Harnessing the potential of livestock to improve nutrition of vulnerable populations: Technical guidance for program planning

Paula Dominguez-Salas
Land O’Lakes/ILRI Animal Source Foods for Nutrition Impact workshop, Nairobi, 4 May 2017
How can livestock contribute to nutrition?

Potential resources: environment, technology, people

Quantity and quality of actual RESOURCES human, economic & organisational and the way they are controlled

Inadequate maternal & child CARE practices

Poor water, sanitation & inadequate HEALTH services

Inadequate maternal & child CARE practices

Production, processing and marketing of nutritious foods (all year round?)

Insufficient access to SAFE AND NUTRITIOUS FOOD

Inadequate dietary intake

Malnutrition, death & disability

Inadequate maternal & child CARE practices

Income used for health and hygiene

Agriculture related diseases

Time and physical activity (Labor saving technology?)

Natural and human resource management

Source: UNICEF
West Africa ‘Livestock and nutrition’ initiative

- Growing interest on ASFs and livestock interventions (UN agencies, donors, NGOs, etc.)
  - ECHO funded initiative
- Organisation of a regional workshop on ‘Livestock, livelihoods and human nutrition’, for program implementers
  - Burkina, Chad, Mali, Mauritania, Niger, Senegal
- Objectives
  - Capacity building and sensitisation on Nutrition-sensitive agriculture and linkages between livestock interventions and human nutrition
  - Discuss current barriers and challenges identified in West Africa
  - Highlight lessons learnt from institutions
  - Promote engagement among sectors, implementing partners and with academia
Process in West Africa

**Literature review**

**Scoping study**

→ Identification of key topics for discussion and training, and relevant experiences

**Workshop**

**Follow-up**

→ Based on country action plans developed during the workshop
Perceptions of livestock–Nutrition linkages

Do you think that integrating nutrition into livestock interventions is perceived as a priority for the livestock sector (n=40)?

There is a disconnect between livestock interventions and human nutrition in West Africa and Sahel

Do you think nutrition experts perceive livestock interventions and ASF consumption as a priority to tackle malnutrition (n=39)?

Source: Dakar workshop
HARNESSING THE POTENTIAL OF LIVESTOCK TO IMPROVE NUTRITION OF VULNERABLE POPULATIONS -Technical guidance for program planning-

Paula Dominguez-Salas (RVC/ILRI) & Domitille Kauffmann (FAO)
• Assessing the local nutritional context

• Explicit nutrition-related **objectives** and **activities**

• A nutrition-sensitive household targeting strategy

• Targeting women for livestock activities
General considerations for program design II

- Understanding the ‘livestock to nutrition’ impact pathways
- Nutrition-related indicators
- Do no harm principle
Examples of indicators

- Production diversity
- Household food security
- Knowledge / attitudes
- Target food consumption
- Individual diet diversity
- Infant and young child feeding
- Food prices and availability
- Target nutrient consumption
- Consumption / Expenditure
- Anthropometry / biomarkers
- Energy expenditure
- Time use
- Women’s Empowerment in Ag Index

Source: Randolph (2007)
Example of indicator (women diet diversity score)
Baseline for livestock project

“Using this indicator allows measuring direct impact of livestock intervention on ASF consumption (milk, meat,...), both in quantity and quality and that we realized how important it is to incorporate well defined measurable nutrition objectives from the early design of the intervention.” M. Chapon, AVSF

Source: AVSF project in Mopti, Mali
Specific considerations related to livestock production

- Choices of species
- Seasonal variations in livestock production
- Animal health interventions
Specific considerations related to the livestock value chains

• Business approach

• Value chain analysis

• Use of livestock by-products

• Preservation and processing techniques
<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
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<tbody>
<tr>
<td>Drying</td>
<td>Partial/total elimination of water contained in fresh meat, combining temperature, humidity and ventilation, to preserve meat throughout the year. The meat can be consumed raw or rehydrated and cooked in stews.</td>
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<tr>
<td>Smoking</td>
<td>Direct/indirect exposure to smoke from certain plant- or wood-burning, delaying ASF degradation and giving attractive taste. The meat must be finely sliced to ensure uniform smoking. The phenolic components prevents insects.</td>
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<tr>
<td>Salting</td>
<td>Salt (possibly with spices) addition, frequently combined with drying, cooking or smoking. Two types: dry salting (meat, either in a block or in fine slices, is rubbed with a dry salt mixture) or wet salting (meat is marinated within water with the salt mixture, i.e. brining, during a variable length of time).</td>
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<tr>
<td>Fermentation processes</td>
<td>Preparation of sour milk, promoting growth of lactic acid-fermenting bacteria. These bacteria convert sugars in lactic acid, which in turn decrease pH and produce antibiotic components, thus preventing the development of other undesirable bacteria. In addition, fermentation improves the organoleptic characteristics of the product and increases the digestibility of the milk. The addition of fermented bacteria is often preceded by heat treatment.</td>
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<tr>
<td>Other</td>
<td>Butter- and cheese-making; pasteurised, condensed or powder milk; home-preparation of canned meat, etc.</td>
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</tbody>
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Nutrition education and behaviour change communication

• Nutritional value of ASF
• Lift taboos and diversify ASF consumption
• Food hygiene and safety at household level
• Broader target of nutrition education
• From producers to consumers
Key messages

• There is not a “fit all sizes” solution and design has to be context-specific.
• Improvements in nutrition via livestock are neither automatic, nor quick or easy, but it is a good opportunity
• Nutrition built in since the design stage.
• It can be tackled at different levels/scales
• Need to assess impact and compile/disseminate good practices/lessons learnt
• Need to strengthen links between researchers/practitioners to build the needed evidence for scaling up
• Need to promote dialogue between sector experts and organisations -> delivery platforms
Some useful resources in AgriNut

- LSHTM online module on agriculture, nutrition and health: [http://www.lshtm.ac.uk/study/freeonlinecourses/agriculture/index.html](http://www.lshtm.ac.uk/study/freeonlinecourses/agriculture/index.html)
- USAID online course on nutrition-sensitive agricultural programming: [http://agrilinks.org/training/nutrition-sensitive-agriculture](http://agrilinks.org/training/nutrition-sensitive-agriculture)
- FAO Capacity development modules on:
- FAO Compendium of indicators for nutrition-sensitive indicators. [www.fao.org/3/a-i6275e.pdf](http://www.fao.org/3/a-i6275e.pdf)
- Field exchange special on ‘Nutrition-sensitive programmes’ ([www.ennonline.net](http://www.ennonline.net))
- Academy Annual Conference IMMANA/LCIRAH & A4NH
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