OVERVIEW OF THE KENYAN POULTRY SECTOR & ITS HPAI STATUS

JOHN OMITI

KIPPRA
OUTLINE

• Motivation
• Context
• Livestock sector
• Poultry sector issues
  • Population
  • Distribution
  • Genotypes
  • Contribution
  • Linkage with other sectors
• Structure
• Production & consumption trends
• Value chains
• Research gaps
MOTIVATION

- 1st HPAI outbreak in China 1997
- Reported in 67 countries
- Endemic in Indonesia, Egypt & Nigeria
- Reported in Sudan – neighbour
- Kenya lies on wild bird migratory
- Informal cross-border live bird marketing
  ⇒ not whether but when disease will occur
- Need to understand poultry sector
- Identify HPAI “hot spots” entry points
- Identify key players – impacts & control
- Design of pro-poor mitigation strategies
CONTEXT

- Kenya – 35 million (est.) – 3% grw rate
- GDP – US$57.7 billion (2007)
- Average GDP/capita/yr – US$1,084
- Agriculture mainstay of economy
  - 25% (US$14.4 billion in 2007)
  - 70% of employment
  - 25% through linkages with other sectors
  - 75% of industrial raw materials
- Agric GDP growth rate – 2.4% to 4.6% btwn 2000 & 2006 respectively
LIVESTOCK SECTOR

- Contributes 12% to GDP & 38% to AG. GDP
- 11.5 million TLU valued at US$4.4 billion
- 84% of rural households keep livestock
- Most livestock keepers are in Eastern & RVP
POULTRY SECTOR
## POPULATION

<table>
<thead>
<tr>
<th>Poultry type</th>
<th>No. (millions)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigenous</td>
<td>31.4</td>
<td>84.1</td>
</tr>
<tr>
<td>Layers</td>
<td>3.1</td>
<td>8.3</td>
</tr>
<tr>
<td>Broilers</td>
<td>2.1</td>
<td>5.7</td>
</tr>
<tr>
<td>Others†</td>
<td>0.7</td>
<td>1.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>37.3</td>
<td>100</td>
</tr>
</tbody>
</table>

†Turkeys, ducks, guinea fowls, etc
POULTRY DISTRIBUTION

Central 26.9%
Coast 8.1%
Eastern 8.9%
Nairobi 7.3%
North Eastern 11.2%
Nyanza 3.5%
Rift Valley 33.6%
Western 0.4%
## GENOTYPES

<table>
<thead>
<tr>
<th>Type</th>
<th>Genotype</th>
</tr>
</thead>
<tbody>
<tr>
<td>Layers</td>
<td>Isa Brown, Ross</td>
</tr>
<tr>
<td>Broilers</td>
<td>Arbor Acres, Hybro, Cobb &amp; Hypeco</td>
</tr>
<tr>
<td>Type</td>
<td>Genotype</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Turkeys</td>
<td>Local: Small bronze &amp; buff type</td>
</tr>
<tr>
<td></td>
<td>Commercial: Large white &amp; buff</td>
</tr>
<tr>
<td>Ducks</td>
<td>Muscovy type</td>
</tr>
<tr>
<td>Guinea fowls</td>
<td>Helmeted type</td>
</tr>
</tbody>
</table>
POULTRY CONTRIBUTION

• 6.1% to livestock GDP
• 2.3% to AG GDP
• 0.7% GDP
• 3.7% of per capita annual animal protein consumption
• Employs 3 million people
• Socio-cultural roles
• 20 chickens per household
• Indigenous poultry - reared in rural areas
• Commercial – peri-urban & urban areas
SECTORAL LINKAGES

POULTRY SECTOR

- Feed industry
- Vet care providers
- Importers (Pre-mixes)
- Sports
- Manure
- Feathers
- Eggs
- Live birds
- Dairying
- Crop farming
- Fishing industry
- Food processors
  - Hotel industry
- Tourism
- Local & Central government

Income
<table>
<thead>
<tr>
<th>Attribute</th>
<th>Sector1</th>
<th>Sector2</th>
<th>Sector3</th>
<th>Sector4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production system</td>
<td>Industrial integrated</td>
<td>Commercial</td>
<td>Semi-commercial</td>
<td>Village/Backyard</td>
</tr>
<tr>
<td>Bird &amp; product marketing</td>
<td>Commercial processing</td>
<td>Commercial processing</td>
<td>Live birds</td>
<td>Little marketing; Live birds</td>
</tr>
<tr>
<td>Biosecurity</td>
<td>High</td>
<td>Moderate to high</td>
<td>Minimal to low</td>
<td>Minimal</td>
</tr>
<tr>
<td>Inputs</td>
<td>High use of external inputs</td>
<td>Moderate to high</td>
<td>Low</td>
<td>Little or none</td>
</tr>
</tbody>
</table>
Sector 1: Industrial integrated

- E.g. Kenchic Ltd
- Large-scale commercial
- Several thousand birds
- Upstream integration – DoCs production
- Downstream – contract farmers with 3-12000 birds + poultry meat outlets
- High bio-security measures at all points of production – slogan – “From farm to fork”
Sector 2: Hatcheries

- One found in Sector 1
- rear 10,000-12,000 layer breeders p.a.
- 10,000-18,000 broiler breeders p.a.
- Non-sector 1 hatcheries are not integrated
- High bio-security measures
## Sector 2: Hatcheries...

<table>
<thead>
<tr>
<th>Hatchery</th>
<th>Sector</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenchic</td>
<td>1</td>
<td>Nairobi</td>
</tr>
<tr>
<td>Muguku Farm</td>
<td>2</td>
<td>Kikuyu</td>
</tr>
<tr>
<td>Sigma</td>
<td>2</td>
<td>Nairobi</td>
</tr>
<tr>
<td>Kenbrid</td>
<td>2</td>
<td>Naivasha</td>
</tr>
<tr>
<td>Western Kenya</td>
<td>2</td>
<td>Webuye</td>
</tr>
<tr>
<td>Bixa</td>
<td>2</td>
<td>Mombasa</td>
</tr>
<tr>
<td>Lake Chick</td>
<td>2</td>
<td>Kisumu</td>
</tr>
<tr>
<td>Kim</td>
<td>2</td>
<td>Nakuru</td>
</tr>
<tr>
<td>Nyonjoro Nightngale (Turkey)</td>
<td>2</td>
<td>Naivasha</td>
</tr>
<tr>
<td>Maasai Ostrich Farm (Ostrich)</td>
<td>2</td>
<td>Kajiado</td>
</tr>
<tr>
<td>Ruaraka Duck Farm (Ducks)</td>
<td>2</td>
<td>Naivasha</td>
</tr>
</tbody>
</table>
Sector 3: Semi-commercial

- Dominated by small-scale producers
- 23,661 broiler & 11,311 layer farms (2006)
- Derive 73% of income from poultry
- 100-4,000 layers and 300-2,000 broilers kept
- Some are contract farmers with Kenchic Ltd
- DOC bought from hatcheries
- Contract farmers get DOC, vetcare & market from Kenchic Ltd
- Minimal to low biosecurity except Kenchic farmers – income & level of awareness
Sector 4: Village/Backyard poultry

• 1.5 million households – 31.4 million (2006)
• 20.8 chickens per household
• Subsistence-oriented
• Low-input – little or no purchased inputs
• Low-output – 1.6kg at 225 days; 3 clutches/yr 33-42 eggs/hen/yr; 40-49g/egg; 75-85% hatchability; 55% chick survival
• Low bio-security; chickens share houses with humans
• Transport by foot, bicycle or public vehicles
Production trends: 1. DOCs

- Kenchic
- Muguku
- Kenbrid
- Sigma
- Bixa
- Lake Chick
- Western

Population (Millions)

Hatchery
Production Trends: Live birds

<table>
<thead>
<tr>
<th>Year</th>
<th>Broilers (Millions)</th>
<th>Layers (Millions)</th>
<th>Indigenous (Millions)</th>
<th>Other (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>5.0</td>
<td>2.0</td>
<td>3.0</td>
<td>0.5</td>
</tr>
<tr>
<td>2002</td>
<td>5.0</td>
<td>2.0</td>
<td>3.0</td>
<td>0.5</td>
</tr>
<tr>
<td>2003</td>
<td>5.0</td>
<td>2.0</td>
<td>3.0</td>
<td>0.5</td>
</tr>
<tr>
<td>2004</td>
<td>5.0</td>
<td>2.0</td>
<td>3.0</td>
<td>0.5</td>
</tr>
<tr>
<td>2005</td>
<td>5.0</td>
<td>2.0</td>
<td>3.0</td>
<td>0.5</td>
</tr>
<tr>
<td>2006</td>
<td>5.0</td>
<td>2.0</td>
<td>3.0</td>
<td>0.5</td>
</tr>
</tbody>
</table>
Production Trends: Eggs
Production Trends: Poultry meat
Consumption, exports & imports

- Consumption:
  - 1.1 kg per capita p.a. – poultry meat
  - 37.5 eggs per capita p.a.

- Major exports:
  - DOCs – UG, TZ, ET, SO
  - Poultry meat – TZ, SU, ET, Ghana, RW

- Major imports:
  - Hatching eggs – US, UK, Holland, SA
  - DOCs - UG
VALUE CHAINS – COMMERCIAL CHICKENS & EGGS

- Chickens & Eggs
- Large-scale commercial farms
  - Hatcheries
  - Small scale farmers
  - Primary markets
- Secondary markets
- Tertiary markets
- Consumers
- Processors
- Exports
VALUE CHAINS – INDIGENOUS CHICKENS & EGGS

Legend:
- eggs
- live birds
- day old chicks

Hatchery → Market → Neighbor → Traders

Household
- eggs
- live birds
- Primary collectors

Local market
- Local kiosk, shops and small restaurants
- Primary egg collectors
- Neighbors

Rural consumers
- Secondary traders
- Whole sale market

Urban
- Whole sale market

Tertiary trader
- Small restaurants
- Kiosks and shops
- Urban consumer

Gifts – cultural rites
- Sports – cockerel fighting

Kuku group
- manure
RESEARCH GAPS

1. Economic & social impacts of HPAI in Kenya
2. Poultry policy development & implementation
3. Data issues – quality, dissemination
4. Margins & volumes at each stage of v/chain
5. Location of key players
6. Consumption & price data
7. Compensation strategies/mechanisms
8. Awareness of HPAI risk – consumers & producers
9. Role of institutions in governance/regulation
Thank You