

Factsheet final findings Global Challenges Programme Call 3



Assessing and supporting Dairy Input & Advisory service Systems (ADIAS) in Ethiopia and Kenya

Summary

The ADIAS project looked at dairy input & advisory configurations in Kenya and Ethiopia. In both countries, a transition to more farmer participation in markets is needed in order to eke out a living from shrinking farms and, of course, to feed the nation. While Kenyan farmers benefit from pluriform service provision models, upgrading such services in Ethiopia is hampered by limited space for private service providers, but some promising examples exist. In both countries it is clear that the process of 'semi-subsistent farmers supplying to local markets' transitioning to 'market-oriented farmers supplying to urban markets' may take decades when market and context conditions remain sub-optimal. The project found that farmers closer to local service centres were able to specialize more into dairy, by increasing the use of external inputs and services, as well as increasing milk production and sales per hectare and per cow. Large differences do exist though between farms, villages, and dairy clusters. Some general issues surfaced, including high costs of production, large seasonal variation, and poor quality control of inputs and milk. These result in an unattractive product offer to consumers. To engage more farmers profitably in production of more and safer milk for urban consumers, market and public actors will need to reconfigure their services to address the specific situations of these farmers.

Final research findings

The interdependencies between farming systems, markets, and contexts strongly influence the appropriateness of particular service configurations. Farmer participation in input and output markets, and the service models they are part of, is strongly influenced by their proximity to local service centres (for inputs, services, sales). Due to more conducive institutional and market conditions, farmers in Kenya practice more intensive dairy and market twice the volume of milk per cow and per hectare as compared to farmers in Ethiopia. Prices of dairy inputs and services for farmers in different service configurations in Kenya differ across configurations (processor-led, cooperative, and spot market), but farmer margins per litre of milk do not. Upgrading of farming systems, markets, and enabling context needs to happen concurrently. Assessment of different models for provision of inputs and services showed that the effectiveness of the models often is limited by weak entrepreneurial skills and by limited business results. These then reduce the extent to which the model is able to meet farmers' needs. Discussions with farmers increased their awareness on pros and cons of different service configurations, offering information to improve their choices of technologies & practices. Project findings were included in training activities of partners, in both training courses and staff training, and were used to engage with dairy policy makers.

Final outcomes achieved

Project insights enabled input and service providers to improve their advice to dairy farmers. Adaptation of their service models makes them more attractive to their farmer-clients and enables these farmers to increase marketing to more sophisticated markets. Their staff requires adequate communication skills to interact with farmers. An example of a successful adaptation comes from an innovative model in the 2Scale project in Ethiopia that ADIAS studied. Dairy farmer Minishu, 36-year old mother of six, explains: "I have one hectare of land and twelve cattle, of which three are lactating cows. Before I started using concentrate dairy feed supplied through Family Milk, I was getting very low milk yields. After I joined the 2Scale dairy feed advancing model, I received trainings on dairy husbandry, feeding, improved forage production, milk hygiene and dairy business. Then I started to feed my cows. I increased milk yield by 5-6 litres per cow per day. The milk quality also got better. Currently I am supplying 20 litres per day to Family Milk and get 240 Birr (7.5 Euro) per day. I still plan to increase my milk production more by applying all the knowledge

I acquired and by the improved feed. My concern here is the increase in feed prices, with little change in milk price. That is a threat for the use of new practices.”

An example of project spill-over comes from a Dutch dairy project leader in East Africa: “I recently ran into your article in Sustainability and I really love it! Your analysis framework in particular is well thought out and the description of the situation very apt. [It] also seems to be a very good tool for describing the changes that are taking place within the dairy sector [...]. I want to use it for the final report of our project. [...]. In discussion with the embassy, we came to the conclusion that the Dutch Ministry of Foreign Affairs does not really have indicators to "measure" sector transformation [...]. So I want to try to use yours to develop realistic indicators.”

Message to

A) Actors from private sector:

- To increase milk supply and market participation of Ethiopian dairy farmers, private companies should invest in more sophisticated input and service provision models, in particular for artificial insemination, veterinary services, and advisory services. They need to engage with policy makers to allow more pluralistic input and service delivery systems.
- The dairy feed advancing model can be used by more dairy processors in Ethiopia, and can be extended to other inputs and services.

B) Civil society and practitioners organizations:

- Interventions to connect farmers to markets need to take into account spatial variation in market access, not just variation in farmer resource levels.
- Dairy cooperatives may consider to embed service companies, such as youth service provider enterprises (SPEs) in their business development plans, as being complementary to or part of their extension system, to enhance member access to fodder. When establishing SPEs, a balance is needed between vocational/technical skills and entrepreneurial skills training, in order for them to orient themselves toward agri-businesses from the onset.

C) Policy makers:

- A feed quality assurance system can support various private sector-led governance mechanisms including industry-inspired quality and safety standards. Adequate stakeholder coordination is required in maintaining quality standards.
- In both countries dairy development objectives are centred around poverty alleviation, which aligns well with current policy interests. Policy makers and cluster development planners should carefully design sustainable intensification pathways for competitive commodities, considering: (1) enabling a larger proportion of resource-poor farmers to participate in markets; (2) enabling private input and service provision models that can last; and (3) pay more attention to food safety and climate smartness of agricultural development.

Knowledge products

- [Effects of proximity to markets on dairy farming intensity and market participation in Kenya and Ethiopia, Agricultural Systems.](#)
- [Intensification and Upgrading Dynamics in Emerging Dairy Clusters in the East African Highlands, Sustainability.](#)
- [The dairy feed advancing model – a value chain innovation in the Ethiopian dairy sector. Practice brief.](#)
- [Dairy feeds quality standards enforcement - Challenge in Kenya: perception of stakeholders. Policy brief.](#)
- C. W. Kilelu, J. v. d. Lee, J. Koge and L. Klerkx, 2021. Emerging Advisory Service Agri-enterprises: A Dual Perspective on Technical and Business Performance, *The Journal of Agricultural Education and Extension RAEE*, DOI: 10.1080/1389224X.2021.1888759.

Knowledge networks

Research partners are active in various dairy sector networks in Kenya and Ethiopia, in which private companies, knowledge institutes and NGOs collaborate. Through practice and policy briefs, direct feedback to private sector partners and farmers, and presentations in conferences and seminars, the team has shared study findings with stakeholders.

Co-creation

Next to consortium partners, the main stakeholders involved in processes of co-creation, research uptake and knowledge sharing were the private sector partners (the Kenyan dairy processor NKCC and the Ethiopian feed processor AKF), other enterprises involved in experimental models, and interviewees (chain actors, farmer organizations, farmers and development projects). This diversity of actors enabled the project to look closely at the interlinkages between farms, input and service providers, and dairy processors, and to study the internal dynamics of dairy farming systems in various localities as well as at interdependencies between dairy farming systems, dairy value chains, dairy clusters and the wider food system.

Consortium partners

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- [African Centre for Technology Studies - ACTS](#)
- [Wageningen UR Livestock Research](#)
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