



Mobile Camel Dairying in Kenya

Piers Simpkin, Tumal Orto and Prame Lesorogol
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A presentation on Ethical Camel dairying in Kenya - and should we go the same way as the cow?

- Background
- Examples of 3 production models in Kenya
- Need for Ethical camel dairying
- Challenges to ethical camel dairying
- The way ahead



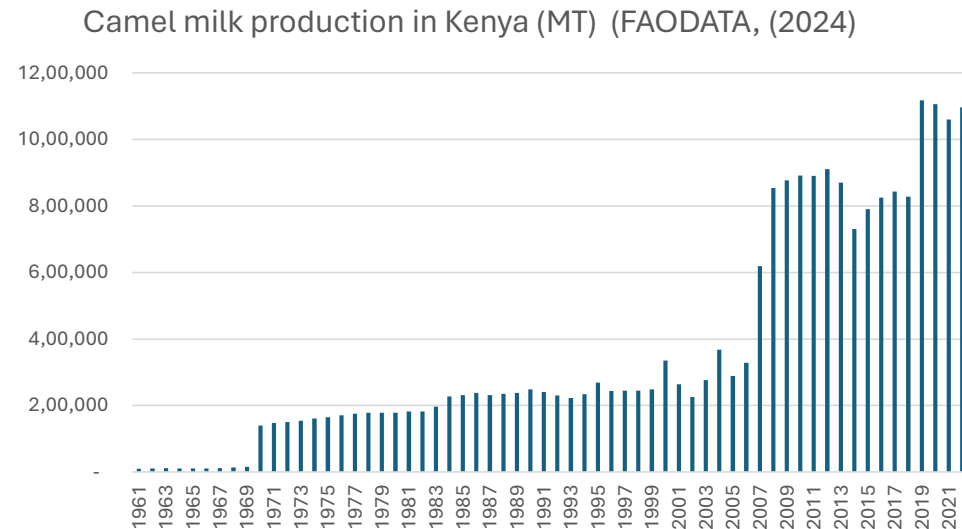
Background

- Pastoralist – non-equilibrium systems – mobility
- Camel evolved and adapted to climate variability and mobility
- Kenya - 4.2 million camels, 3 million litres milk per day valued at US\$ 13,636,860 per day. (KCA, 2021)

In Isiolo county alone:

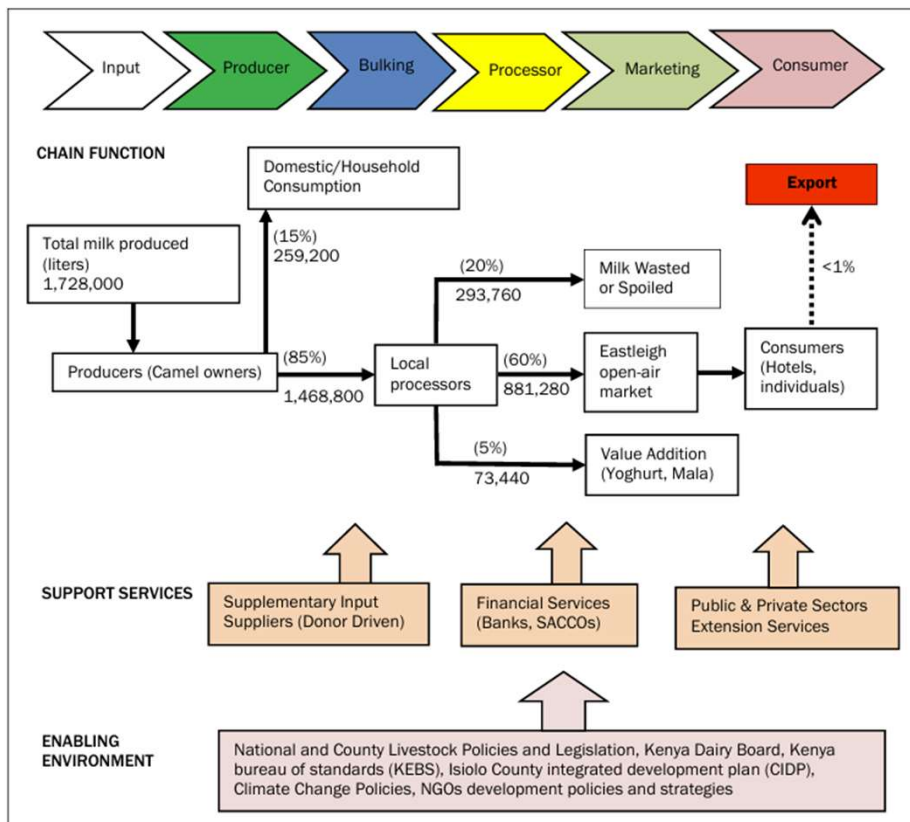
1.7 million litres produced annually;
85% is marketed to processors,
15% consumed by households,
but 20% goes to waste.

Machan et. al., (2022)



Three production models:

Model 1. Traditional / current Pastoralist system selling milk commercially (Isiolo example) *Machan et. al., (2022)*



“Traditional milk production and preservation methods may suffice for the domestic market, but does not conform to global standards.

The existing policy and regulatory frameworks are either outdated, or weak and fail to recognize camel milk as dairy milk

Despite the existence of 6 regulatory authorities, there are no control mechanisms in the camel milk value chain to enhance a viable business environment”.

Model 2. Spiers Enterprises – mobile dairy system to sell milk commercially

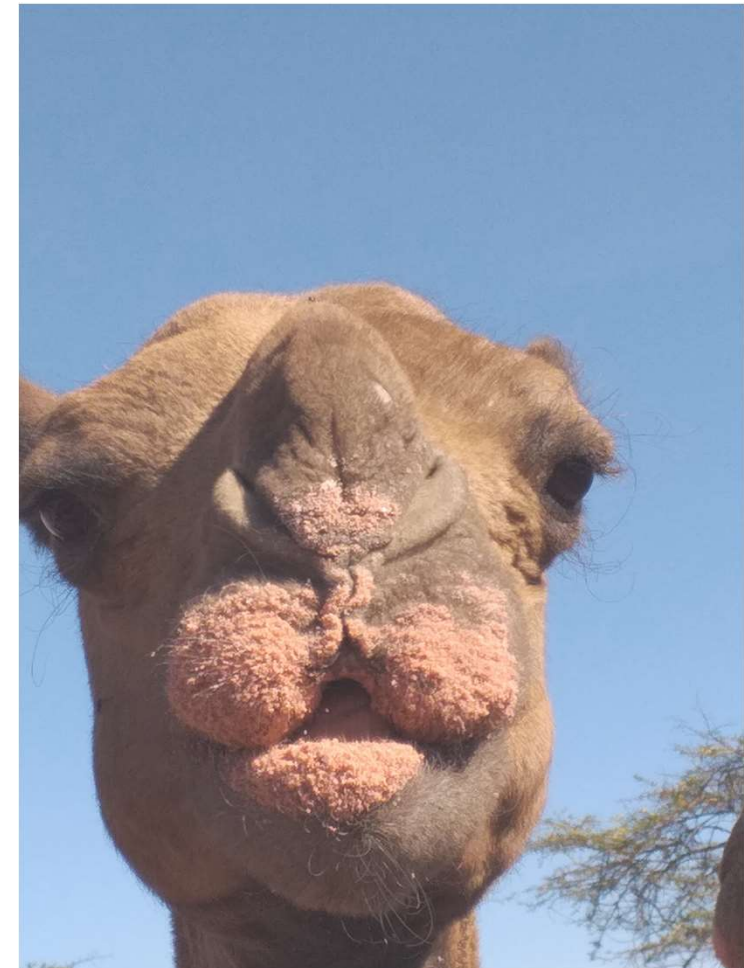
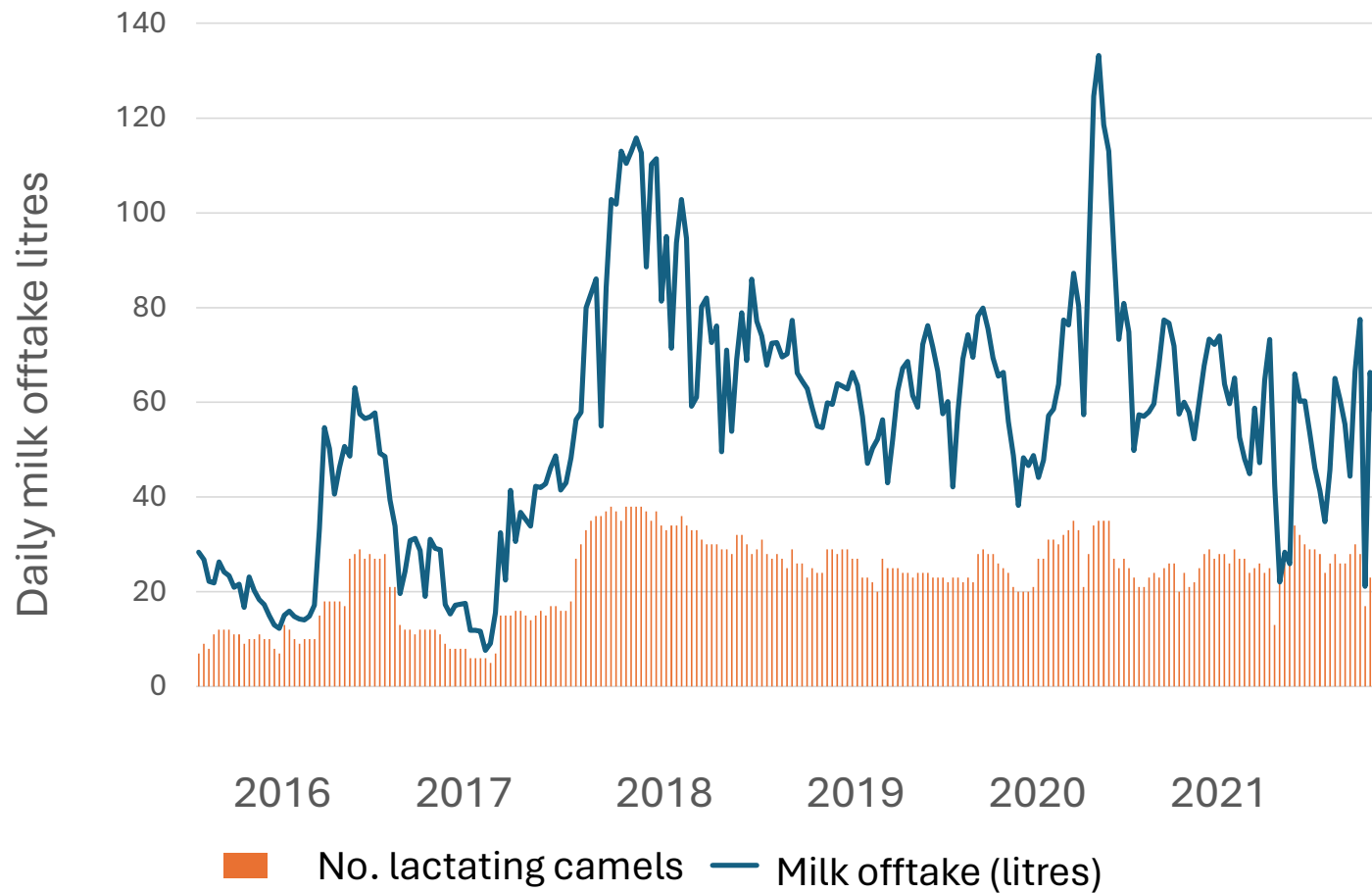
- Since 1990s
- Kajiado / Nakuru / Laikipia counties
- Free range
- Good Agricultural Practice
- Welfare and Ethics – Highly important



Model 2. Spiers Enterprises (cont) - Average figures over 6 years (2018 – 2023):

- Milking camels / day = 23 (5 - 38)
- Milk sales / year (litres) = 11,335 (6,400 – 16,900) at US\$ 1 per litre.
- Income per year (US\$) = 19,749 (13,832 – 26,179)
- Expenditure per year (US\$) = 21,778 (14,542 – 31,400)
- Operating Profit / **Loss** per year (US\$) = **-2,029** (-14,041 - +4,701)
- Herd / Asset growth / **Loss** per year (US\$) = 4,887 (**-13,919** - +23,214)
- Overall Herd Profit / Loss (US\$) = +2,601 (**-19,302** - +18,571)

Model 2: Total Daily Camel Milk Offtake (litres) Soysambu Ranch 2016-2023



Model 3: Tumul Orto- integrated livestock business

- North Horr, Marsabit County.
- Camel keeping since 1750.
- Too far from market to sell milk
- *“Yesterday I bought 1L of milk on my way to North @Ksh 100. It went bad - I could not even prepare tea. Actually 70% of milk is wasted in the grazing fields from Marsabit County.”*

Korka Guda Grazing Fields in Marsabit.



Model 3: Tumul Orto integrated livestock business

- Hybrid management – traditional free ranging with supplementation in dry/drought seasons.
- Milks the camels and feeds to his young sheep and goats to improve survival and growth rates.
- Sells the male sheep and goats at good prices .



Need for Ethical camel dairying and welfare

- Anti-microbial resistance and emerging zoonotic diseases.
- Good welfare of camels and employees / consumers increases productivity.
- Produce quality product – accurate advertising, aflatoxin and residue free – increases market



Opportunities

- Growing demand for health/y products
- Medicinally richer ???

- Culturally more acceptable:
 - Natural behaviour and production system – animal welfare
- Climate friendly:
 - Green technology (solar cold chains, “kuni” pasteurisers), low emissions.
 - Efficient converters (water and feed intake => milk output)



Challenges to Successful Ethical Camel Dairying and Camel Welfare in Kenya

- Traditional management systems have positive and negative welfare issues.
- Breed selection and productivity improvement in local camels is slow
- Non-standard Business model – Drive to maximise profitability vs resilient seasonality of camel dairying
- Reduced mobility, poor grazing management and competition for resources



The way ahead

- Maintain free-range system, -
“Healthy milk, Happy camels”
- ---
- Hybrid systems - supplement lactating females in dry/drought times.
- Research
- Establish improved breeding and management centres and systems for camels.
- Good Agricultural Practice





Thankyou

- Tumul Orto: tumalorto@yahoo.com
- Piers Simpkin: spsimpkin@gmail.com
- Prame Lesorogol: pramelesorogol@gmail.com

Questions