An integrated approach to controlling brucellosis in Africa

Introduction to the meeting

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Workshop: An Integrated Approach to Controlling Brucellosis in Africa
Addis Ababa, 29-31 January 2013
Research Firsts for Africa

1. Earliest lesions compatible with brucellosis found in hominin skeleton in South Africa, dated to around 1.5 myo.

2. In 1921, Bevan, a vet in Zimbabwe first suggested that *B. abortus* could be zoonotic.

3. ‘Bakkale’ recognised by Fulani as a disease causing abortions & hgyroma. Confirmed as brucellosis in the 1940s.
African livestock sector today

2. An important role for women in livestock production, processing, retail and food preparation.
3. Wildlife uniquely important and present opportunities and risk.
4. High levels of disease, yet low levels of reporting.
175 million poor livestock keepers, 320 million people live in poor livestock keeping households

Source: ILRI report to DFID, 2012
Africa: 600 million ruminants & pigs, 500 million in extensive systems

Source: FAO/ILRI, 2011
Africa: one billion consumers with high potential to consume more livestock products

2050: 2 billion consumers

Source: Herrero et al 2008
Importance of women

• 1% of African women own land but 10% own livestock
• Usually responsible for poultry, animals at the homestead, watering, feeding and looking after sick animals
• High involvement processing and sale of ASF
• Prepare most food for household consumption

• Giving women the same resource access as men would add 20-30% to farm yield  (source: FAO, 2011)
Wildlife an opportunity and risk

75% ZEID emerge from wildlife

Major reservoir of important diseases including brucellosis

Wildlife an increasingly scarce resource

Bush-meat important for income and food

Zoonotic EID events 1930-2012 from wildlife

Zoonotic EID events 1930-2012 not from wildlife
High levels of avoidable livestock disease

- Transboundary animal disease
- Production disease
- Zoonoses
- Food borne disease
- Emerging disease

Annual mortality of African livestock

<table>
<thead>
<tr>
<th></th>
<th>Young</th>
<th>Adult</th>
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<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>
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Source: Otte & Chilonda; IAEA
Dozens or hundreds of vets but millions of livestock
Massive under-reporting of disease and disconnect between human, livestock and wildlife disease surveillance systems

Bovine brucellosis according to surveys

<table>
<thead>
<tr>
<th>Region</th>
<th>Bovine brucellosis Predicted cases annual</th>
<th>Bovine brucellosis Cases reported 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Africa</td>
<td>21,104,976</td>
<td>12</td>
</tr>
<tr>
<td>West Africa</td>
<td>30,646,060</td>
<td>37</td>
</tr>
<tr>
<td>South Africa</td>
<td>8,492,555</td>
<td>6305</td>
</tr>
<tr>
<td>North Africa</td>
<td>7,952,853</td>
<td>1073</td>
</tr>
</tbody>
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Source: LRI report to DFID Mapping poverty and likely zoonosis hotspots
Status quo brucellosis in Africa

- Over 800 studies
- Present cattle, camels, shoats, horses, pigs, dogs, poultry, wildlife
- Average prevalence 10.5% in animals and 8% in people
- Reduce production by 8% per annum
Expectations for the workshop

- Evidence on prevalence and impact of brucellosis
- Share experience on what works and what is to be avoided
- Provide forum for conversations, networks, publications, awareness
- Lead to plans, proposals and new investment in tackling brucellosis
Better lives through livestock
Animal agriculture to reduce poverty, hunger and environmental degradation in developing countries

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