

A case study of Organizing, Training and Linking Rural Poor Communities in Kenya to an Emerging Niche Market for Dairy Goats and Goat Related Products.

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Abstract

Goat rearing is increasingly becoming popular among smallholder mixed crop-livestock farmers. Goat production is regarded as a feasible means to improve the income and nutrition of rural communities and to bring these communities into commercial marketing systems (Braker *et al*, 2002).

The goat has become very popular in recent years as a pathway out of poverty (Ahuya *et al.*, 2004). Currently, many non-government organizations (NGOs) in Kenya working with resource-poor livestock keepers in medium to high potential areas are encouraging farmers to keep improved goat genotypes, which are mainly cross-breeds between the exotic temperate and the indigenous tropical breeds.

The goat enterprise has proved to be profitable with annual gross margins of over US \$259 recorded indicating that dairy goat enterprises under smallholder production systems can be profitable.

FARM-Africa, an International-NGO, introduced the British Toggenburg dairy goat, into the Eastern Highlands of Kenya for use in upgrading the local goats for improved milk production and growth. There has been an exponential growth in demand for live animals within Kenya and regionally. The challenge within FARM-Africa and its collaborators is to develop models and systems that can effectively and efficiently respond to these market demands. FARM-Africa through its weaned project is supporting the development of a goat milk dairy processing plant and systems that is targeting lucrative niche market of this rather unique product.

The foregoing case study captures success and challenges of FARM-Africa in linking farmers to markets within the dairy goat industry.

1. Introduction

Dairy goats have become increasingly popular among smallholder mixed crop-livestock farmers. Dairy goat enterprises are profitable and have contributed significantly to the improvement of livelihoods of the rural communities in medium to high potential areas of Eastern Kenya, and elsewhere with similar agro-ecological conditions. Their profitability does determine sector growth within smallholder production systems according to a survey carried out in 114 farmer groups, representing 435 goat herds and 1676 goats. (C.O Ahuya et al, 2004).

Meru Central and Meru South districts are among thirteen districts that form the Eastern Province of Kenya. They both border Mt. Kenya. Meru Central is the larger of the two districts having an area of 2,982 square kilometers and a population of 512,518 people in 2001 at an annual growth rate of 1.48%. Altitudes range from 3,000m above sea level (ASL) to 5,199m ASL at the summit of Mt. Kenya and this creates a wide variety of microclimates and agro-ecological zones. Rainfall ranges from as high as 1,250mm-2,500mm on the windward side of Mt. Kenya to as low as 380mm-1,000mm on the leeward side. The high population density has put a lot of pressure on the land leading to subdivision of land into uneconomic units, to soil erosion and declining crop yields.

The rural communities' natural resource livelihood strategies in the project area are mainly subsistence farming and livestock keeping. The average age of the farmers surveyed by the FARM-Africa project in 2003 was 47.8 years with a range from 22 – 77 years. 51.9 % of those interviewed were female and the great majority of those interviewed were married (90%). 60% of the respondents had at least primary education and 15% had no formal education. Of those with no formal education, 84% were women and 72% were group members. 61.9% owned/rented less than 2 acres of land.

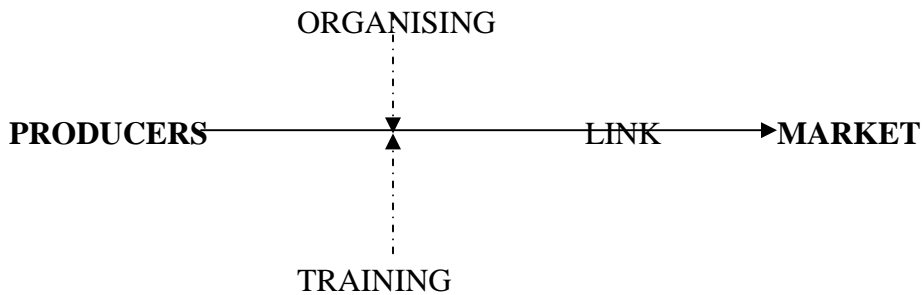
The target beneficiaries of the FARM-Africa project are poor farmers in the poorer divisions of the districts, the majority of whom are women. The farmers have formed an association with the goal of assisting members to get a good goat and register it with Kenya stud book also assist in looking for market where members can sell goats and goat products and get access to credit in order to alleviate poverty.

The dairy goat farming project was initiated in Meru by FARM-Africa in 1994 with the objective of alleviating poverty among poor farmers in the marginal and densely populated districts of Meru South and Central through the establishment of a livestock development and animal healthcare service delivery system. Among the outputs realized has been the formation of strong independent farmers groups, registration of the umbrella Meru Goat Breeders Association (MGBA) and formation of a self-sustaining service delivery support structures.

2. The markets

Markets by their very definition require a product offer to a ready/existing or potential customer base. The customer and product factor sits squarely in the center and must be the pre-occupation of any business effort.

The live goat and goat products market is highly characterized by the unique aspects that sharply competes with more abundantly available cattle products. A simple market system in the goat sub-sector on which this case study is derived would look like this:



The operationalisation of this rather over simplified diagram is complex and requires long-term commitment. The reason is that the producers have a limited capacity in taking up the new technology in goat improvement and represents a social dynamism that is complex but yet potential.

The live goats market is currently composed of local farmers who wish to uptake the goat improvement technology, other farmer groups around the country who have been made aware through the scaling-up of impact effort by FARM-Africa and a regional demand in the neighboring countries.

The prime milk market movers currently are hawkers and tiny specialized processors. A small but apparently well organised hawker system supplies small quantities of raw goat milk to hospitals. This milk is destined for patients diagnosed with cow milk allergy.

Currently professional cheese makers in Kenya only process their own goat milk, produced on farm due to very limited milk supply the goat cheese production and which is rather erratic. There is however a demand especially within the tourism industry especially for blue cheese.

In Kenya the goat industry has developed a stir after posting admirable results in the rural development.

3. Organizing, Training and Linkages

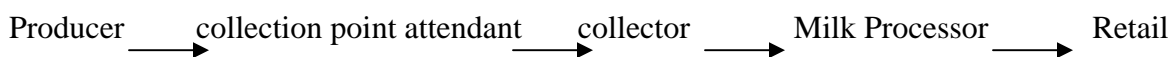
3.1 The starting point-Organisation

The project has been implemented through self-help groups, most of which were formed specifically to carry out project activities. The community was assisted to identify the poorest families by selecting indicators of wealth and using them to rank households accordingly.

Currently the FARM-Africa project has built a growing farmer base of 146 groups divided into 20 units consisting of 5-6 groups of between 25-30 members. This means a potential producer base of $146 \times 25 = 3560$. The farmers have formed an association with the goal of assisting members to get a good goat and register it with Kenya stud book and also to assist in looking for market where members can sell goats and goat products and get access to credit in order to alleviate poverty.

The MGBA operates a goat milk collection system centred on its small goat milk plant in Nkubu town. Twenty goat milk collection points have been established in Meru Central out of which six are operating so far as a pilot area. Each collection point receives milk from 10-25 goat farmers. At each collection point two trained milk collection point attendants receive milk from producers. The collection point attendants keep records of goat milk quantities received from each producer, collect milk delivery slips from the milk collector, ensure adequate daily cleaning of the cloth, sieve and collection can and carry out one simple milk quality check: the lactometer test for detection of added water.

Milk from the six collection points is transported to Nkubu by motor-bike, which does a regular daily morning run starting at 6:30am – 7:00a.m. and arriving at the milk plant by 10:00am – 10:30am. Before transferring milk from the 25 litre collection can into the 50 litre transport milk churn the milk collector (an employed milk plant collection clerk), who transports the milk by motor-bike, carries out the alcohol test to determine the freshness of the milk.



Upon arrival of the milk at the plant the alcohol test is repeated by the milk processor. So far no raw milk has ever been rejected. Goat milk volumes collected daily fluctuate between 22 and 70 litres. Since the milk collection started in July 2005 a monthly average of 1316 litres at the start in July to 772 litres in October. The dry spell starting in September and lasting up to mid October may account for some, but not for all of the decrease in milk delivery. Volumes in September were still up at 1232 litres.

3.2 Capacity building through training

Linking farmers to markets must begin by ensuring that the products produced are of specific standard and quality. The bulk of the work in product development in the case of this case

study started by building capacity of the farmers to uptake the goat improvement technology. True to the classical normal distribution trend of adoption the project has just gone through the innovators phase quickly through the early adopter's phase which represents about 10% of the potential farmer base.

FARM-Africa has invested a lot of resources in building capacity of the producers in terms of farm level quality assurance, process coordination and business skills. Two major training workshops were conducted to prepare relevant players with the skills to run the production and marketing of goats and its products. Unit level workshops were used as platforms to inform and sensitize farmers on best practices. The unit level training focused on several issues key among them being reminding farmers of the need for ensuring quality during milking, putting their goats in a feeding regime that would guarantee maximum milk yield, common diseases that may affect goat milk productivity, drug administration and milk withdrawal periods after treatment.

As part of Capacity building, several other trainings have been undertaken for ordinary members of the associations' officials. These have included; Training of trainers (TOT) on Fodder development, conservation and usage to support the improved goat genotype, training on Judging and Inspection for shows, breed improvement and registrations, leadership training for MGBA officials, goat production and management, micro-enterprise training, business management, breed improvement and Record keeping. To add value to the trainings several study tours have been undertaken

3.3 Linking farmers to markets

Important linkages have been established both at government level and private sector which will ensure successful operations. The project has mainly concentrated on selling of breeding stock as demand from within the country and outside has continued to outstrip supply. To date over 20,000 improved goats have been produced. Sale of breeding stock and meat animals have earned the farmers in excess of Ksh8 million (USD 107,000) as at 2005.

3.3.1 Breeding Goats.

Currently the demand for breeding goats in the country and neighboring countries outstrips supply. In comparison, the supply with an annual growth rate of 10%, has the population projected to grow to 21,452 in the next five years as summarized in the table below

YEAR	2004	2005	2006	2007	2008	2009	2010
NO.	13,900	14,943	16,063	17,268	18,563	19,955	21,452

The current market areas include the ASAL districts of Mwingi, Kitui, Taveta and highly populated districts such as Vihiga and Kiambu. Uganda and Tanzania are also ready markets. The two Meru districts are also large markets for the breeding goats as more farmers join the program. Currently about 300 goats are sold annually. Following the capacity building efforts of FARM-Africa, the now independent farmer association-MGBA has

organized the marketing functions to include shows, sale and auctions. These are held every so often with 100% planning by the now empowered farmers.

The pricing of goats is based on agreed value setting which harmonizes the sales activities across the farmer network. For pure Toggenburgs the selling price is determined by multiplying the live weight by Ksh600 per Kg (female) and Ksh400 per Kg (male) and adding a further Ksh4000 for breeding value whether it's a male or female. To maintain quality control the Ksh4000 is based on breeding records that the farmers must keep and which are maintained in the stud book. Therefore female goat weighing 40kg will fetch $40 \times 600 + 4000 = \text{Ksh}28000$ (USD 373). This compares competitively well with imported animals from UK which would cost Ksh35000 for a whole animal (weight irrespective). After breeding process the farmers stabilize the genetic composition to $\frac{3}{4}$ which fetch in Kenya Ksh150 per live weight plus a further Ksh1000 breeding value. The price changes to Ksh300 per live weight plus a further Ksh2000 when sale is outside Kenya

Goats are sold when they attain the average weight of 30 kg in about 6 months. They are sold on live weight basis plus a certain flat rate as breeding value. Currently the goats are sold by individual farmers but MGBA is undertaking a centralized auction approach.

3.3.2 Goat Milk.

The milk processing plant project is an extension of the FARM-Africa efforts in supporting farmers to achieve maximum value on development investment. The Small Scale Producer Marketing Project was designed to enable the farmer association to set up a functional milk processing plant. The original idea was to upscale of subsistence goat milk production to a fully-fledged entrepreneurial model where value adding can be used to boost incomes through improving the shelf life of raw goat milk and enabling farmers to sell at a guaranteed price, currently Ksh30 per liter

The immense success this project has had in the two districts it was operating has necessitated the need to think about taking the goat project to the next level. After the production of milk was achieved, there was need to consider adding value to it to enable farmers increase the shelf life of their milk and hence get even better prices in the market. This is a market response based to customer feedback to have the product available in less perishable state.

The milk processing project is therefore attempting to realize this goal by bringing the plant close to the farmers where they can sell their milk at better guaranteed prices in the market without wastages that would be occasioned by inefficiency through inexperienced logistical system.

A growing and possibly lucrative niche market unique to goat milk is the hospitals with the HIV/AIDS scourge, the medicinal value of goat milk is increasing taken to be an antidote. The marketing strategy for milk marketing project will be the use of technical information about goat milk which is its USP (unique selling point). Opportunities exist to

link the project with research centres through FARM Africa, in order to innovate new products.

The initial business strategy was to buy the milk from the farmers at a guaranteed price and resell in bulk to consumers who would further sell in small quantities. This model has long since proved not to be viable. There was a need to break the bulk and instead resell in small batches of value added products. This way, demand can be controlled and productive efficiency realized. This approach has started in a small way and the main market outlets so far have been the Agricultural Shows, farmer field days and regional workshops where the farmers can showcase their products.

Milk collection was also hampered by lack of a provision to cater for overheads of the milk collection. The expansiveness of the area to be covered and the roughness of the terrain especially during the rainy season did contribute to the problem. New thinking however now is that the plant should concentrate on its core activities and contract out milk collection to an independent collector. The distribution will follow the outsourcing model of marketing so that the farmer network concentrates on its core competence of organizing and training its membership.

4. Emerging niche market

Niche marketing has the potential to be the entry point for the plant's products which will provide envisaged higher returns. Goat milk products are unique and offer a great value nutritionally and are thus considered prime. A marketing strategy that focuses on specific markets, especially hospitals, will be developed in the long-run. However current trends are also indicating that the people are appreciating the nutritional value of goat milk and consumption levels are increasing. Hence alongside the core target market, efforts will be invested in creating awareness to the general population.

Continuous marketing and capacity building campaigns will be the core activities for the remainder of the project, alongside business process reengineering to make the plant more efficient in its productive capacity. The market research will serve as an eye opener to what opportunities lie ahead and will assist in market positioning as well as product range enrichment or streamlining. Product marketing as planned has not taken off, although with the small resources available the farmers have been able to run ads on the local vernacular radio stations that have registered their own impact, albeit in a limited way.

Other developments like the DFID funded radio communications initiative, which is a project that seeks for the first time in Kenya to ensure more slots are available for airing development content in a sustainable way, will be exploited. This initiative seeks to link up with the Kenya Broadcasting Corporation as a service provider and will rely on development organizations for content provision, to be repackaged free of charge for a wider audience. This content it is hoped will then attract the corporate world to pay to advertise their products and that way ensure sustainability. Through FARM-Africa the plant will seek to maximize on this opportunity in the future.

5. Challenges and lessons learnt

A sincere commitment to the welfare of rural poor farmers is very important in the eventual success of linking farmers to markets. Sometimes a modest investment is all that is required to catalyze the process.

FARM-Africa has also learnt that farmers lack the implementation capacity at any incremental level of development especially when it comes to markets requiring certain managerial and business skills not resident with them. This is where the trial with models of partnerships with the private sector becomes useful.

It is worth noting some of the challenges emerging especially since the milk plant went into initial production.

- i. Important markets are yet to be penetrated. There is need therefore to engage in vigorous marketing strategies which have already been proposed. These will first involve a market research with a bid to establishing the following.

-What the currently targeted market thinks about the product. Here aspects on packaging, nutrition, branding will be looked at. Packaging has especially been cited prior to the research as a key hindrance to future penetration of larger outlets like supermarkets. Most clients here prefer the relatively expensive tetra-park packaging.

-The possibilities of other markets not yet accessed and the best way to access

-Develop a media marketing strategy for promotion of the products and the most optimal avenue for this.

- ii. The milk production data is a “guess- timates” and is based on estimated herd sizes and milk yields. However this data is being developed which will give better projections and decision making.

- iii. The Kenyan dairy industry is growing featuring more participation, new models of milk sources and distribution therefore requiring the industry to embrace a learning culture.

- iv. Kenyan market for cheese is small though yoghurt products are growing in popularity. The slow growth of higher value products is due to limited purchasing power and lack of an acquired taste for such products. This develops therefore a niche market among tourism, expatriates residents and local population of middle and upper income population. The distribution of such high value products is by implication very specific and requires additional capacity for in-experienced farmer networks.

Conclusion

By comparison, live goats and goat milk are expensive products. First because the goat improvement programme demands high technical support in organising and training farmers to produce quality offspring and eventually high quality and quantity of milk. Secondly, the higher production, collection and specialised marketing costs push up the cost of producing a unit of product. Health food outlets and hospitals for instance provide the high price market for goat milk which would guarantee good returns to be able to make a growing business.

Through facilitating the formation of viable farmer groups that are well trained and motivated to produce for Kenyan market and external foreign markets it is evident that linking farmers to markets does hold answers to rural development. FARM-Africa through its Training and Advisory unit is documenting lessons learnt with the aim of developing best practices ready for uptake by other development partners to widen the impact.

It is important to mention in closing that markets served by farmers are subject to external forces like competition which although should ideally develop the competence may as well lead to collapse of the best intentions. Rural development agents therefore need to support farmer networks to position themselves competitively in the markets.

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