Issues in livestock activity data

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• Common challenges & options
  • Population data
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1. Relevance of livestock activity data

- Livestock emissions account for about 66% of Agriculture emissions
- A major emission source in many developing countries in particular
1. Relevance of livestock activity data

• Tier 2 is much more useful for tracking effects of policies and measures
1. Relevance of livestock activity data

~ 100 developing countries include livestock emissions in their INDCs, but <30 use a Tier 2 approach. Activity data is perceived to be a major challenge.
2. Common challenges

Population data

Data availability

• Total populations in many developing countries
  • census infrequent
  • annual stats only for some production systems
• Sub-category populations in many countries
• Incomplete time series

Methods challenges

• Data collection in mobile livestock systems
• Populations in commercial sub-sectors (e.g. feedlots)
• Defining dairy cattle consistent with IPCC Guidelines and country circumstances
2. Common challenges

Animal performance data

<table>
<thead>
<tr>
<th>Metric</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Weight (kg)</td>
<td>Live weight for each animal type</td>
</tr>
<tr>
<td>Av. daily weight gain (kg)</td>
<td>Daily weight gain for growing animals</td>
</tr>
<tr>
<td>Milk yield (kg)</td>
<td>Annual average daily milk yield</td>
</tr>
<tr>
<td>Fat content (%)</td>
<td>Fat content of milk</td>
</tr>
<tr>
<td>% giving birth</td>
<td>% of cows giving birth</td>
</tr>
<tr>
<td>Hours of work</td>
<td>Annual average daily work hours</td>
</tr>
<tr>
<td>%DE</td>
<td>Feed digestibility</td>
</tr>
<tr>
<td></td>
<td>- Diet composition</td>
</tr>
<tr>
<td></td>
<td>- Chemical composition of feed</td>
</tr>
<tr>
<td>Ym</td>
<td>% of gross energy lost as methane</td>
</tr>
</tbody>
</table>

Data challenges

- Availability (esp. diet composition, DE%)
- Representativeness
- Cost-effective data collection methods
2. Common challenges

Manure management

Data challenges

- Availability: % of manure managed in different systems
  - Manure flows through different systems
  - Residence times in each system
- Rarely incorporated in national statistics in developing countries
3. Resources for support and future needs

Options:
- Making the best of available data
- Proxies
- Gap filling methods
- ...
- Useful tools
- Worked examples
- Methodological guidance

See also www.agmrv.org
3. Resources for support and future needs

Key future needs

• Cost-effective data collection methods
  • High-resolution, accurate data is costly
  • What is the uncertainty associated with ‘second-best’ data collection method (e.g. household surveys)
• Guidance on data collection, e.g. for manure management systems
• Making available data accessible, e.g. diet composition and feed quality data

At country level:
• Collaboration to improve livestock data for stakeholders’ multiple data needs
Key points

• Common demand to improve livestock GHG inventories in many countries

• Need for user-oriented innovation & guidance for common activity data needs

• Better livestock data is not only useful for GHG inventories – let’s work together on it!