in the coming decades

- The transformation of livestock will pose huge challenges to society

- Policy and institutional innovations are key for a sustainable transformation of livestock
Africa: population and economy – 2015-2050

Source: FAO GPS, 2018
Africa: consumption of livestock products - 2015-2050

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2050</th>
<th>Increase by 2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>beef</td>
<td>8</td>
<td>24</td>
<td>+ 200%</td>
</tr>
<tr>
<td>poultry</td>
<td>9</td>
<td>28</td>
<td>+ 211%</td>
</tr>
<tr>
<td>small ruminants</td>
<td>4</td>
<td>11</td>
<td>+ 175%</td>
</tr>
<tr>
<td>pork</td>
<td>3</td>
<td>9</td>
<td>+ 200%</td>
</tr>
<tr>
<td>raw milk</td>
<td>63</td>
<td>148</td>
<td>+ 138%</td>
</tr>
</tbody>
</table>

Demand for livestock products will exponentially increase

Source: FAO GPS, 2018
Africa: production of animal source foods - 2015-2050

Production of livestock will exponentially increase

<table>
<thead>
<tr>
<th>Year</th>
<th>Beef</th>
<th>Poultry</th>
<th>Small Ruminants</th>
<th>Pork</th>
<th>Raw Milk</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>7</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>2050</td>
<td>19</td>
<td>23</td>
<td>8</td>
<td>5</td>
<td>140</td>
</tr>
</tbody>
</table>

Source: FAO GPS, 2018
Africa: animal population - 2015-2050

Livestock production systems will dramatically change.

<table>
<thead>
<tr>
<th>Year</th>
<th>Cattle (million heads)</th>
<th>Goats (million heads)</th>
<th>Sheep (million heads)</th>
<th>Pigs (million heads)</th>
<th>Poultry (million heads)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>333</td>
<td>422</td>
<td>368</td>
<td>38</td>
<td>2300</td>
</tr>
<tr>
<td>2050</td>
<td>703</td>
<td>927</td>
<td>705</td>
<td>108</td>
<td>7850</td>
</tr>
</tbody>
</table>

Source: FAO GPS, 2018
Africa: livestock productivity - 2015-2050

Livestock production systems will dramatically change.

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beef</td>
<td>169</td>
<td>211</td>
</tr>
<tr>
<td>Milk yield</td>
<td>747</td>
<td>1000</td>
</tr>
<tr>
<td>Poultry</td>
<td>1.1</td>
<td>1.3</td>
</tr>
<tr>
<td>Pigs</td>
<td>46</td>
<td>51</td>
</tr>
<tr>
<td>Sheep</td>
<td>16</td>
<td>19</td>
</tr>
</tbody>
</table>

Productivity: carcass weight and milk yield.
The livestock transformation: a satellite view

1985: Pop = 0.46 million

2000: Pop = 0.92 million

2015: Pop = 2.2 million

Ouagadougou 2050: 8.6 million
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Livestock’s role in society

1. LIVELIHOODS
2. ENVIRONMENT
3. PUBLIC HEALTH
1. Livelihoods

Doubling human and doubling (cattle) population

- Increased competition for productive resources

- Many will exist the livestock sector: will there be sufficient employment opportunities?

Working age population: 0.5 billion today / 1.3 billion in 2050

62% of rural HHs keep livestock

<table>
<thead>
<tr>
<th>Country</th>
<th>% of rural households keeping livestock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>40</td>
</tr>
<tr>
<td>Madagascar</td>
<td>80</td>
</tr>
<tr>
<td>Malawi</td>
<td>60</td>
</tr>
<tr>
<td>Niger</td>
<td>90</td>
</tr>
<tr>
<td>Nigeria</td>
<td>30</td>
</tr>
<tr>
<td>Tanzania</td>
<td>40</td>
</tr>
<tr>
<td>Uganda</td>
<td>30</td>
</tr>
</tbody>
</table>
2. Environment

- Livestock is the largest user of agricultural land at global level
  grazing land + croplands for feed = 80%

- Livestock is a major user of water
  In the literature, estimates of water use per kg of feed ranges from 27 to over 200,000 lit!

- Livestock is a major contributor of GHG emissions
  14.5% of total GHG emissions

- Nutrients overloading of soil and water / biodiversity loss

Doubling (cattle) population
3. Public health

- 70% of human diseases originate from animals
  *Domesticated animals and wildlife*

- Emerging infectious diseases (e.g. avian influenza) increasingly frequent
  *More frequent and novel interactions between animals, humans and wildlife - high cost of society; e.g. Ebola USD 31-33 billion; H1N1 USD 45-44 billion*

- Increased incentives to use antimicrobials for disease prevention and growth promotion
  *Livestock-driven antimicrobial resistance*
Add to that... transformed livestock supply chains

Pop in SSA from 39% (2015) to 58% (2050) urban

E.g. Kenya: from 25.7 to 46.3 million - 65% of pop growth will be in urban areas!

+ 11 million in 35 years
+ 314,000 per year
+ 26,000 per month
+ 6,100 per week
+ 870 per day
The future of livestock in Africa?

How to ensure livestock sustainability in 2050?
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Livestock Development Strategy for Africa

• “Public and private sector investments and policies”
• “Genetic potentials of animals improved”
• “Improved animal health systems and reduced impact on animal diseases”
• “Availability and access to quality feed and water enhanced”
• “Marketing and value addition infrastructure improved”
• “Existing, relevant technologies adopted”
Livestock Development Strategy for Africa

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Good practices for livestock development

There is plenty of «good practices» at the farm level and along the value livestock chain, which can support the sustainable development of livestock in Africa

- genetics
- feed
- health
- marketing
- PPP
Policy and institutional reforms and innovations are essential for scaling up good practices.

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Policy and institutional reforms and innovations are essential for scaling up good practices.
Policy and institutional reforms: innovations

Challenge: policy and institutional reforms are marginalised in the developmental debate

- Time consuming / uncertain / multi-stakeholders / politics
- Outcomes & impacts in the long-term
  i.e. returns on investments in policy and institutional reforms are all but certain!
Policy and institutional reforms: innovations

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How to promote policy and institutional innovations to scale up good practices?

?
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• Policy and institutional innovations are key for a sustainable transformation of livestock: what to do?
Thank you