Sustainable Intensification Pathways for Dairy Farming in Kenya

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1 Research questions

In dairy intensification processes, what are the:

- ⇒ Sustainable development pathways and sustainability indicators?
- ⇒ Strategic management decisions that farmers make in the face of many opportunities and constraints?

2 Findings

- ⇒ Sustainability indicators identified are land use intensity, access to external inputs & services and markets where milk is traded.
- ⇒ The strategic management decisions that farmers make reflect their dairy intensification levels.
- ⇒ The decisions concern: whether or not to reduce cost of production, build entrepreneurial skills, participate in processed milk supply chains, and rely on traded feed and fodder that includes a trade-off in manure accumulation on the farm.

3 Methodology

- ⇒ MESMIS framework approach in case studies, interviews with value chain actors and literature reviews
- ⇒ SWOT analysis of sustainability indicators and alternative sustainable pathways

Results Intensification **Alternative Strategic Decisions to Sustainable Pathways Sustainability Concerns Pathways** Reducing cost of production or Local raw milk chains Economic issues Producing without sensitivity to production costs Building entrepreneurial skills or Participating in inclusive cooperative society development **Sustainable Dairy** Bulk processed milk Societal issues Intensification supply chain Participating in bulk processed milk **Pathways** supply or Innovating milk marketing for local market Niche chains for high Relying on traded feed and fodder, with trade quality dairy products off of manure accumulation on the farms or ——— Environmental issues Relying on local nutrient balanced systems













5 Conclusions

- ⇒ Large differences in dairy production intensification process resulting from a variety of farming systems are evident.

 Land pressure in the highlands and climate effects in the coastal lowlands are key production limiting factors.
- ⇒ The strategies for sustainable intensification differ between the levels of intensification with distinct features being land use intensity, access to external inputs and services, and the markets where milk is traded.
- ⇒ Farmers choose their dairy intensification pathway from three alternatives on the criteria of trade-offs between economic, social and environmental sustainability issues of concern to them.





