

Institutional and technological innovations to transform informal milk markets in the eastern and central Africa region: preliminary lessons from action research

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**Abstract**

This paper discusses preliminary lessons from action research to promote institutional and technological innovations aimed at transforming informal milk markets in selected East and Central African countries. Regulations affecting the dairy sectors in five countries were reviewed and factors limiting cross-border dairy trade documented. Dialogue and action among dairy experts and regulatory authorities in four selected countries was then undertaken to build consensus in developing a regional guideline and curriculum to certify informal dairy traders, based on mutually agreed minimum standards of competence to ensure cross-border recognition of certification by counterpart regulatory authorities and freer trade. The consultative process has fostered sharing of valuable experiences in improving the quality of informally sold milk, and has helped influence changes in mindset among regulatory stakeholders, who are now more willing to support the development of informal milk markets. Generic work plans will be developed to facilitate the required actions.

Key words: informal milk markets; East and Central Africa; action research; dairy regulation; policy and institutional environment

## Introduction

Inappropriate regulations or the poor implementation of well intended ones have long been identified as the most important factors constraining enterprise development in developing countries. In agricultural markets, traditional or informal dairy markets perhaps suffer the greatest burden of stifling regulations or neglect due to perceived quality and safety concerns. This has been the case in eastern and central African countries where, despite the fact that informal small-scale milk traders handle over 85% of marketed milk, they have long been ignored or discouraged by public policy largely due to the safety and quality concerns. Private firms with vested interests in milk processing and packaging also actively promote this perception without sufficient scientific evidence, thereby compounding the stifling of small-scale milk traders. Furthermore, the capacity of responsible national authorities to directly regulate the dairy sector is largely inadequate.

Comprehensive dairy systems research in Kenya and Tanzania ([www.smallholderdairy.org](http://www.smallholderdairy.org); Omore *et al.*, 2004) and ensuing wider consultations in the region by the Eastern and Central Africa Program on Agricultural Policy Analysis (ECAPAPA) of ASARECA identified removal of policy barriers against informal milk traders as key to the continued development of respective dairy sectors. The evidence generated further demonstrated that bridging the regulatory gap between informal and formal markets is feasible without endangering public health. One alternative and potentially effective mechanism for achieving this is pro-active engagement of the traders and promotion of certification schemes involving training in milk quality control, and enforcing the use of appropriate milk handling equipment, through business development services (BDS).

The rationale for accommodating and improving informal milk markets is as follows: They flourish because they supply cheaper milk for poor consumers, satisfy traditional tastes and offer better prices for milk producers ([www.smallholderdairy.org](http://www.smallholderdairy.org)). These traditional milk

markets also contribute significantly to income and employment generation, and to the nutrition of millions of poor consumers who cannot afford to pay higher prices of formally processed and packaged milk products. If encouraged, these markets can form a solid bedrock for growth in dairy industry in the region.

Based on this, ECAPAPA and ILRI have in the past undertaken relevant research and promoted institutional environments in which small milk traders in the eastern and central Africa (ECA) countries can market their milk more efficiently within individual countries and across their borders. This engagement also employs action research to monitor selected activities in order to learn lessons for wider application in the region. The preliminary lessons learnt thus far from the processes are presented and discussed.

### Methodology

A policy change cycle involving first, a data collection and analysis phase and subsequently, dialogue and action phase was followed. The first phase conducted in 2004, involved a comprehensive review of policies, rules and regulations affecting the performance of the dairy sub-sectors in five selected countries in the region and documented factors limiting domestic and cross-border movement of dairy inputs and products. During 2005, a second phase aimed to promote dialogue and action among scientists and dairy sector development and regulatory agencies, to realize pro-poor institutional reforms in milk marketing by small-scale milk traders in the region.

The dialogue was promoted by engaging national experts with experience in dairy technology and training, to collect and collate the needed background information in each participating country, and comparing the information across countries in regular meetings. The experts worked in close consultation with the national dairy regulatory authorities to define minimum requirements for competence and hygienic handling of milk, for inclusion in milk training

guidelines and curricula. This information formed the basis for developing a harmonized generic guideline and curriculum for certification of small milk traders that would in turn be tailored again to specific national needs without altering the minimum competence requirements agreed upon. A key objective was the cross-border recognition of the “stamps of approval” issued by counterpart regulatory authorities and thereby, greater market access. The over-arching aim was that the generic training materials would be availed for adaptation and adoption by other ASARECA countries not directly participating in the initial exercise.

A more sustainable quality assurance strategy, involving the use of business development services (BDS) was proposed to be a central component of a work plan to institute the proposed policy and technological changes (Figure 1). This was in light of the limited capacity of the regulatory authorities to effectively provide the needed services directly, but to instead limit their role to facilitating the provision of the services.



Figure 1: A schematic diagram for applying institutional and technical approaches in a quality assurance scheme involving business development services

The milk quality assurance scheme to be facilitated by the regulatory authority through privately provided business services involves the following:

The BDS providers:

- Provide milk traders with training on milk safety, quality control and hygienic handling, and other services
- Issue certificates of competence to trained traders
- Report their activities to the regulatory authority

The milk traders:

- Pay cess fee to the regulatory authority upon showing a certificate of competence
- Conducts his/her business within norms accepted and approved by regulatory authority

The regulatory authority:

- Accredits BDS providers based on agreed minimum standards of competence for trainers
- Monitors compliance of accredited BDS providers to approved trainers competence level
- Issues licences to trained traders based on the evidence of a certificate of competence
- Monitors compliance of certified milk traders to approved minimum standards for milk handling

### Preliminary lessons and discussion

Regular meetings by those involved have provided a useful forum for learning from each other's experiences in streamlining the activities of informal milk markets. The engagement of top-level regulatory stakeholders developing informal milk markets through a more effective quality assurance scheme also indicates a willingness to transform the sector. This is particularly evidenced by the action taken by the Kenya Dairy Board (KDB) to include the project's outputs in its recently released Strategic Plan to 2009. Already, the KDB has partnered with a local NGO to implement a quality assurance scheme based on the institutional framework outlined

here. This noteworthy attitudinal change being witnessed among the top-level staff at KDB is encouraging but still needs to trickle down to the level of field staff, some of whom still carry out their activities with an “anti-raw milk marketing” mindset. This pilot project is being monitored through qualitative and quantitative approaches to evaluate both technical and behavioral changes among project implementers and boundary partners, through Outcome Mapping (Earl *et al.*, 2001) to learn lessons that would inform the development of generic work plans for the other countries in the region.

One of the experiences that is positively influencing adoption of ‘good practices’ is Uganda’s experience in improving quality in its informal milk markets after the dairy sector was liberalized. Prior to the establishment of the Dairy Development Authority (DDA) in 1998, milk quality control among small-scale traders and regulatory systems tailored for their needs were non-existent and raw milk was commonly handled in plastic containers and heated by open-pan boiling, often under unhygienic conditions. Following appropriate sensitization and training by the DDA, informal traders have formed groups and acquired hygienic water jacketed batch pasteurizers to replace the open-pan boiling system. Plastic containers for handling milk have increasingly been replaced with metal containers, thus improving milk quality. One of the key factors contributing towards this high level of quality compliance among informal traders within the relatively short span of DDA’s existence has been its adoption of a “peer pressure” approach to sensitize groups of traders to join training programmes, with rewards for attendance. The traders now regard DDA as partners working for their good, as long as they adhere to the set code of hygienic practice. This progress forms good ground for further dissemination and uptake of appropriate milk handling technology among other informal sector cadres and offers vital lessons for other countries to adopt.

Since the uptake of the quality assurance scheme depends on active participation of traders and regulatory authorities, the current consultation with them will be extended to meetings among

them and exposure to promising pilot projects in the region. This is expected to make them more willing to openly engage in activities geared towards the development of informal milk markets.

An important underlying factor to the positive changes in mindsets is the value of evidence-based knowledge in influencing policy changes. In this case the risk analysis studies on milk-borne public health risks from milk markets in Kenya have been critical. This shows the benefits of integrating research with development projects.

### References

Earl, S., Carden, F. and Smutylo, T. 2001. *Outcome mapping: building learning and reflection into development programs*. International Development Research Centre (IDRC), Ottawa. <http://web.idrc.ca/openbooks/959-3/>.

Omore, A., Staal, S.J., Osafo, E.L.K., Kurwijila, L., Barton, D., Mdoe, N., Nurah, G., and Aning, G. 2004. *Market mechanisms, efficiency, processing and public health risks in peri-urban dairy product markets: Synthesis of findings from Ghana and Tanzania*. International Livestock Research Institute. 131pp.

[www.smallholderdairy.org](http://www.smallholderdairy.org). Website with reports of the MoLFD/KARI/ILRI Smallholder Dairy (R&D) Project.