Animal and human health: A dangerous intersection or a healthy future?

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Unlucky 13 zoonoses sicken 2.4 billion people, kill 2.2 million people and affect more than 1 in 7 livestock each year.
Livestock disease destroys 20% value of the sector

Annual mortality of African livestock

<table>
<thead>
<tr>
<th></th>
<th>Young</th>
<th>Adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>22%</td>
<td>6%</td>
</tr>
<tr>
<td>Shoat</td>
<td>28%</td>
<td>11%</td>
</tr>
<tr>
<td>Poultry</td>
<td>70%</td>
<td>30%</td>
</tr>
</tbody>
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Source: Otte & Chilonda; IAEA

Source: Grace et al., 2015
Emerging zoonotic disease events, 1940 – 2012

Potential Hotspots in US, Western Europe, Brazil, Southeast Asia

Most emerging human diseases come from animals. This map locates zoonotic events over the past 72 years, with recent events (identified by an ILRI-led study in 2012) in blue. Like earlier analyses, the study shows western Europe and western USA are hotspots; recent events, however, show an increasingly higher representation of developing countries.

1 EVENT  2-3 EVENTS  4-5 EVENTS  6 EVENTS  EVENTS IDENTIFIED IN 2012 (recent emergence)

Global antimicrobial use in food animals (mg per 10km pixel)

- Total consumption in the livestock sector in 2010 estimated at 63,151 tons
- Global antimicrobial consumption will rise by 67% by 2030

Source: Van Boeckel et al. 2015
Foodborne disease: health burden comparable to malaria, HIV-AIDS or TB

Source: Grace, 2015
Source: Queenan et al., CAB Reviews 2017
Participatory processes
Policy relevant

- CGIAR/ILRI niche - risk assessment and policy/ regulatory analysis for fresh foods in domestic markets
- WB convenes overall support to government
- ILRI support to Vietnamese Task Force on Risk Assessment for Food Safety, institutionalized by HUPH
- Long-term (>10 year) engagement – Government, WB, VN research, CGIAR partners, CGIAR

Branding & certification of milk vendors in Kenya & Guwahti, Assam led to improved milk safety.

It benefited the national economy by $33 million per year in Kenyan and $6 million in Assam.

70% of traders in Assam and 24% in Kenya are currently registered.

6 million consumers in Kenya and 1.5 million in Assam are benefiting from safer milk.

Source: Johnson et al., 2015
better lives through livestock

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