Poultry market chains

Description, usage and recommendations

What is a poultry market chain?

- Diagram depicting components, structure and inter-relationships in a system
  - Started as an economic and managerial tool but has been adapted (partially) to disease control
- The poultry industry comprises a set of different but interlinked value chains
  - Visually explicit
  - Suited to communicating to experts or lay people
  - Enables policy analysis and choices between different options
  - Can represent different levels of detail

Map 6: Formal layer chain: Geographical dimension (Egyptian case)

Map 0: Entire (chicken) industry

Intended use of market chains (1)

- Evaluate strategies
  - Epidemiological and socioeconomic interactions
  - Maximize efficiencies and leverage
  - Guide policy to improve surveillance, control and rehabilitation
    - Cost effective surveillance
    - Culling, compensation and vaccination policies
    - Industry restructuring options
    - Biosecurity improvements
Intended use of market chains (2)

- Facilitate analysis
  - Where to outbreaks concentrate?
  - Where do risks concentrate?
- Effects of interventions
  - Impact on disease
  - Effects on industry
  - Effects on vulnerable groups
- Communication tool
  - Lay audience
  - Experts

Market chain subsets

- Sector subsets eg
  - Commercial layer
  - Commercial broiler
  - Farmed ducks
  - Village chickens
  - Song birds
    - (fighting cockerels; wild birds)
- Information subsets
  - Overview
  - Volume
  - Value
  - Relationships
  - Current control
  - Risks

Map 0: Entire (chicken) industry

Map 1. Formal layer chain: Volume

Map 2. Formal layer chain: Value

Map 3. Formal layer chain: Relationship
‘Frozen data’ a major weakness
• Restricts analysis
• Limits conclusions/recommendations
• Restricts modeling options
• Poor interface for risk analysis

But

“Active” data linkage

<table>
<thead>
<tr>
<th>Carcass/meat</th>
<th>Other</th>
<th>Other</th>
<th>Eggs</th>
<th>Live birds</th>
</tr>
</thead>
<tbody>
<tr>
<td>No coordination</td>
<td>Coordination</td>
<td>Same company</td>
<td>Independent farm</td>
<td>Contract farm (Plasma)</td>
</tr>
<tr>
<td>Slaughterhouse (large)</td>
<td>Supermarket</td>
<td>Restaurant</td>
<td>Hotel</td>
<td>Processing</td>
</tr>
<tr>
<td>Collector</td>
<td>Slaughterhouse (medium)</td>
<td>Traditional</td>
<td>Restaurant</td>
<td>Processing</td>
</tr>
<tr>
<td>Collector</td>
<td>Slaughterhouse (small)</td>
<td>Traditional</td>
<td>Restaurant</td>
<td>Processing</td>
</tr>
<tr>
<td>Collector</td>
<td>Parent farm</td>
<td>Traditional</td>
<td>Restaurant</td>
<td>Processing</td>
</tr>
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<td>Parent farm</td>
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</tr>
</tbody>
</table>

Summary: Potential usage

• Strengths
  - Multidisciplinary
  - Governance
  - Inter-linkages
  - Leverage
    • Trickle down effects
  - All players represented
  - Detail can vary
  - Excellent communication tool
  - Attractive

• Weaknesses
  - Can be ‘busy’
  - Lack detail
  - Proliferation of maps (25+)
  - Not all linkages are explicit, or easy
  - Must still use other techniques (C-B etc)
  - *Does not easily address risk

Where to now?

• Three market chain analyses in Indonesia
  - Bali (2007)
  - Medan (2007)
  - Jakarta (2008)
• Same basic model, but variable application
• How best to use the data?
  - Local usage for specific purposes
  - Mainly demographic usage
• Attempt ‘higher usage’, with ‘active data’
  - Risk
  - Socioeconomic effects
  - Strategy and policy

Thank you