



Australia Awards

Australia Award –Africa
2016 Agribusiness Short Course Award

CAMEL MILK VALUE CHAIN ANALYSIS IN DADAAB SUBCOUNTY, GARRISA, KENYA



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“ I am a food security and livelihoods specialist, with over 8 years’ experience working with NGOs and communities in arid pastoral regions of Kenya. I have a BSc Agricultural extension, Diploma in project cycle management and graduate studies in Development management. I possess practical experience in livelihoods and food security programming, disaster risk reduction and resilience building. I am integrating my skills of value chain analysis in my food security and livelihoods programming with the hope of becoming a practitioner and consultant at both local, national and African level. ”



Watering animals during drought is a problem

VALUE CHAIN APPROACH

A value chain approach means taking a whole-of-chain perspective from primary producers and their input suppliers, through every stage until the product reaches the end consumer. It examines the flows of products, money and information, with a focus on how these are influenced by the relationships among chain members. Of particular importance is the need to understand markets and consumers, and the state of collaboration among chain members.

A value chain approach highlights how effective partners can align better their skills, resources and behaviour to deliver products and

services to different market segments and to reduce waste, with the resultant financial returns being distributed equitably so as to sustain partnerships within the chain. This improves the competitiveness of each business and helps chain members to recognise their interdependence, and the consequent benefits of solving shared problems.

Detailed advice on adopting a value chain approach is provided in *A Guide to Value Chain Analysis and Development for Overseas Development Assistance Projects*, by Ray Collins, Benjamin Dent and Laurie Bonney, available free at <http://aciar.gov.au/publication/mn178>.

HIGHLIGHT

This example highlights that focusing on delivering the positive attributes of the product can address consumer deterrents to purchasing as well as reduce waste.

CONTEXT

Garissa hosts refugee camps that are home to around 300,000 people, mostly from neighbouring Somalia. The local community and refugees have similar cultures, being mainly Muslim pastoralists, and share similar tastes in food. The region faces numerous problems: basic infrastructure is undeveloped with mostly earth roads which are vulnerable to rain, less than 1% of the population have electricity and only 23% have access to safe water.

The main livelihood comes from cattle, goats, sheep and camels, whose products are either eaten, or traded as meat, milk and hides. Indeed, Garissa has over 230,000 camels, well suited to this arid land, and providing income to about 2 million people. An estimated 1½ million camels are reared in Northern Kenya. Women are generally responsible for selling camel milk, so it provides them with a valuable source of income towards household needs.

APPROACH

Meshark reviewed existing reports to provide background to his investigation, and then conducted two focus groups, split between men and women, each of 10 people. Next he interviewed vendors (3), transporters (2), producers (8), input suppliers (2) and an extension officer.

UNDERSTANDING THE CAMEL MILK MARKET

Meshark first identified four routes to market:

- Consumption within a herder's household
- Rural households and restaurants, either for making tea or consumed fresh or fermented
- Urban markets, largely amongst the significant Somali communities living in all major urban areas in Kenya, including Nairobi's Eastleigh suburb
- High-end health markets in Kenya and internationally.

He then conducted consumer research focusing on rural households. He found that camel milk is valued as healthy and medicinal because camels feed on more than 30 different species of plants which are themselves regarded as herbal medicines. Fresh camel milk is considered the richest in these characteristics, with its freshness being detected by colour and taste. However, there are also deterrents to consumers purchasing camel milk:

- Some vendors adulterate camel milk with goat or cow milk, which are cheaper and/or more readily available, or even water so they can earn more;
- Vendors boil milk to extend its shelf-life by at least 3 days, but consumers believe this destroys its medicinal value, although they will still buy it in preference to alternatives;
- Vendors sell milk in plastic jerry cans but consumers say these allow the milk to warm up, affecting its taste and freshness;
- Milk is sold in open markets which consumers view as unhygienic, and often vendors use dirty containers;
- Prices double when supply is low due to impassable roads in rainy seasons, or lower production in drought conditions.

To address the problem of freshness and avoid boiling of milk, Meshark found that consumers favoured the use of traditional containers known as *"Dil"*, or *"Han"* in Somali language. These are traditionally made from a specific wood. Consumers found that

"Dil"/"Han" could keep fresh boiled milk for one week while maintaining its original freshness – and they were willing to pay 25% more.

MAPPING THE CHAIN

VENDORS

Selling to individuals and hotels, camel milk vendors are exclusively elderly women, bulking up supplies from 4–5 producers, communicating with them by mobile phone or by sending messages via intermediaries, often public transport drivers.

TRANSPORTERS

Camel milk is transported by:

- public transport, with drivers collecting up to 30 containers of milk from producers at bus stops, and returning empty containers. Vendors pay the driver. However, buses can be unreliable, especially when heavy rain affects road conditions.
- motorcycles, a rapidly expanding alternative because they can pick up direct from producers' homesteads
- donkey carts, used by producers who travel to markets to sell directly to vendors, often because they cannot afford mobile phones and so vendors cannot contact them.

PRODUCERS

Producers are all pastoralists, keeping camels as a source of milk, income and prestige. Meshark found they commonly own 5–10, but milk production varies depending on season and availability of fodder. Production can be as high as 30 litres/day/camel, but the average is around 15 litres.

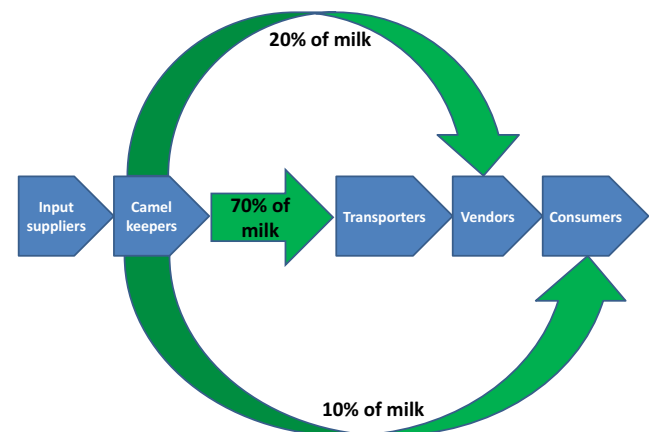
The main challenges they reported were:

- Communicating with potential buyers, because telephone and road networks are limited, leading to wastage
- Risk of diseases which reduces production and also kills camels
- Lack of veterinarians or advice on husbandry. Traditional livestock healers are used, but are not sufficiently knowledgeable.
- Animal medicines are expensive or simply unavailable.
- Low prices, and transactional relationships with vendors

INPUT SUPPLIERS

There is a severe lack of veterinary stores or services, and extension advice.

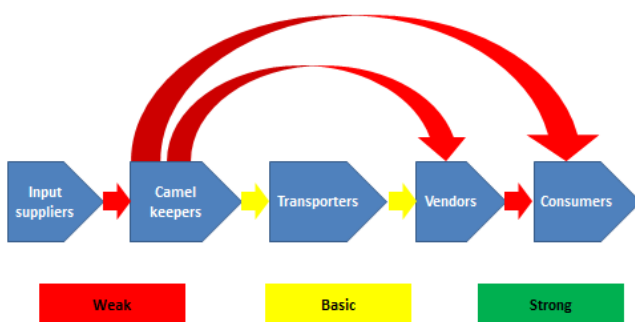
Material Flow and Routes to Market



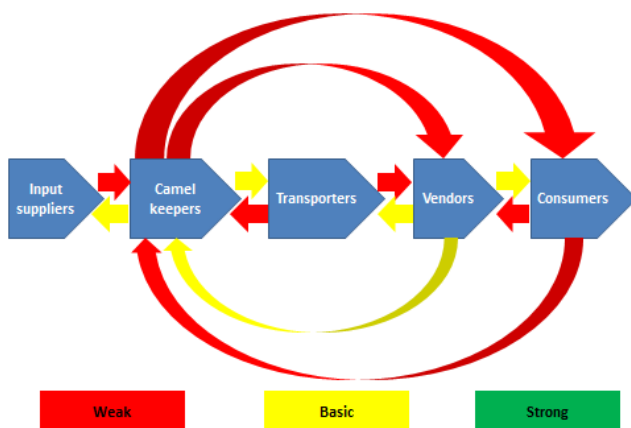
Relationships and Information Flows

The value chain is characterised by weak relationships and information flows. Meshark found that there is little trust between any of the members of the chain, resulting in predominantly transactional relationships. Producers are largely passive, waiting for vendors to contact them asking about supplies, and vendors manage supplies and keep their prices low by using several producers. Accordingly, information flows are also mostly weak. Transporters are critical as intermediaries between producers and vendors, but communication is only operational focusing on quantities, deliveries and price. Similarly, vendors are not listening to their consumers' concerns, as exposed in Meshark's focus groups, and a belief that they dilute camels' milk, so he found little shopper loyalty to particular vendors. Overall, the weak relationships and information flow, combined with lack of investment in the material flow, means that 50% of milk is wasted.

Map of Relationships



Map of Information Flow



FINDINGS AND RECOMMENDATIONS

Meshark concluded, "There is a lot of potential in building effective camel milk value chains, because currently everyone is acting as an individual business. This results in a lot of wastage and failure to respond to consumers' concerns, which (if addressed) would help expand the market and create value." Camel milk's freshness and perceived therapeutic qualities are closely related in the eyes of consumers, and they are willing to pay for both.

His analysis revealed two possible short term interventions:

1. Vendors, producers and transporters require training to understand and address the complaints from consumers. "... and they need to understand the concept of delivering value to consumers and the importance of trust in a chain."
2. Vendors need to improve their milk outlets including sheds, packaging and containers for carrying milk, especially since some containers lead to wastage as milk spoils faster.

He also proposed some longer term improvement projects:

1. Husbandry practices and veterinary services for camels require improvement, including research on better feed supplements. Diseases significantly lower production and producers have no idea on how to deal with these challenges.
2. There needs to be much wider research targeting a larger number of people especially non-Somalis who don't consume camel milk.
3. Camel milk producer alliances could be formed that can be linked with more distant consumers such as those in urban areas.
4. Consideration should be given to developing systems that allow further processing of camel milk and its export out of the country.
5. Refrigerated transport and storage of milk would be most helpful, right from milking to the point of sale, though this would require reliable electricity supplies.

LESSONS

In terms of conducting this study, Meshark found that people were willing to share information on how they conducted their business, even about their incomes, but their expectations were very high, and participants needed to understand that at this stage, that he was identifying potential improvements.

"The project has taught me to learn to talk to different actors; piece together information, and then create linkages between actors. Also, even within undeveloped chains like camel milk, it is important to understand the existing formal and informal arrangements along the chain."

Finally, he exposed how previous interventions have been based on assumptions rather than investigations, and also tended to adopt a supply chain approach of focusing on interventions that were production-driven rather than market-driven, which meant benefits had been limited.



Focus group discussion with camel milk producers



Australia Awards

AUSTRALIA AWARDS

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They aim to:

- develop capacity and leadership skills so that individuals can contribute to development in their home country;
- build people-to-people links at the individual, institutional and country levels.

Australia Awards' Short Courses are a tailored program that aims to create skills development through short-term post-graduate training courses of three months or less that are delivered in Australia and/or the country or region specific to the course.

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AUSTRALIA AWARD –AFRICA 2016 AGRIBUSINESS SHORT COURSE AWARD

The Agribusiness Short Course Award, designed by UQ International Development (UQID) specifically for Awardees from 10 African countries, provided learning experiences related to Agribusiness to enhance participants' ability to engage with and influence challenges regarding sustainable economic development in their home country, profession, workplace and community. Key features included using Value Chain methodology as the context around which the curriculum is delivered. The program balanced content and experiences to maintain engagement and interest, and enabled Awardees to access value chains of major Australian agricultural industries from a South-East Queensland training base. Furthermore, the course collaborated with African partners' during the course design phase to ensure participants were supported upon their return to Africa.

The course comprised of 8 x 1 week long learning modules: Week 1 – The Value Chain in Context; Week 2 – Value Chain Innovation in Practice; Week 3 – Smallholders and Small Business; Week 4 – Public Sector Perspectives; Week 5 – Analysing and Improving the Value Chain; Week 6 – Professional Skills for Agribusinesses; Week 7 – Business Development; Week 8 – Rapid Value Chain Analysis.

Awardees developed a Work Plan on Return (WPR) which detailed a unique project outlining an area of change that they will be addressing when returning to their organisation. These projects are devised with the expert knowledge and learnings gained from the course and enable the Course Leader, UQID and Australia Awards to monitor and provide feedback during various stages of the project.