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Securing Kenya's Dairy Future:
The Case for a Cooperative Fodder Fund

Summary

The dairy sector in Kenya plays a crucial role in food security, employment, and economic stability, contributing 4% to the national GDP. However, climate-induced droughts have resulted in severe fodder shortages, which causes significant financial losses for dairy cooperatives and individual farmers. The fodder deficit leads to reduced milk yields, financial distress, and processor shutdowns, with annual losses exceeding KES 3 billion across key dairy cooperatives. This brief report provides an in-depth review of the impact of drought-related losses across cooperatives, highlights emerging patterns, and proposes a structured intervention through a cooperative fodder fund to enhance resilience.

Cooperative-Specific Analysis

1. Kiambaa Dairy Cooperative

Kiambaa Dairy Cooperative experiences significant fluctuations in milk production, ranging from 16,000 to 26,000 litres per day, with peak production occurring during favourable weather conditions. However, post-harvest losses account for 46% of total fodder, which leads to milk production deficits and financial losses. These fodder shortages result in annual losses of KES 91.5 million, with monthly losses reaching KES 19.6 million during drought periods. The cooperative's lack of a structured feed strategy further exacerbates its reliance on external fodder markets.

2. Ainabkoi Dairy Cooperative

Ainabkoi Dairy Cooperative faces significant challenges in milk production, with daily output ranging from 2,300 to 16,000 litres and severe fluctuations during dry seasons. The price per kilogram of milk also varies between KES 23 and 42, depending on supply constraints and seasonal trends. These challenges, primarily attributed to fodder shortages, result in annual losses of KES 10.5 million for the cooperative. Limited investment in fodder conservation further worsens milk supply disruptions.

3. Kirima Slopes Dairy Cooperative

Kirima Slopes Dairy Cooperative exhibits a high reliance on purchased fodder, with 90% of its dairy farmers dependent on external sources, making them vulnerable to price shocks and supply deficits. Milk production varies significantly, ranging from 12,000 to 64,000 litres per day, which indicates extreme seasonal variability. Drought-

related fodder losses contribute to a 50% decline in milk production, and that leads to economic instability. The absence of coordinated purchasing mechanisms for fodder storage further worsens supply fluctuations.

4. Olkalou Dairy Cooperative

Olkalou Dairy Cooperative experiences extreme fluctuations in milk production, ranging from as low as 8,172 liters during droughts to a peak of 62,000 liters in favorable seasons. The cooperative suffers significant financial losses due to fodder deficits, which amounts to KES 453 million annually—the highest among the surveyed cooperatives. Each month of limited fodder availability results in revenue losses that exceeds KES 55 million, further straining the cooperative's financial stability. The lack of a formalized fodder preservation strategy aggravates these seasonal supply gaps, and makes the cooperative highly vulnerable to drought-induced feed shortages.

5. Githunguri Dairy Farmers Cooperative

Githunguri Dairy Farmers Cooperative, one of the largest dairy cooperatives, experiences substantial fluctuations in milk production, ranging between 200,665 and 274,000 liters per day. However, fodder shortages pose a significant financial challenge, that leads to monthly losses exceeding KES 31.3 million and annual losses reaching KES 671 million. The cooperative lacks a structured fodder fund or bulk storage mechanisms, that leaves farmers vulnerable to market-driven price fluctuations and supply uncertainties. Its heavy reliance on rain-fed forage has proven unsustainable, highlighting the urgent need for a long-term feed strategy to ensure production stability and financial resilience.

6. Kenya Cooperative Creameries (KCC)

Kenya Cooperative Creameries (KCC) plays a vital role in Kenya's dairy value chain, as it processes over 285,500 litres of milk daily. However, drought-related supply shortages have severely impacted its operations, resulting in annual financial losses of KES 942 million and significantly affecting procurement and processing capacity. The underutilization of processing plants, which operate at only 40% capacity, has led to inefficiencies and increased operational costs. Additionally, the growing dependence on dairy imports continues to weaken local milk prices and reduce the competitiveness of Kenya's dairy sector, underscoring the urgent need for strategic interventions to enhance sustainability.

Emerging Lessons Across Cooperatives

The analysis of dairy cooperatives reveals several critical challenges affecting the sector. Extreme fluctuations in milk production, with reductions of up to 99% during dry seasons, indicates the urgent need for fodder stabilization strategies. The widespread fodder shortages have led to significant economic losses, with annual financial deficits ranging from KES 91 million to KES 942 million per cooperative, underlining the unsustainable burden of feed scarcity. A key contributing factor is the absence of structured fodder conservation and bulk procurement systems across all surveyed cooperatives, further worsening seasonal milk shortages. These supply inconsistencies have destabilized processors, and caused the closure of 22 processing plants and resulting in over 48,000 job losses across the dairy value chain. Additionally, the increasing reliance on dairy imports, particularly from Uganda—valued at KES 210 million in 2022—continues to weaken local milk prices and reduce the competitiveness of Kenya's dairy sector. To address these challenges the sector requires urgent, coordinated interventions that would enhance fodder security and strengthen the resilience of dairy cooperatives.



Recommendations and the Case for a Cooperative Fodder Fund

1. Establishing a Cooperative Fodder Fund

One way of addressing the persistent fodder shortages and stabilize milk production, would be to establish a Cooperative Fodder Fund. A Cooperative Fodder Fund would create a pooled financial mechanism that would enable cooperatives to invest in fodder bulking, conservation, and long-term storage, and assure a consistent feed supply throughout the year. The fund would enhance financial sustainability and reduce dependency on unpredictable external markets through requiring each cooperative to contribute a percentage of its milk sales revenue to a collective fodder reserve. Such a structured approach would prevent the economic losses caused by feed scarcity and improve the overall resilience of the dairy sector.

2. Scaling Up Fodder Production and Storage

Scaling up fodder production and storage would also be essential for ensuring year-round feed availability and mitigating the impact of drought on dairy cooperatives. Investing in county-level fodder banks would provide a stable and accessible feed supply, reducing seasonal shortages. Additionally, encouraging cooperatives to lease and allocate land for commercial fodder production would enhance self-sufficiency and decrease reliance on volatile external markets. To further strengthen fodder security, offering incentives for mechanized harvesting, preservation, and silage processing is crucial, as this would significantly reduce post-harvest losses, which currently stand at 46%. Implementing these strategies would promote long-term sustainability and resilience within the dairy sector.

3. Policy Reforms and Data-Driven Planning

Implementing policy reforms and adopting data-driven planning are essential for strengthening Kenya's dairy sector. Recognizing fodder as a formal agricultural value chain would facilitate policy alignment and attract financial support, and assure a more structured approach to feed management. Additionally, developing a centralized digital platform to monitor fodder demand, supply trends, and pricing variations would enhance decision-making and enable cooperatives to plan more effectively. Encouraging public-private partnerships (PPPs) would also be crucial, as it would attract investment in feed and fodder infrastructure, fostering innovation and sustainability. These measures would create a more resilient dairy industry, reducing the economic impact of fodder shortages and ensuring long-term sector stability.

4. Enhancing Cooperative Feed Management Strategies

Enhancing cooperative feed management strategies is vital for ensuring a stable and sustainable fodder supply. Implementing contract farming models, where cooperatives engage fodder producers through forward purchase agreements, would secure consistent feed availability while reducing market uncertainties. Additionally, training dairy farmers in climate-smart fodder production techniques would improve their resilience to drought impacts, enabling them to sustain milk production even during dry seasons. By leveraging their collective buying power, cooperatives can negotiate better fodder pricing and secure long-term supply contracts, reducing costs and mitigating the risks associated with feed shortages.

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