

Policies to Support Smallholder Dairy for Sustainable Employment and Incomes in Kenya



Partnership for promoting an African success story

Key factors in economic recovery in Kenya, as elsewhere, are employment and incomes for the poor. Broad strategies are outlined in the current 'Economic Recovery Strategy for Employment and Wealth Creation' and the recently launched 'Strategy for Revitalizing Agriculture'. Smallholder dairy production and milk marketing already contribute to the goals of these strategies, generating jobs, raising incomes and improving the health of the poor. Enhancing this sector and broadening its benefits thus has enormous potential to help drive Kenya's economic recovery during this new era of policy redirection and renewed public commitment.

A consortium of partners working in this area has come together to help promote smallholder dairy in Kenya, and to provide information to help guide the policy debate and implementation. This brief highlights key information, findings and policy implications. Most findings reported in this brief have come from the **Smallholder Dairy Project (SDP)**, a research and development project, collaboratively implemented by the Ministry of Livestock and Fisheries Development, Kenya Agricultural Research Institute and the International Livestock Research Institute and funded by the UK Department for International Development (DFID)

Partners:

- Ministry of Livestock and Fisheries Development
- Kenya Agricultural Research Institute (KARI)
- International Livestock Research Institute (ILRI)
- Kenya Dairy Board (KDB)
- Institute of Policy Analysis and Research (IPAR)
- ActionAid Kenya (AAK)
- Intermediate Technology Development Group (ITDG)
- Strengthening Informal Sector Training and Enterprise (SITE)
- Tegemeo Institute
- Land O' Lakes





Opportunities through Kenyan Smallholder Dairy

An African success story

With over 3 million improved dairy cattle,¹ Kenya has by far the largest dairy herd in Africa, more than all the other countries of East and Southern Africa, including South Africa, combined. Research by SDP and partners has shown clearly that the official national milk production estimate of 2.65 billion litres may be significantly understated due to a greater increase in dairy cattle numbers than officially recognized, resulting in a strong recent growth rate in milk production of some 7 percent per year.

Tied to the successful increase in milk production is the fact that Kenyan milk consumption, at some 80–100 litres/person/year, is among the highest of any developing country in the world. When expressed as consumption in relation to annual gross domestic product per person, only Mongolia and Mauritania surpass Kenyan milk consumption per unit of income. This success story is particularly important because it has taken place among rural smallholder farm households, who produce most of the milk in Kenya.

Employment and incomes through dairy

The success of dairy has translated directly into employment creation and income, not just on the smallholder dairy farms, but also among those who market much of the milk. This is important in the context of the Economic Recovery Strategy's emphasis on increasing employment.

On-farm jobs and incomes

There is direct employment for both men and women in the estimated 6–800,000 smallholder families in Kenya for whom dairy farming is a primary activity. Many of these farms also employ full-time labourers to assist with the dairy enterprise, creating some 360,000 additional full-time jobs, some from among the poorest members of the community. Many also employ short-term labourers.

Competitiveness of smallholder dairy farming

Dairy farmers are able to make good profits from dairying. Recent research has shown that across a range of production systems, from zero-grazing to extensive grazing-only, the dairy enterprise generates about twice as much income per person as other farm enterprises or rural labour, and higher in some areas. This includes the significant amount of milk consumed by farm families. Added to this are the

additional benefits that dairy cattle provide: insuring against emergencies, inflation-proof savings and producing manure for crops. Although they are rarely included in farm-budget calculations, research has shown that these non-cash benefits can add up to 19 percent to the 'profits' from dairy production, and provide strong support to smallholder farmer non-cash needs.



Jobs through milk marketing and processing

There is also significant employment through milk marketing and related activities, both in formal processed and informal 'raw' milk sectors. The informal market represents well over 80 percent of all milk marketed in Kenya. Of this, half is sold directly from farmers to consumers, with small-scale traders, including milk bars, mobile traders and raw milk sales from cooperatives, accounting for the rest. Recent research has shown that there are over 29,000 Kenyan jobs supported by formal and informal milk marketing, at average wage levels higher than the official national minimum wage. Over 70 percent of these jobs are in the informal raw milk market. These non-farm jobs are important dairy-related opportunities for rural and urban poor.

Positive nutritional benefits

Milk is an important source of nutrition, and given the high levels of milk consumption in Kenya, milk can play a crucial role in child development. Research shows that milk consumption significantly enhances children's physical and mental development, leading to long-term and intergenerational benefits. Unlike in most other poor countries, even poor households in Kenya (both urban and rural) buy and consume milk, mostly in tea. Households that keep dairy cattle have better access to milk, and are able to more easily capture these benefits. Recent research has shown that Kenyan households that keep cattle have fewer children exhibiting long-term malnutrition or stunting.²

Whilst drinking raw milk would present a threat to public health, research has shown that the vast majority of Kenyan consumers who purchase raw milk boil it, both for preservation, and in preparation of tea. Whilst slightly reducing the nutritional value,³ boiling destroys harmful micro-organisms, rendering it relatively safe for consumption. However, cultural preferences that encourage consumption of raw milk, whether fresh or fermented, should be discouraged, including the practice of using left-over raw milk from previous day's sales.





Constraints to continued Development of Kenyan Smallholder Dairy

In spite of the success to date of smallholder dairy in Kenya, important constraints remain to its continued development, which need to be addressed by policy makers, planners, and development agencies.

Policy environment, institutions and implementation

Production and marketing in the dairy subsector are affected by a wide range of policy areas, including policies and regulations on feed, animal health, breeding services, milk collection, processing and marketing, public health and land. This has produced a very complex and sometimes contradictory policy environment. Some key issues include:

- Lack of policy implementation results in a clear difference between written policy and action on the ground.
- Written policy and instruments that affect the dairy sector have not been adequately updated to make them appropriate to a liberalized environment, and significant delays in updating these continue.
- Key public institutions in the sector are poorly functioning and under-resourced for their stated functions.
- Key bodies that influence policy do not have full representation from stakeholders, particularly smallholder farmers, consumers, and milk market players.

Infrastructure

Poor-quality rural access roads pose a threat to incomes from dairy, causing unreliable milk collection, lower farm-gate milk prices, and reduced access to input supplies and services.

- Research has shown that poor feeder roads contribute strongly to the lower price (on average 22 percent lower) received by farmers more than 75 kilometres from the main consumer market of Nairobi. Upgrading poor feeder roads to good murrum roads could reduce transport costs on those roads by 30 percent, and raise prices paid to farmers accordingly.
- Research has also demonstrated that these market factors have a larger impact on successful dairy production practices and returns than access to land and fodder resource, for example. Upgrading infrastructure and services may thus benefit dairy livelihoods more than focusing attention on other policy issues which receive high public prominence, but may have limited impact on small farmers.



Public health and milk markets

Raw milk markets pose a potential threat to public health. However, research has now demonstrated that these risks are relatively low because of the practice in Kenya of boiling milk, and can be reduced further through training in proper handling of milk. The important benefits highlighted above—market outlets for farmers, jobs at all levels, and affordable milk for consumers—point to the need to redress policies affecting informal markets, so that improving standards and ‘formalizing’ the informal milk sector can be done in a way that preserves jobs and dependent livelihoods. This can be done at the same time as minimizing public health risks.

Issues from the research include:

- The proportion of milk marketed by small traders, or ‘hawkers’, is often overstated. Of all milk marketed in Kenya, 42 percent is sold directly by farmers to households and restaurants, and is not handled by traders. Raw milk traders handle another 42 percent of the overall milk market. Many of these traders operate from fixed premises (‘milk bars’ and cooperatives); others are mobile traders.
- The universal practice of boiling milk, whether pasteurized or not, reduces health risks significantly, as milk-borne, potentially disease-causing micro-organisms are destroyed by boiling.
- Current policies allow licensing of those with fixed premises, but not mobile traders, with KDB emphasizing that this is for traceability and inspection.
- Research has shown that raw milk quality differed little between licensed and unlicensed traders and retailers, indicating that licensing policies are not addressing the real issues of raw milk quality and public health. Some of the poorest-quality milk was found among larger-scale traders, some of whom have licenses, who transport milk long distances from rural to urban areas. However, KDB has now developed a checklist of milk handling procedures for small-scale traders, aimed at ensuring that only traders who meet set criteria are licensed.
 - Small-scale traders have largely been operating without access to training and support in milk handling. Pilot testing has shown that when such traders receive training in milk handling, testing and the use of appropriate containers, milk quality improves significantly.
 - Research results suggest that policies that provide for some form of





licensing for small-scale traders, preceded by requirements for training in proper milk handling methods, can both improve milk quality and enhance employment generation.



- Improving the performance of small-scale milk market agents through these activities will help bridge the quality and entrepreneurial gap that such traders must cross in order to be incorporated into the formal milk market, which is the longer-term vision.
- Supporting the long-term development of the formal market is an important goal for providing reliable market outlets for smallholder farmers. Currently the formal market is constrained by consumer demand, as described below.

Constraints to better nutrition through milk

Because the large majority of milk in Kenya is bought raw by consumers, policies affecting milk markets can have a significant effect on levels of consumption of milk, and thus on nutritional benefits to poor households, including children.

- Research among Kenyan consumers has shown that currently price is usually the most important factor in determining which type of milk consumers choose, followed by perceived quality.
- Raw milk is 25 percent and 50 percent cheaper than pasteurized milk in urban Nairobi and urban Nakuru, respectively.
- Only relatively wealthy households buy significant amounts of pasteurized milk, except in Nairobi, where the price difference between raw and pasteurized is smallest. Consumption of pasteurized milk will only grow significantly when household incomes rise through economic development.
- Research has demonstrated that a significant increase in the price of milk would reduce consumption by poor households, and thus reduce nutritional benefits.

Conclusions

This wide-ranging evidence shows that the dairy industry affects the livelihoods of a huge range of people, in ways that are often not discussed. Stakeholders include the millions of poor consumers for whom access to affordable milk is so important, and hundreds of thousands of people whose jobs and livelihoods depend on the production and marketing of milk and dairy products, most of them working in the smallholder and informal sectors.

Whilst there are clearly many problems affecting the industry, it should be seen for the success story it is, and that success built on. But to do this requires developing policies and institutions that take account of the wide range of ways that the industry affects people's livelihoods, so that jobs and access to crucial nutrition are not sacrificed. This in turn requires proper representation of all stakeholders in dairy industry bodies and decision-making processes.

There is plenty of good robust evidence to show how various policy options might impact in different ways. This evidence, its implications, and some recommendations, are outlined in more detail in the accompanying policy briefs from the Smallholder Dairy Project and from the Institute of Policy Analysis and Research.

What is clear is that any policies must take account of the nature of consumer demand, so that a sustainable industry develops. This will require policies that give clear pathways and allow entrepreneurship by industry players in all sections of the current market. At the same time, real concerns about quality and public health need to be addressed in a pragmatic and evidence-based manner. Adoption of cheap processing and packaging technologies or pasteurized bulk milk dispensers by small-scale market agents should be encouraged, together with training, to offer a quality and affordable product.

Finally, the important role of the formal processed dairy product sector in providing the future of the dairy industry should not be underestimated nor undermined.

A more vibrant industry, generating many jobs, can be developed through linking producers to domestic consumers through efficient, safe and appropriate marketing channels, while also developing opportunities for producers to access value-added and export markets.

¹ Without a livestock census in recent decades, actual numbers are likely to be higher.

² Measured as lower-than-average child height compared to others of the same age.

³ It should be noted that most Kenyans consume milk in tea. When pasteurized milk is boiled, it will also suffer slight reduction in nutritional value. However, fat-soluble vitamins, including vitamin A, are preserved following boiling.

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Ministry of Livestock and Fisheries Development: SDP Project Manager, MoLFD, Hill Plaza, P.O. Box 30028, Nairobi. Telephone: 02-2718528. E-mail: lili-ma@afncaonline.co.ke.

Kenya Agricultural Research Institute: The Director, or SDP Asst. Project Manager, KARI P.O. Box 57811 Nairobi Telephone 02-58330-20. E-mail: Resource.centre@kari.org, or david.kari@afncaonline.co.ke.

International Livestock Research Institute: SDP Field Manager, MOSD, ILRI PO Box 30709, Nairobi, 00100, Kenya. Telephone: 02-630743. E-mail: s.staal@cgiar.org, or m.gitau@cgiar.org.

Kenya Dairy Board: Managing Director. Box 30406 Nairobi. Tel 020 310559. E-mail: info@kenyadb.org

Institute of Policy Analysis and Research: Dr. John Omiti, Box 45843-00100 Nairobi. Tel. 251179; Email: jomiti@ipar.or.ke

Tegemeo Institute of Egerton University: Director. Box 20498- 00200 Nairobi. Tel: 0202717818. E-mail: egerton@tegemeo.org

Intermediate Technology Development Group: Elijah Agevi (Regional Director). Box 39493, Nairobi. Tel 2713540. E-mail: elijah.agevi@itdg.or.ke

ActionAid Kenya: Elizabeth Mueni (Food Security Programme Co-ordinator). Tel: 4440440/4/9. E-mail: muenik@actionaidkenya.org

Strengthening Informal Sector Training and Enterprise (SITE): Harun Baiya - Chief Executive. Box 10618 - 00100. Tel: 0202718155. E-mail: harun_baiya@sitenet.org

Land O'Lakes Kenya: Yesse Oenga - Country Co-ordinator. Box 45006 Nairobi. Tel: 0203748526. E-mail: lolkenya@landolakes.co.ke