

Livestock Trade:

Insights and Recommendations



FEED THE FUTURE INNOVATION LAB FOR LIVESTOCK SYSTEMS
University of Florida
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OUTLINE

Introductions

Insights

- Feed supply and demand
- Livestock trade networks
- Factors affecting trade
- Markets for Animal-Source Foods

Recommendations

- People, places, institutions

FEED THE FUTURE INNOVATION LAB FOR LIVESTOCK SYSTEMS

Vision: To sustainably intensify livestock production to improve the nutrition, health, incomes and livelihoods of vulnerable people

Scope: Manage 45 field-to-fork research for development projects in 8 countries



Motivation: Animal-source foods (ASF):

- Are the best, high quality nutrient-rich food for 6-23 month olds (WHO, 2018)
- 59% of children are not fed much-needed nutrients from ASF (UNICEF, 2020)

PREMIER PARTNERSHIP PROJECT

The LSIL is the first project funded by the USAID – Bill & Melinda Gates Foundation strategic partnership.

The EQUIP project leverages USAID funds that established the Livestock Systems Innovation Lab.



BILL & MELINDA
GATES foundation

CONTRIBUTORS TODAY



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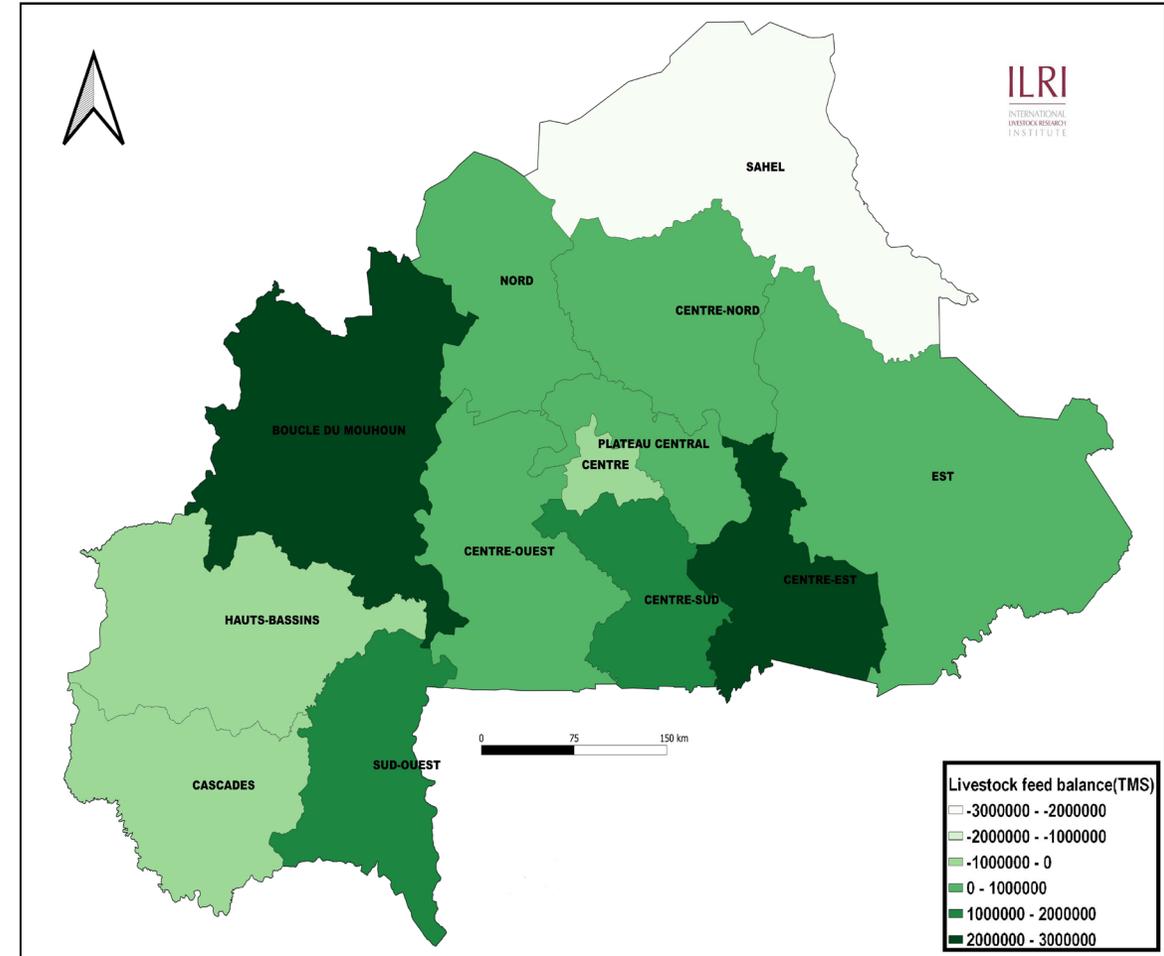


**Dr. Olivier Walther,
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Founder, African Networks Lab

FEED SUPPLY & DEMAND AFFECT TRADE IN ANIMALS AND FEED

- Livestock in most LMIC are kept in pasture-dependent extensive systems
- Needs-based sales rather than market-oriented production
- Livestock movements follow pasture and water availability in pastoral systems
- Pasture availability depends on rainfall creating shortage periods



Livestock feed balance in Burkina Faso: From high surplus (dark green) to severe shortage (white)

OPPORTUNITIES

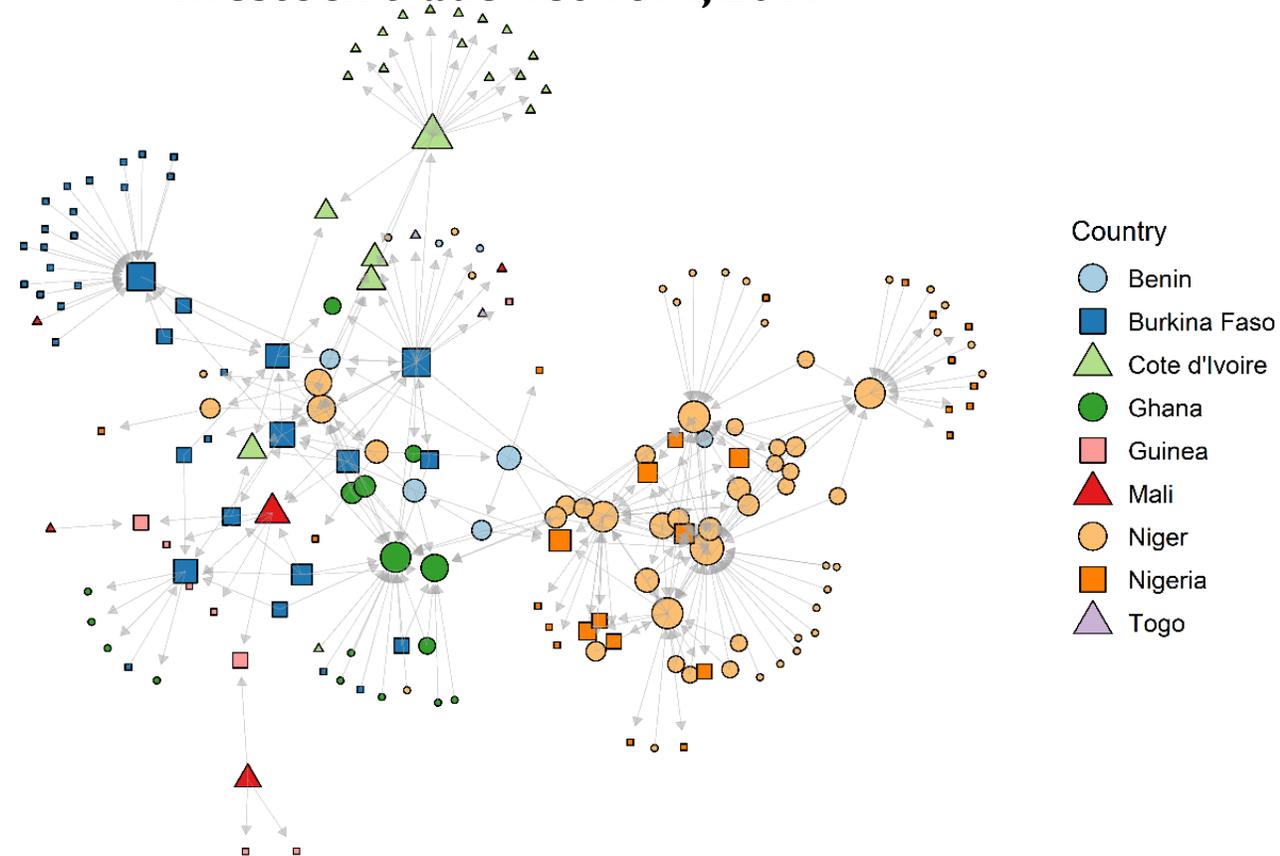


- Tailor market development support to producer types
- Increase feed production with drought tolerant hybrids in the Sahel Zone
- Increase feed conservation and transport from other areas to the Sahel Zone.
- This can create business opportunities for smallholders especially women and youth

LIVESTOCK TRADE NETWORKS IN WEST AFRICA

- Two-thirds of livestock cross borders
- Routes are well established
- Markets are regional
- Few key hubs control a lot of trade; losing few of these can create major disruptions
- External shocks cause major disruptions (e.g. Naira devaluation; COVID-19 movement restrictions)

Markets in the West African livestock trade network, 2019



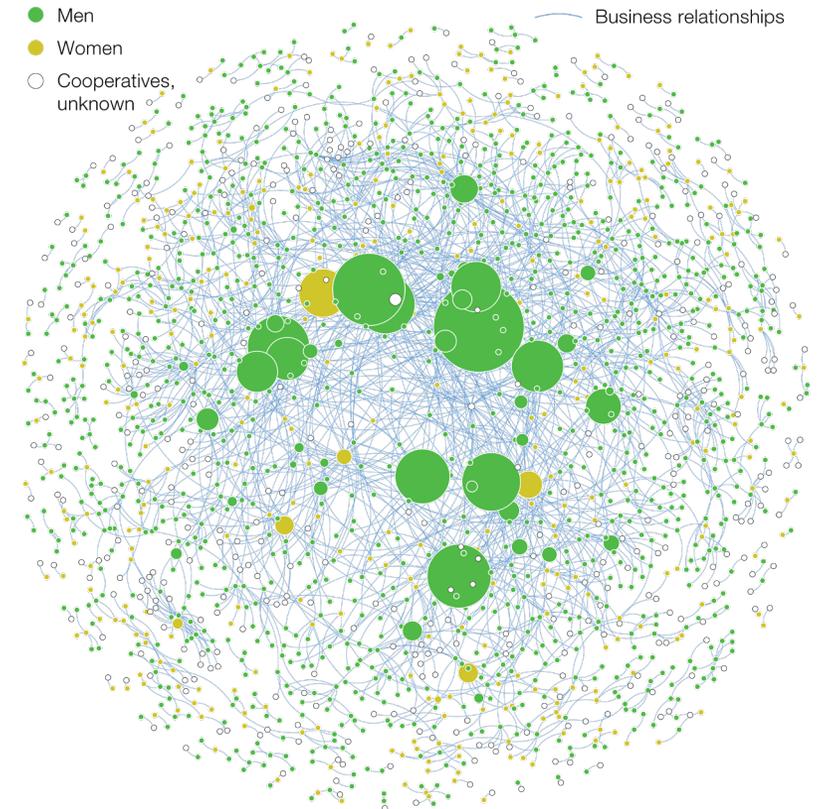
Node size proportional to no. of trade partners

FACTORS AFFECTING TRADE:

I. GENDER

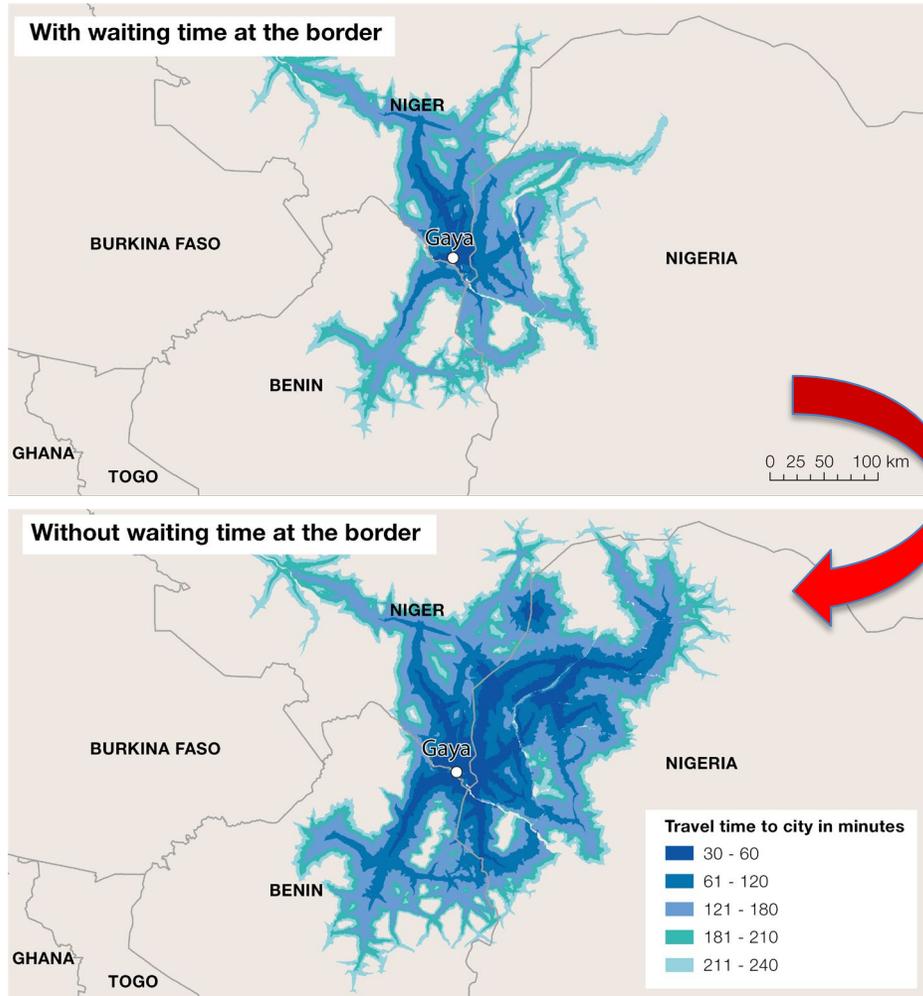
- In supply chain networks, women are often marginalized
- Their profit is determined by their structural position within the value chain
- Most women have low levels of social capital
- The most prosperous entrepreneurs are those who have established numerous ties within and beyond their community

Individuals in the rice supply chain between Nigeria, Niger and Benin in 2018 by gender



Node size is proportional to brokerage capacity of actors (betweenness centrality). The larger the node, the more central the actor.

FACTORS AFFECTING TRADE: 2. BORDERS



- With fewer delays at the border and fewer checkpoints, regional products can be more affordable, and cities become more accessible
- Accessibility can be increased by up to 30% if wait times at the border are reduced by an hour
- Accessibility can be increased by up to 40% if there are no checkpoints

FACTORS AFFECTING TRADE:

3. INFORMATION AND COMMUNICATION TECHNOLOGY

Can specialized ICTs (i.e., apps) improve cooperative performance?

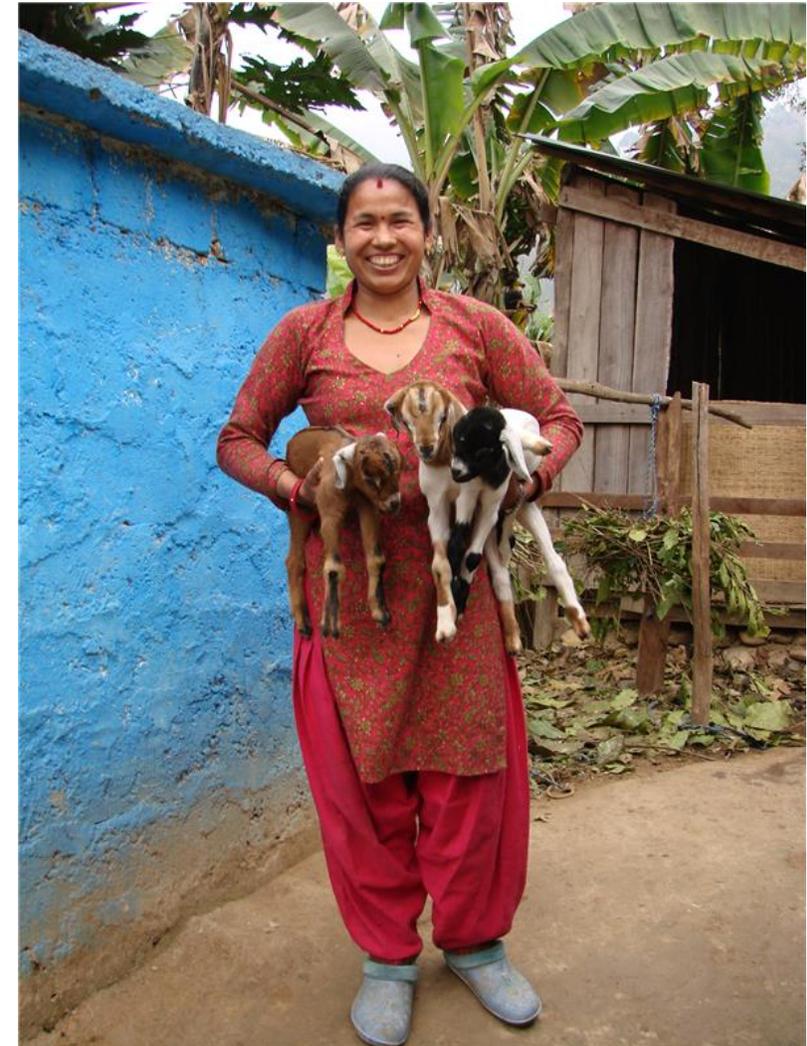
1. Designed an SMS-based Android marketing app for cooperatives in Nepal
 - allows cooperatives to manage inventory data, making it possible to forecast supply and coordinate collective sales
2. Piloted a website to
 - help traders find cooperatives, reducing search costs.

RESULTS

Uptake of the app was too low to evaluate any effects through the randomized control trial.

Possible reasons:

- Unwillingness to try again after initial technical issues
- Limitations of SMS
- Insufficient incentives for members of self-help groups (SHG) collecting inventory data
- Lack of support on the ground



FUTURE DIRECTIONS

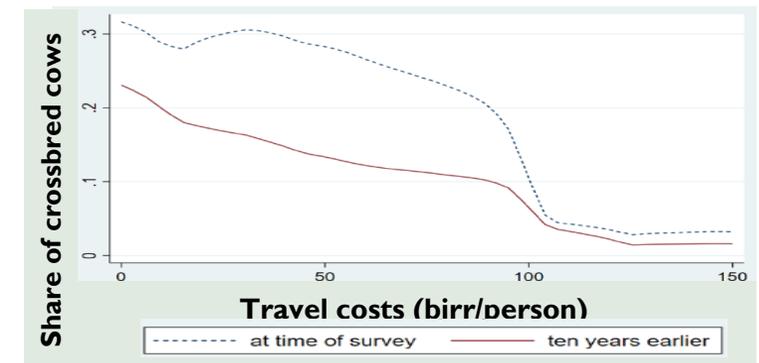
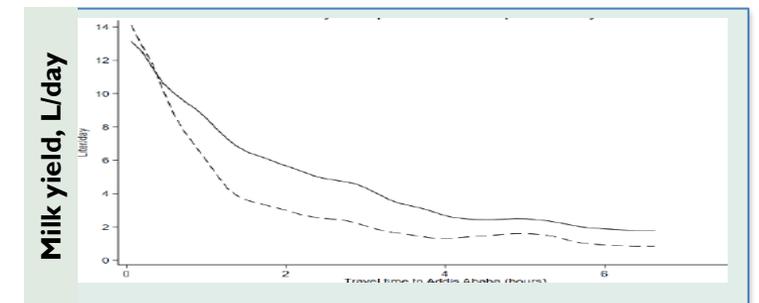
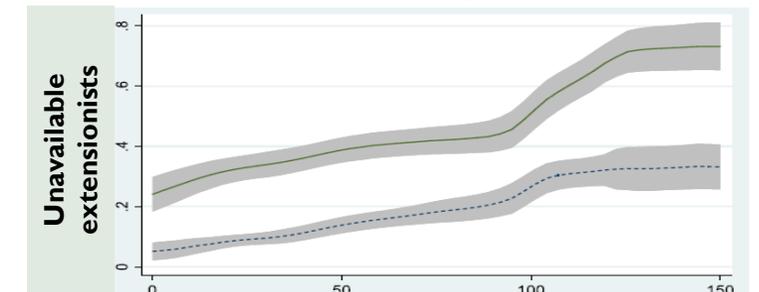
- **Technological limitations can be overcome**
 - Limitations of SMS can be resolved by using an internet-based app
 - Usage will increase as network coverage becomes better and more affordable
- **Proper incentives are needed**
 - Incentives for SHG managers could improve willingness to collect inventory data
 - Mobile airtime in exchange for sending in inventory data, commission offered whenever members sell through the cooperative
 - SHG managers could become “marketing agents”

MARKETS FOR ANIMAL-SOURCED FOODS

Key findings in Ethiopia

- ASF expenditures increased by 50% from 2007 to 2016 but ASF prices increased by up to 62%
- Value chain participation of small and remote farms is disproportionately low
- No price premiums for the adoption of improved practices
- The pandemic starkly decreased demand for raw milk not pasteurized / powder milk

Farm location affects milk yield and trade



RECOMMENDATIONS

INVEST IN PEOPLE

Including marginalized actors who do not have access to the core of supply chain networks, such as women

Enable

- access to finance
- education, entrepreneurship, professional training, marketing skills
- information exchange and networking



INVEST IN PLACES

Including marginalized places that have long been neglected

Consider investing in:

- market infrastructure, including border markets, and roads that connect markets
- secure overnight truck areas
- watering facilities
- abattoirs & cold storage



INVEST IN INSTITUTIONS

By reducing restrictions to flows of goods, people, ideas and capital

- Support public-private partnerships
- Strengthen producer and trader organizations
- Support cross border advocacy efforts (e.g., by traders' associations)
- Continue to improve ICT applications to optimize livestock demand/supply (including incentives for intermediaries)



TAKE HOME MESSAGES

- Livestock trade is critical; addressing bottlenecks could generate more income
- ICT can improve livestock marketing, but success will depend on stakeholder buy-in (“*can it save me time, money?..*”)
- Underlying infrastructural factors will need to be addressed to reduce transaction costs
- The Livestock Lab partners are highly capable to address the research and private sector engagement needs highlighted
- UF’s Sahel Research Group can enhance the LSIL’s work through research on the political, social, religious, economic, environmental and cultural dynamics

REFERENCES AND RESOURCES

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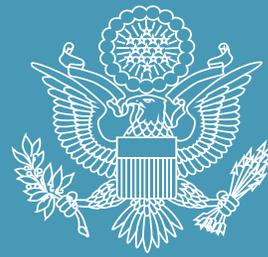
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Disclaimer

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