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Mapping the red meat market system to inform pastoral livestock breeding programmes in Kenya

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Abstract

Pastoral systems in Kenya occupy approximately 80 % of the total landmass, support over 20 % of the human population, and host nearly 75 % of the national ruminant population. These systems contribute over 80 % of domestically consumed beef, yet productivity and profitability remain low due to recurrent droughts, disease burdens, and inadequate feed quality and availability. Although growing market opportunities present significant potential for sectoral transformation, structural inefficiencies, limited infrastructure investment, high transaction costs, and weak actor integration undermine the pastoral red meat sector. This study assessed the inclusivity and performance of the red meat market system in Kenya's arid and semi-arid lands using a market systems development framework conceptualising markets as multi-actor arrangements comprising core exchange functions, supporting services (inputs, infrastructure, and service provision), and enabling environment (standards, regulations, and norms). Through a facilitated multi-stakeholder engagement with 50 representatives across the value chain, including producers, aggregators, traders, processors, consumers, input and service providers, and institutional enablers, a participatory market-system mapping was implemented. System blockages affecting actor groups were identified, and a root cause analysis was implemented to determine underlying systemic constraints in the red meat value chain. Findings revealed a high multiplicity of actors concentrated within the core value chain, with weakly defined linkages that limited effective coordination. The actor mapping presented groups comprising; six actors within the enabling environment, six within the core value chain (condensed from 19 sub-actor categories), and five within the supporting services. Limited capacity of livestock producers emerged as the primary systemic blockage affecting all actor groups. Additional bottlenecks included insufficient capacity to meet demand for inputs, services, and technologies; inadequate financing of market actors; and weak policy frameworks and compliance mechanisms. These bottlenecks create systemic inefficiencies that limit market integration, value addition, and overall sector performance. The importance of a systems-oriented approach to understanding actor interdependencies and strengthening linkages across value chain nodes was evident. Integrating market system insights into the design of livestock breeding and genetic improvement programmes could stimulate changes in pastoralist livestock productivity, reinforcing stakeholder mapping as a foundational step toward sustainable transformation of pastoral red meat systems in Kenya.

Keywords: Livestock, market-systems, pastoralists, value chain mapping

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