Smallholder dairy farming in Tanzania: Farming practices, animal health and public health challenges and opportunities

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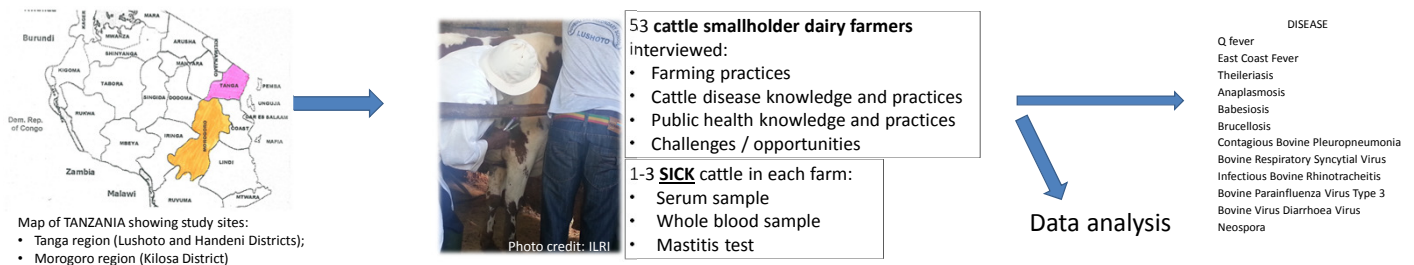
Introduction

Livestock farming efficiency can be conceptualized as producing the biggest yields with the lowest inputs. The predominantly large extensively raised herds in East Africa are challenged to achieve appropriate yields and smallholding zero-grazing farming is looked up to as an alternative that can provide greater yields and more sustained incomes.

In this type of farming system, farmers keep small numbers of improved (crossbred) animals that have the potential to produce better yields, but are also more demanding in terms of environment and nutritional requirements, among others. In addition, the system presents many challenges, and the appropriate context and infrastructure need to be available to ensure farmers are supported with the necessary services and inputs that will help maximize the benefits and outcomes of this type of farming.

Materials and methods

Project objectives: (i) describe animal farming practices; (ii) assess cattle disease situation and management; (iii) assess farmers' knowledge and practices towards public health protection; (iv) identify animal and public health challenges and opportunities for improvement.

Map of TANZANIA showing study sites:
- Tanga region (Lushoto and Handeni Districts);
- Morogoro region (Kilosa District)

Photo credit: ILRI

53 cattle smallholder dairy farmers interviewed:
- Farming practices
- Cattle disease knowledge and practices
- Public health knowledge and practices
- Challenges / opportunities

1-3 SICK cattle in each farm:
- Serum sample
- Whole blood sample
- Mastitis test

Data analysis

DISEASE
Q fever
East Coast Fever
Theileriasis
Anaplasmosis
Babesiosis
Brucellosis
Contagious Bovine Pleuropneumonia
Bovine Respiratory Syncytial Virus
Infectious Bovine Rhinotracheitis
Bovine Parainfluenza Virus Type 3
Bovine Virus Diarrhoea Virus
Neospora

Results

SMALLHOLDER FARMING SYSTEM
- Predominant in areas with high vegetation/rainfall (feeds availability)
- Mean herd size 4 (range 1-12)
- **Mean=1.1 lactating cows (range 1-4)**
- Approx 80% MIXED FARMING (crops + livestock). 64% kept other livestock.

ANIMAL HEALTH
- Very **limited knowledge** of animal disease (most farmers unable to name a disease)
  Most reported disease – East Coast Fever
- Farmers reported not applying health checks when buying/selling animals
- Half of farmers do tick control, but NOT with appropriate frequency.
- [Lab results not yet available]

MILK PRODUCTION
- Most lactating animals subclinical mastitis
- Farmers unable to recognize udder with mastitis
- **Milk from mastitic cows regularly harvested, marketed and consumed**
- Limited knowledge on zoonotic diseases and public health: no prevention measures being applied.

Research into use

- Farming management practices are acceptable, and farmers proved knowledgeable about basic concepts of livestock farming.
- Important lack of knowledge and awareness among farmers on how to recognize, treat and prevent common cattle diseases. This compromises the farmers' ability to fight livestock disease and, ultimately, the **business profitability**.
- Farmers limited knowledge on zoonotic diseases suggests that practices to limit arrival of zoonotic pathogens in the milk and to protect farmers of directly transmitted zoonosis are not commonly used.
- Collective action (e.g. farmers groups, HUBs) are being implemented in the area to support farmers in the aspects above.

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