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KENYA NATIONAL WOMEN IN DAIRY REPORT

2026

Transforming Kenya's Dairy Sector Through Gender-Inclusive Development Evidence-Based Analysis and Policy Recommendations

Counties Covered:

Nakuru | Meru | Nyandarua | Uasin Gishu | Kiambu

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FOREWORD

Kenya's dairy sector is the backbone of livelihoods for millions of smallholder farming households. Women are at the heart of this sector — they provide the majority of labour, make critical day-to-day management decisions, and sustain household nutrition. Yet their contributions remain undervalued, under-resourced, and largely invisible in policy.

This report presents the most comprehensive national picture to date of women's participation, challenges, and aspirations in Kenya's dairy sector. It draws on primary data collected across all eight agroecological zones, focus group discussions with over 800 women farmers, and key informant interviews with sector stakeholders at county and national level.

We commend this report to national and county governments, development partners, financial institutions, and the cooperative movement as an urgent call to action.

Emmanuel Mwenda
Chief Executive Officer

Kenya National Farmers' Federation - KENAFF

EXECUTIVE SUMMARY

Dairy farming is Kenya's leading agricultural subsector, contributing approximately 14% of agricultural GDP and supporting over 1.8 million smallholder households. Women form the backbone of the sector, contributing up to 70% of on-farm dairy labour, including feeding, milking, animal health management, fodder preparation, and household nutrition support.[1]. This report presents one of the first comprehensive national assessments of women's participation, contributions, and empowerment within Kenya's dairy value chain. It highlights Kenya's opportunity to position itself as a global leader in gender-inclusive agricultural development. The report comes at a critical moment as the country prepares to participate in the International Year of the Woman Farmer 2026. The report is based on a study conducted among women dairy farmers across the largest dairy-producing counties: Nakuru County, Meru County, Nyandarua County, Uasin Gishu County, and Kiambu County. The study employed both qualitative and quantitative methods to generate comprehensive insights into women's participation, contributions, and experiences in the dairy sector. The assessment aimed to document and celebrate the achievements of women in dairy farming while also highlighting the structural, social, and economic challenges that continue to affect their empowerment and participation across the dairy value chain.

The study outlines a persistent "participation-control paradox" that characterises the political economy of the value chain. While 86% of women belong to dairy cooperatives and report 82% control over dairy income, structural power remains concentrated elsewhere. Only 23% own titled land, and just 19% have documented cattle ownership. Leadership positions in cooperatives remain overwhelmingly male, with some boards having only two women out of eight seats. Despite these constraints, women's contributions yield tangible gains: dairy income improves household food security (78%), dietary diversity (70%), and child nutrition (61%). However, 65%of women cite a lack of collateral as the main financial barrier, limiting investment in productivity improvements. Addressing gendered power asymmetries is not merely a social justice issue but also an economic necessity that can unlock productivity, strengthen food security, and drive inclusive rural transformation.

The path to transformation therefore requires moving beyond participation towards redistribution. Structural reforms, such as joint land titling, direct digital payments, minimum 40% leadership quotas in cooperatives, and gender-responsive by-laws, are essential prerequisites for equitable change. The report also highlights the need for innovative and accessible financing models to enhance women's access to credit, productive assets, and investment opportunities across the dairy value chain. In conclusion, the report calls for gender-responsive policies, stronger women's leadership and representation within cooperatives, and more inclusive dairy governance systems that align women's contributions with equitable access to ownership, decision-making, and economic benefits.

Recommendations for Policy Makers and Practitioners

[1] *Note on data sources: Sector-level figures in this paragraph — including the 14% contribution to agricultural GDP, 1.8 million smallholder households, and women's estimated 70% share of on-farm dairy labour — are drawn from secondary sources (Ministry of Agriculture and Livestock Development, 2025; Kenya Broadcasting Corporation, 2026; International Livestock Research Institute, 2025) and are not directly measured in this study's sample of 129 respondents. Study-derived findings are clearly labelled throughout the report.*

Transforming Kenya's dairy sector requires moving beyond symbolic participation towards the structural redistribution of power, assets, and decision-making. The priority for policymakers is to enforce, finance, and reform the law, while practitioners must tailor interventions to county-specific realities. With the International Year of the Woman Farmer approaching, Kenya has a unique opportunity to lead globally in gender-inclusive dairy development.

In the short term, government and sector actors should prioritise women's economic inclusion through land, finance, and governance reforms. Counties should fast-track joint land titling, reduce registration fees for women smallholders, and strengthen legal support for inheritance and ownership rights. Cooperatives must adopt mandatory gender quotas and reserve leadership positions for women, with compliance linked to government support and market incentives. Financial institutions, SACCOs, and cooperatives should expand dairy-specific loans, using flexible collateral such as livestock, milk delivery records, and group guarantees.

Extension and market systems also require urgent reform. Counties should recruit and train more female extension officers, ensure gender-responsive service delivery, and link performance targets to outreach to women farmers. County milk-pricing committees should include mandatory representation of women and introduce transparent price-setting mechanisms. Cooperatives and processors should shift to direct digital payments to women via mobile money and expand women's access to digital literacy, smartphones, and financial management training.

Over the medium term, counties should establish gender-responsive agricultural policies with dedicated budgets and accountability frameworks. Support for women-led value-addition enterprises, including subsidised feed, milk coolers, and processing equipment, would improve productivity and incomes. Women-centred collective marketing groups should also be strengthened to enhance bargaining power, reduce post-harvest losses, and connect women to premium markets. Community dialogue programmes that engage men, religious leaders, and local institutions are equally important for transforming harmful gender norms and promoting shared decision-making.

County strategies should reflect local barriers and opportunities rather than a uniform national approach. In Nyandarua, priority should be given to land reform, joint titling, and legal support for women's land rights, as land ownership underpins economic empowerment. In Kiambu, policies should strengthen women's asset security alongside income gains to reduce vulnerability to market shocks. Nakuru requires governance reforms, including cooperative leadership quotas and household dialogue programmes, to ensure that asset ownership translates into decision-making power. Meru and Uasin Gishu should invest in youth-inclusive dairy programmes and mentorship models that support emerging women farmers. Across all counties, gender-disaggregated data must guide planning, budgeting, and resource allocation.

In the long term, Kenya should enact a binding National Women in Agriculture Policy with clear targets, funding, and enforcement mechanisms. Legal reforms should formally recognise livestock as collateral and strengthen women's community land rights. A national Women in Dairy Credit Guarantee Fund, gender-inclusive value chain standards, and a sector-wide target of 50% women's representation in dairy leadership by 2030 would provide the structural foundation for lasting transformation. Ultimately, sustainable dairy development depends on recognising women not only as producers but also as equal owners, leaders, and decision-makers.

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SECTION 1: BACKGROUND AND INTRODUCTION TO THE KENYA DAIRY SECTOR

1.1 The Kenya Dairy Sector: An Overview

Kenya's dairy sector is among the largest in Africa. Kenya is the second-largest milk producer on the continent after Egypt. In 2025, the country produced a record 5.5 million tonnes of fresh milk (Kenya National Bureau of Statistics, 2026). Formal processor intakes surged to 522.6 million litres in the first half of the year and are projected to exceed 1 billion litres for the full year (Ministry of Agriculture and Livestock Development, 2026). Smallholder farmers account for roughly 80% of national output. The sector contributes about 4.5% to GDP, 14% of agricultural GDP, and 44%of livestock GDP, supporting over 700,000 direct jobs (Ministry of Agriculture and Livestock Development, 2025). Kenya's per capita consumption is among the highest in Africa at 92 litres annually, and demand is expected to double by 2030 (Kenya Dairy Board, 2025b). Milk consumption in Kenya is dominated by raw milk through informal channels. Processed items include pasteurised fresh milk, UHT milk, yoghurt, butter, cheese and ice cream. Upcoming innovations include chocolate production in new plants, such as Namelok Dairies in Narok (Narok County Government, 2026). Milk exports from Kenya target the Middle East, South Sudan, and Somalia, with the Kenya Dairy Board working to gain access to the EU and DRC markets under the African Continental Free Trade Area (Kenya Dairy Board, 2025a). The top-producing counties are Kiambu, Meru, Nyeri, Nakuru and Uasin Gishu. Meru has risen to second place, largely driven by the Meru Dairy Cooperative Union, which now handles nearly one-third of all formally marketed milk in the country (Meru Dairy Cooperative Union, 2026). The Rift Valley region remains a major belt, while Narok and Kajiado are emerging as important pastoral-based zones (Kenya Dairy Board, 2025a).

The dairy sector in Kenya faces several challenges; over 50% of milk is sold informally, creating quality-control risks. Annual post-harvest losses amount to 175 million litres, worth Sh 7.9 billion (Ministry of Agriculture and Livestock Development, 2025). High feed costs, aflatoxin contamination, inadequate breeding stock and climate shocks remain persistent constraints (International Livestock Research Institute, 2025). Several opportunities exist to grow the sector, including the formalisation of milk marketing, value addition, and export expansion, all of which imply the need for substantial investment. This has led to significant investment by the Kenyan government in the sector, including interventions such as Sh 1.45 billion for 230 milk coolers across 40 counties, a Sh 5 billion livestock value chain fund, and a ban on powdered milk imports (Government of Kenya, 2025). At the county level, Nandi opened a Sh 1.2 billion Kabiyet UHT plant (Nandi County Government, 2025), while Narok attracted a factory with a 200 000-litre daily capacity (Narok County Government, 2026). Modernisation of New KCC factories in Sotik, Eldoret and Nyahururu is also underway (New KCC, 2026). The MoreMilk 2 project, a partnership between the Kenya Dairy Board and ILRI, aims to improve the safety of milk in the informal market (International Livestock Research Institute, 2025).

Meeting the National Dairy Master Plan target requires production to exceed 18 billion litres by 2030, creating substantial room for investment in processing, cold chains, and improved animal husbandry (Kenya Dairy Board, 2025b). These investments will require support from both the public and private sectors, emphasising the need for enhanced institutional partnerships. The sector has therefore attracted several players that ensure the value chain's functionality and formality, including the Kenya Dairy Board, the Ministry of Agriculture, county governments, and research bodies such as ILRI. Major processors include New KCC, Brookside, Bio Foods and GDFCS, while cooperatives such as the Meru and Nandi dairy unions are increasingly central to farmer aggregation and collective bargaining (Meru Dairy Cooperative Union, 2026; Nandi County Government, 2025).

SECTOR SNAPSHOT (2025/26)

5.5M tonnes milk produced | Sh 230 billion sector value | 700,000+ direct jobs

80% of output from smallholders | Sh 1.45 billion invested in 230 milk coolers

175 million liters annual post-harvest losses worth Sh 7.9 billion — a major opportunity

1.2 Women and the Dairy Sector

Kenya's dairy industry, valued at over Sh230 billion, continues to rely heavily on women, who make up an estimated 50% or more of the sector's workforce (Kenya Broadcasting Corporation, 2026). Despite their numerical dominance, women's participation is marked by a stark paradox: they provide much of the labour yet face systemic barriers to ownership, decision-making, and market access. Across Kenya's dairy heartlands, women are responsible for daily milking, household nutrition, and the bulk of direct milk sales. Despite their operational presence, women remain largely excluded from land ownership, credit, and formal market channels. Research on dairy cooperatives reveals economic, personal, policy, and sociocultural barriers that prevent women from engaging meaningfully in decision-making processes (Mukeku, 2024). A recent study found that women's limited agency and their "triple role" of productive, reproductive, and community work severely constrain their participation in post-production nodes of the value chain (Odhiambo, 2024). Additionally, while herd-health intensification practices have contributed to increased dairy productivity, studies have shown that they can also reduce women's ownership and control over livestock assets and dairy income. As dairy farming becomes more commercialised and profitable, men often take over decision-making and control of income that were previously managed by women, highlighting the importance of designing gender-sensitive livestock interventions that safeguard women's economic participation and decision-making power (Maina et al., 2024).

1.3 Recent Initiatives and Empowerment Models

Several interventions are beginning to address these gaps. An ILRI-led Sh37.5 million programme trains women farmers in modern husbandry across six counties and links them to formal markets (ILRI & FarmBizAfrica, 2026). The NAVCDP-BRIDGES programme, supported by the Gates Foundation, focuses explicitly on women's economic empowerment within dairy value chains (Gates Foundation & National Agricultural Value Chain Development Project, 2026). Regulatory efforts to upgrade the informal sector, which handles about 70% of Kenya's milk, increasingly incorporate gender considerations (The Standard, 2025). Dairy cooperatives have been particularly transformative: the Meru cooperative has recently grown in membership, enabling women to negotiate fair prices, access financial services, and achieve financial independence (Kenya News Agency, 2025). The Wakulima Dairy Ltd. model showed that long-term cooperative membership improved women's incomes, food security, dairy productivity, asset ownership, and economic resilience by providing access to training, credit, markets, and control over dairy income (Walton et al., 2012).

Photo 1: A woman farmer manages dairy cattle on a smallholder plot in Kenya's Rift Valley. Photo: KENAFF / AfriCCLAN, 2026

SECTION 2: ABOUT THE STUDY

This study was commissioned by the Kenya National Farmers' Federation (KENAFF) as part of efforts to document and strengthen women's participation, contributions, and empowerment within Kenya's dairy value chain. The assignment was undertaken by AfriCCLAN (The Africa Centre for Climate, Agri-Food and Nature). The study informs deliberations in line with the International Year of the Woman Farmer 2026. It supports Kenya's positioning as a global leader in gender-inclusive agricultural transformation ahead of the 2026 World Farmers' Organisation (WFO) General Assembly.

The study documents women's roles and contributions across the dairy sector, analyses barriers and opportunities affecting women through a political economy lens and provides evidence-based policy recommendations to advance a more inclusive and equitable dairy industry. The study further showcases transformative approaches that strengthen women's economic empowerment, leadership, and participation in farmer organisations and agricultural value chains.

The study serves four interconnected functions:

#	Function	Description
1	Evidence Base	Gender-disaggregated data for policy and investment decisions
2	Visibility Instrument	Celebrating women's leadership, innovation, and enterprise
3	Learning Resource	Practical insights for counties, cooperatives, and development partners
4	Advocacy Tool	Policy-ready recommendations for national, regional, and global platforms

2.1 Objectives

1. Document and quantify women's contributions across Kenya's dairy value chain — covering numbers and age distribution; scale of enterprises (subsistence to commercial); geographical spread; market participation; cooperative engagement; and socioeconomic impact at household, community, and national levels.
2. Celebrate and amplify success stories of women dairy farmers, processors, cooperative leaders, and agripreneurs who serve as role models for broader participation.
3. Analyse structural and systemic barriers limiting women's access to land, finance, extension services, markets, and leadership within dairy cooperatives and institutions.
4. Generate evidence-based, politically grounded policy recommendations supporting inclusive growth, climate-smart practices, and gender-responsive value chain development.
5. Produce high-impact advocacy materials including the flagship report and a professionally produced 3-minute advocacy video for the 2026 WFO General Assembly launch.

6. Position Kenya as a global leader in inclusive dairy transformation in the context of the IYWF.

2.2 Geographic Scope and Rationale

The five focus counties have been selected to represent major dairy-producing counties in Kenya while ensuring diversity in production systems.

County	Key Dairy Characteristics	Gender Inclusion Dimension
Uasin Gishu	Large-scale commercial dairy; strong cooperative base; zero-grazing systems	Women in management of large cooperatives: Access to formal finance
Nakuru	Mixed commercial and smallholder; proximity to Nairobi markets; strong processor linkages	Women processors and milk bars: market participation in formal chains
Kiambu	Peri-urban smallholder; high female labour participation; proximity to processors	Women's leadership in village cooperatives: land tenure issues
Nyandarua	Highland smallholder; strong cooperative culture; semi-commercial scale	Women's ownership of small herds; subsistence-to-commercial transitions
Meru	Emerging dairy zone; agripreneurship; climate variability challenges	Young women agripreneurs: climate adaptation practices

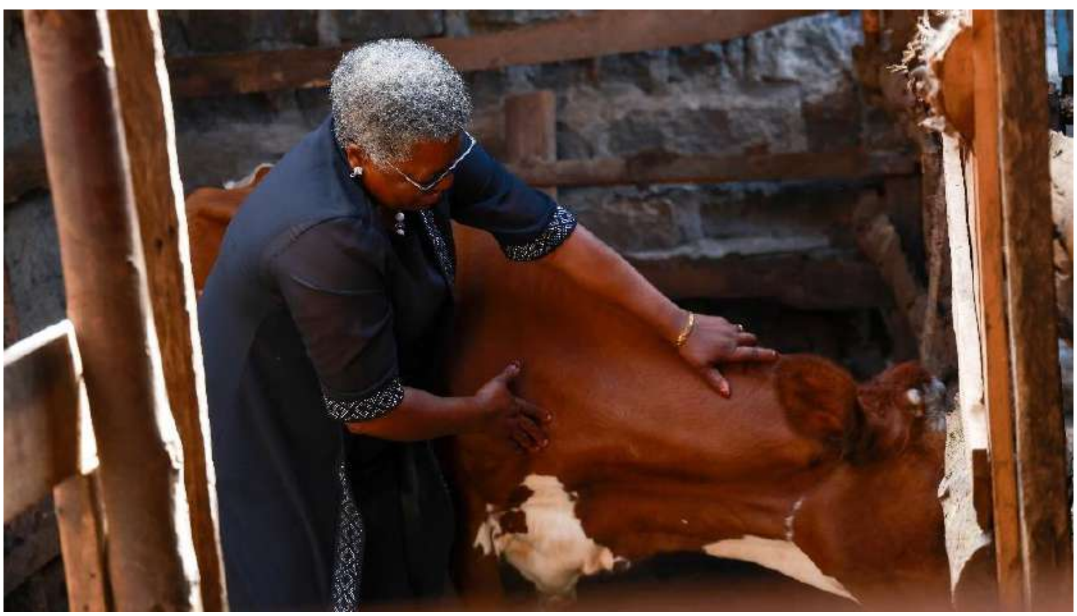

Photo 2: Members of a women's dairy SACCO inspecting her cow in Rift Valley, Kenya. ***Photo: KENAFF / AfriCCLAN, 2026***

SECTION 3: METHODOLOGY AND TECHNICAL APPROACH

The study employed a mixed-methods, participatory, and gender-transformative methodology[2]. This approach was designed to generate both rigorous quantitative evidence and rich qualitative narratives, ensuring the report is data-credible, story-compelling, and policy-relevant. The methodology is anchored in four principles:

- Participation: FGD participants were consulted on their experiences and priorities; findings were triangulated across methods. Future iterations of this research should incorporate formal participatory validation stages in which women farmers review and respond to draft findings before publication.
- Intersectionality: Analysis accounts for age, location, production scale, cooperative membership, and economic status.
- Political Economy Sensitivity: Findings are contextualised within real-world power structures and institutional dynamics.
- Ethical Integrity: All data collection upholds informed consent, confidentiality, do-no-harm principles, and safe-space guarantees.

3.1 Quantitative Data Collection

Gender-disaggregated surveys were administered to at least 129 women farmers across five counties (Nakuru 31, Meru 29, Nyandarua 26, Uasin Gishu 22, and Kiambu 21) using stratified random sampling to ensure representation across production scales (subsistence, semi-commercial, commercial) and cooperative membership status.

The survey captured enterprise profiling; asset ownership and control; market participation; cooperative engagement; access to financial and extension services; and household-level economic impact.

3.2 Qualitative Research

Qualitative methods aimed to add depth, nuance, and human voices to the statistical findings:

- 8 Focus Group Discussions (FGDs): 2 per county with women farmers, processors, and cooperative members. Topics include production challenges, climate risks, market access, labour burdens, social norms, technology adoption, and collective action.

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[2] ***Terminology note:*** *This report uses three related but distinct terms. Gender-inclusive refers to equal access to resources, services, and opportunities regardless of gender. Gender-responsive refers to programme and policy design that recognises and accounts for gender differences in needs, constraints, and roles. Gender-transformative refers to approaches that actively challenge and seek to restructure the underlying power relations, social norms, and institutional arrangements that produce gender inequality. Where these terms appear in this report, they are applied according to these distinctions. The methodology is described as gender-transformative in its ambition; specific tools and recommendations are labelled gender-responsive or gender-inclusive where appropriate*

- 24 Key Informant Interviews (KIIs): With cooperative leaders, county agriculture officials, extension providers, financial institutions, and private sector actors. Topics cover institutional perspectives on gender inclusion, governance, service delivery gaps, investment dynamics, and policy frameworks.
- 5 Enterprise and Leadership Case Studies: 1 per county documenting life histories and enterprise trajectories of outstanding women leaders, selected for diversity in scale, enterprise type, leadership role, and socioeconomic context.
- 1 Documentary Video: 3-minute advocacy video for the 2026 WFO General Assembly.

Political Economy Analysis:

PEA tools were used to examine how power, interests, institutions, and incentives shape women's participation in the dairy value chain. The analysis covered: land tenure regimes; cooperative by-laws and governance; credit and collateral systems; power relations in pricing and benefit-sharing; and political will and enabling factors at county and national levels.

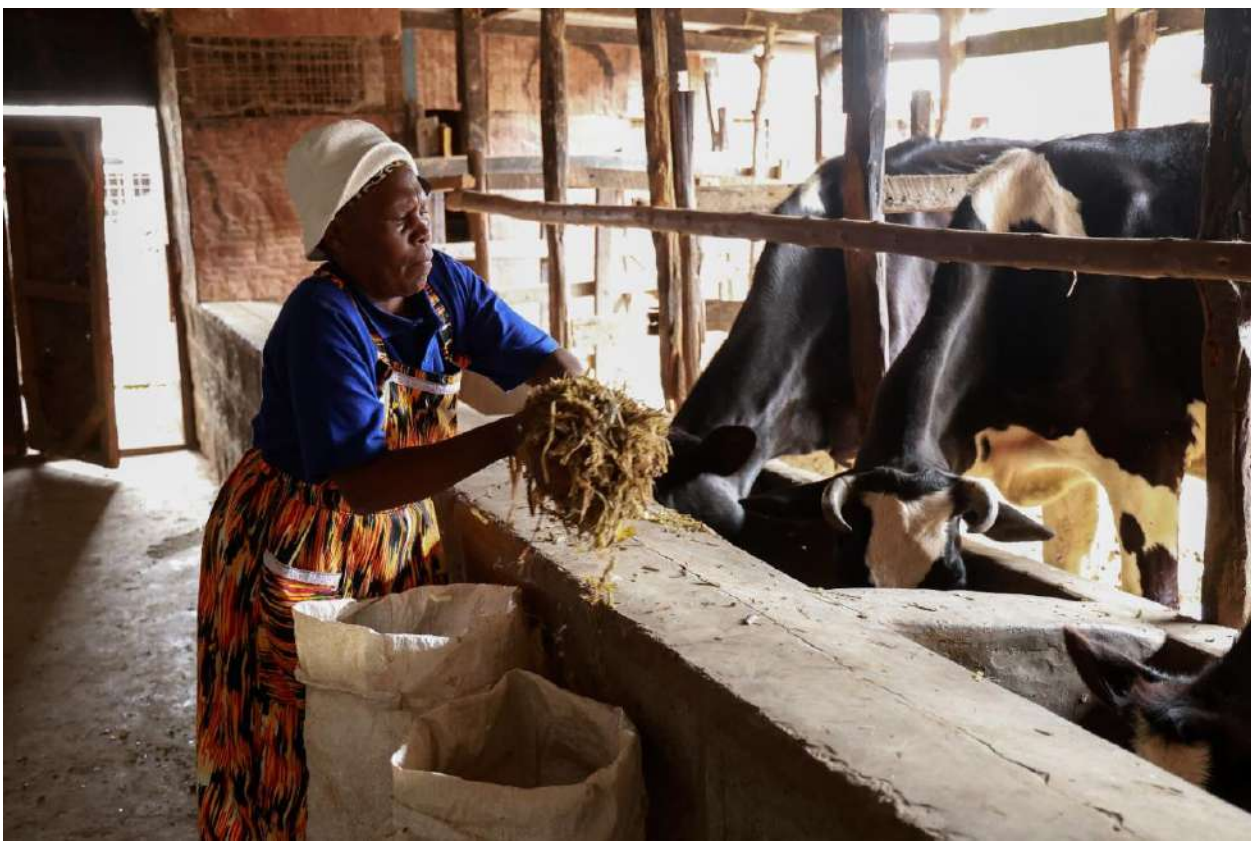


Photo 3: A Woman dairy farmer in Rift Valley feeding her dairy at a dairy shed. ***Photo: KENAFF / AfriCCLAN, 2026***

SECTION 4: FINDINGS – GENDER DISAGGREGATED DATA AND ANALYSIS

4.1 Demographic Profile

In dairy production systems, literacy enhances decision-making on animal health, feeding, breeding, milk hygiene, and income management, while also strengthening women's confidence and participation in cooperative governance and household decision-making. As dairy systems become increasingly commercialised and technology-driven, education and literacy become essential for improving productivity, market participation, and leadership opportunities. Findings from this study indicate relatively high literacy and education levels among women dairy farmers. The average respondent was 46.6 years old (median 45.5), and 70% had attained at least secondary education. This suggests that women engaged in dairy farming possess substantial human capital that could be more effectively leveraged to strengthen productivity, leadership participation, adoption of improved dairy practices, and engagement with cooperatives and markets. Consistent with this, Bitange et al. (2025) reported that education level and age significantly influence women's participation in the dairy sector, with younger and more educated women more likely to pursue leadership roles, while older women with lower educational attainment face compounded disadvantages.

> *"Economically, women are the main producers of milk for both commercial and home use, though some sell through their husbands' accounts rather than directly. Socially, when women are empowered, they enhance interactions in the community — they participate more in chamas and communal welfare groups, which strengthens social cohesion. At the household level, women are the key source of dairy labour."*
>
> — Nyandarua County Officer (KII)

Demographic Data

Age Distribution:	Education Levels:	Marital Status:
Youth (<35 years): 23 respondents (17.8%) Middle-aged (35-55 years): 74 respondents (57.4%) Older (55+ years): 29 respondents (22.5%) Age range: 25-81 years; Mean: 46.6 years; Median: 45.5 years	Secondary: 54 (41.9%) Primary: 35 (27.1%) Certificate/Diploma: 26 (20.2%) Degree+: 10 (7.8%) No formal education: 4 (3.1%)	Married: 86 (66.7%) Single: 23 (17.8%) Widow: 15 (11.6%) Divorced/Separated: 2 (1.6%)

KEY INSIGHT: 70% have secondary education or higher, providing a strong foundation for technology adoption and business management.

4.2 Dairy Enterprise Profile

The gender productivity gap in the dairy sector is not driven by differences in capability but by deeply embedded structural inequalities that restrict women's access to productive assets, financial services, markets, information, and the decision-making power required to transition from subsistence to profitable commercial dairy farming.

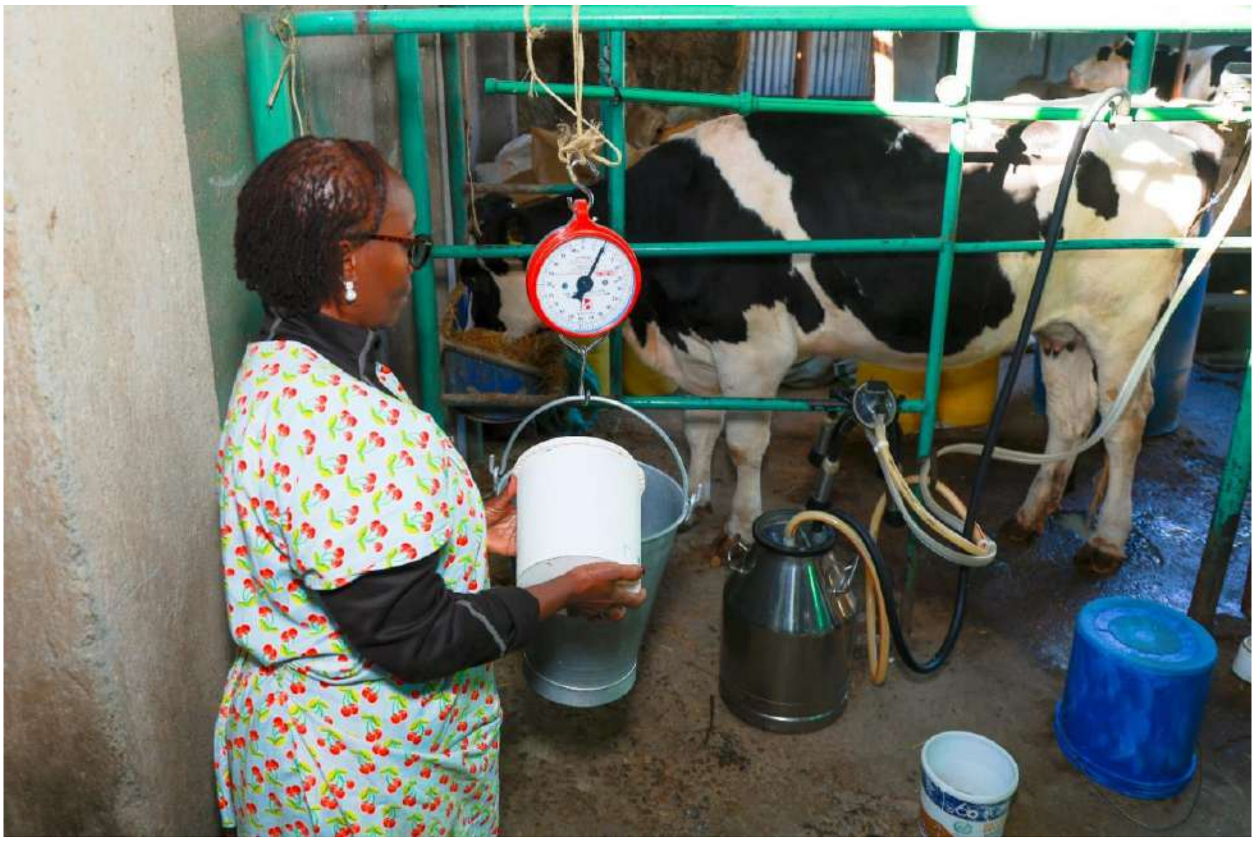


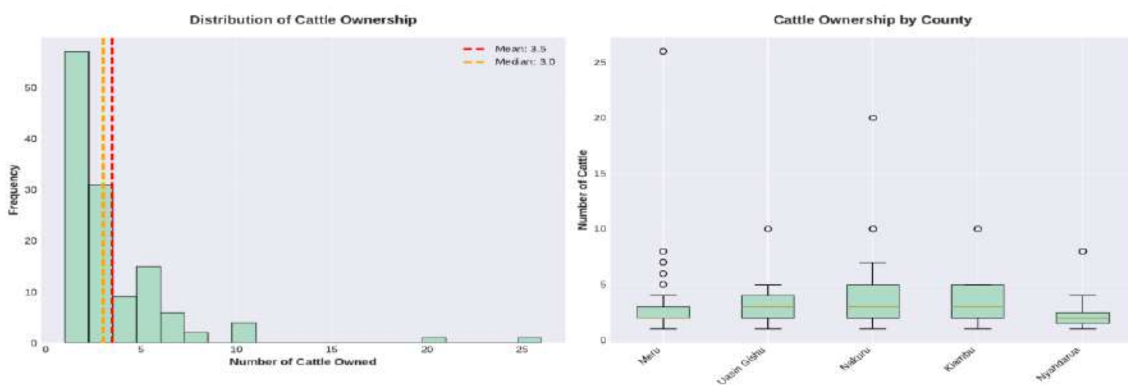
Photo 4: Women dairy farmers weighing and checking milk quality before delivering morning milk at a cooperative collection point in Nakuru County. ***Photo: KENAFF / AfriCCLAN, 2026***

The study findings show that the target women dairy farmers operate smallholder and semi-commercial dairy enterprises, reflecting the broader structure of Kenya's dairy sector, which remains predominantly dominated by small-scale production systems. On average, the women farmers surveyed owned 3.5 cattle per household, with herd sizes ranging from 1 to 26 animals. Average daily milk production stood at 23.3 litres per farmer, although the median production was lower at 15 litres per day, indicating that many women continue to operate at relatively modest production levels[3]. Existing evidence shows that women generally manage smaller herds and are more concentrated in subsistence-oriented dairy production systems. Maina et al. further observed that many women farmers operate under low-input, low-output production systems due to financial constraints, resulting in lower productivity levels. Women also face limited access to quality feed, veterinary services, extension support, and productive resources, which contribute to significantly lower milk yields per cow compared with male farmers (Mukeku, 2024).

"I run an agrovet shop and provide veterinary services including artificial insemination, treatment, vaccination, and advisory support. The majority of my clients are smallholder dairy farmers, and a large number are women who manage the day-to-day care of their cows"—Agrodealer Meru county.

Cattle Ownership:	Milk Production:	Enterprise Scale Classification:
Mean herd size: 3.5 cattle per farmer Median: 3 cattle Range: 1-26 cattle Total across sample: 438 cattle	Mean daily production: 23.3 liters per farmer Median: 15 liters per day Range: 3-120 liters/day Total sample daily production: 2,996 litres	Subsistence (<5 L/day): 3 farmers (12%) Semi-commercial (5-20 L/day): 16 farmers (64%) Commercial (>20 L/day): 6 farmers (24%)

Figure 1: Cattle Ownership Distribution



[3] *Note on enterprise scale classification: The distribution by scale below (subsistence/semi-commercial/commercial) is based on 25 respondents for whom complete daily production data was recorded, representing a sub-group of the full 129-respondent sample. The reported percentages (subsistence 12%, semi-commercial 64%, commercial 24%) should be interpreted as the scale profile of this production-data sub-group. The n=25 reflects data availability at time of analysis — respondents who could not report a consistent daily production figure were excluded from scale classification. The median daily production of 15 litres per day (across all 129 respondents) remains the most reliable whole-sample indicator of typical enterprise scale.*

IMPLICATION: Among the 25 respondents for whom daily production data was recorded, 88% operate at subsistence or semi-commercial scale [Note: sub-sample n=25 of 129; see methodological caveat in Section 3] — suggesting significant growth potential with targeted support.

4.3 Asset Ownership and Control — The Critical Barrier

Patriarchal inheritance customs severely restrict women's land ownership, as property rights are typically passed down through male lineage, leaving women with only secondary use rights (Kenya News Agency, 2025). The study found persistent gender inequalities in land and livestock ownership among the farmers studied, with critical implications for productivity, investment, and economic empowerment. Only 23.2% of surveyed women owned land titles individually, while 24.0% reported joint land ownership with male counterparts. A significant proportion of women relied on family land without formal ownership rights (27.2%), whereas 19.2% occupied land under customary or untitled arrangements. Although only 1.6% of respondents leased or rented land, this finding highlights a potentially underutilised opportunity to expand women's access to productive land through innovative and secure leasing arrangements.

The findings further showed that only 19% of women had documented proof of cattle ownership, reinforcing broader gendered patterns of asset ownership in the dairy sector. Limited ownership documentation constrains women's ability to use livestock as collateral for credit, access formal financial services, or make long-term investments in dairy productivity. Similar findings have been reported by Maina et al. (2024), who found reduced women's livestock asset ownership, and by Mukeku (2024), who reported that women operate on marginal land with smaller herds, both of which function poorly as collateral, effectively barring them from formal credit and agricultural finance. The implications of low asset control for productivity and investment are profound. Without secure land tenure, women cannot invest in long-term improvements such as improved pasture, water systems, or zero-grazing units. Limited cattle numbers and lack of credit constrain the acquisition of higher-yielding breeds, quality feeds, and veterinary inputs, perpetuating low milk yields per cow (Odhiambo, 2024). This traps women in a low-investment, low-productivity subsistence cycle, while men leverage greater asset control to commercialise, invest, and access lucrative formal markets. Addressing these structural disparities through gender-responsive land reform and targeted financial products is therefore essential for unlocking women's productive potential in the sector.

CRITICAL FINDING: Only 23% own titled land. 77% lack land titles — severely limiting credit access and long-term investment.

4.4 Income Control: High Performance, Fragile Foundation

Women demonstrated substantial control over dairy income within the study households, indicating that the dairy value chain may offer stronger opportunities for women's economic agency than many other agricultural enterprises. On average, women controlled 82% of dairy income, while the median was 100%, suggesting that in more than half of the households surveyed, women retained complete control over dairy earnings. Furthermore, 63% of women reported full (100%) control over dairy income. Findings on decision-making further reinforce women's prominent role in dairy-related financial management. Approximately 40% of women reported making income-related decisions independently — defined as deciding alone without consulting a spouse or other household member. A further 31% indicated joint decision-making with their spouses, and 24% reported being the primary but not exclusive decision-maker — meaning they lead on decisions but involve a spouse or family member. These three categories account for 95% of respondents; the remaining 5% (approximately 6 respondents) either did not respond to this item or reported that income decisions were made by another household member, typically the male household head.

> *"Women care for animals, ensuring milk availability for their households. Daily milk sales provide independence and allow women to support household and community activities. The reliability of dairy income — even in small amounts, on a daily basis — gives women a financial autonomy that seasonal crop income cannot match."*
>
> — Uasin Gishu Dairy Group Official (KII)

Women's control over dairy income is a distinctive empowerment win with proven developmental dividends. Unlike other agricultural commodities, where marketing channels are male-dominated, the informal milk trade provides women with daily cash flows over which they retain significant control. Recent research and targeted development programmes show that when women gain control over dairy income through cooperatives, training, and market access, household welfare and community resilience improve markedly. In Nyandarua County, women traders report that dairy income has enabled them to educate their children and invest in improved farming practices (Kenya Broadcasting Corporation, 2026). Evidence further shows that income managed by women is more likely to be reinvested in schooling, healthcare, and nutrition, generating wider community benefits (Walton et al., 2025).

Nevertheless, the study also identified an important vulnerability: payment systems that channel dairy payments into husbands' accounts have the potential to weaken women's effective control over income, despite their central role in dairy production and management. The gains from economic control could be short-term, and women will only continue to benefit if the commercialisation and scaling model favours women. Global evidence confirms that commercialisation frequently undermines women's economic gains in agricultural commercialisation. In Uganda, a rice commercialisation programme significantly reduced women's control over income while strengthening men's (World Bank, 2014). Similar erosions of women's decision-making on harvest use occurred in Ethiopia and Nigeria (World Bank, 2014). Safeguards must address these trade-offs. Commercialisation interventions must embed explicit gender provisions to prevent men from capturing benefits as value chains develop (World Bank, 2014). Without such safeguards, productivity gains risk deepening gender inequalities.

CRITICAL DATA: Mean control: 82% of dairy income; Median control: 100%; Full control (100%): 63% of women; Decision-making: 40% alone, 31% jointly, 24% primarily alone

POSITIVE FINDING: Women control 82% of dairy income on average — far higher than most agricultural value chains.

CAUTION: The *payment paradox* — payments routed to husbands' accounts — can undermine this control as commercialisation deepens.

4.5 Market Participation

The study reveals a clear pattern across marketing channels: 63% of women sell their milk through cooperatives, 19% through roadside sales, 8% through brokers, 3% supply processors directly, and 2.4% use multiple channels (Ministry of Agriculture and Livestock Development, 2025). The strong preference for cooperatives reflects women's strategic use of collective bargaining to secure higher, stable prices and avoid the price volatility of informal spot markets (Walton et al., 2025). Cooperative membership also bundles milk bulking with access to financial services, extension advice, and often a dividend, thereby strengthening women's long-term livelihood assets (Kenya News Agency, 2025; Walton et al., 2025).

> *"The cooperative does not currently provide services specifically tailored to women. However, women within the cooperative have taken the initiative to support each other — particularly around livestock, pooling resources to help members acquire cows or share knowledge on animal management."*
>
> — Nyandarua Cooperative Executive (KII)

Roadside sales was the second most common channel; this probably appeals to women because it offers immediate daily cash, low entry barriers, and a marketing arrangement that flexibly fits around women's heavy domestic and farm workloads (Odhiambo, 2024). Farmers alluded to "although cooperatives offer higher prices, they often pay monthly, whereas informal milk buyers pay immediately upon delivery, taking care of daily household needs". Cash-constrained households frequently sell milk on the side through informal channels at lower prices to meet urgent household needs (Bellemare et al., 2023). Earlier studies also documented that delayed payments significantly weaken farmers' trust in dairy cooperatives and discourage sustained participation in formal marketing channels (FAOHome).

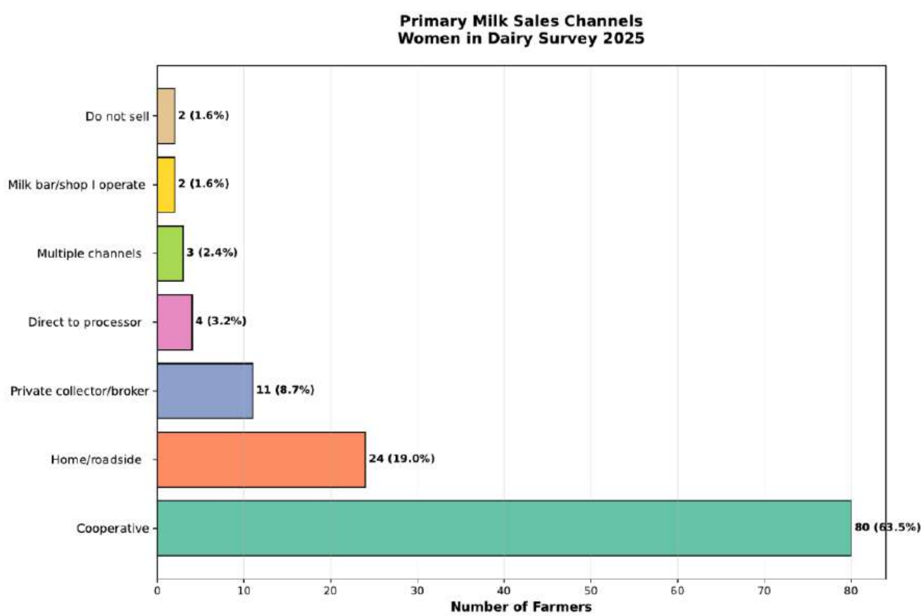
Brokers and direct-processor channels remain marginal for women. Farmers reported that "brokers always offer lower farm-gate prices and cannot be trusted when they take on credit". Unreliable payments from brokers and formal processors, and contracts that frequently demand volumes, quality standards, and delivery schedules, make women's participation difficult due to their small-scale, subsistence-oriented production systems (Mukeku, 2024; Maina et al., 2024).

> *"Many farmers still rely on informal advice, which affects animal health outcomes and overall productivity. There is a genuine need for the government to sensitise women in dairy farming to the*

> *importance of seeking guidance from qualified animal health and veterinary professionals. Informal advice too often leads to incorrect treatments, drug resistance, and avoidable animal losses*
> — Meru County agrodealer

The extremely limited use of multiple channels underscores women's constrained time, capital and information, which restricts their ability to arbitrage across buyers. The implications are twofold. The dominance of cooperatives signals that strengthening women-friendly cooperative governance, training and credit linkages can directly enhance women's income control and empowerment. Meanwhile, the significant reliance on roadside selling highlights the need to upgrade informal market infrastructure, including coolers, hygiene training and simple licensing, so that safety and quality concerns do not undermine women's preferred channel. Safeguarding women's control over income as formalisation proceeds remains critical, because commercialisation risks shifting marketing power to men (Maina et al., 2024).

Figure 2: Primary Milk Sales Channels



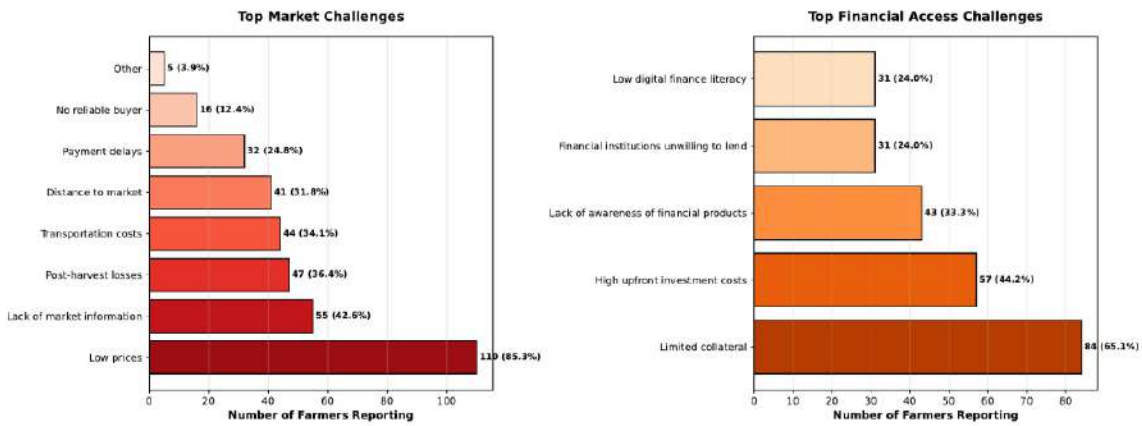
> INSIGHT: Price is the overwhelming concern. Cooperative dependence (64%) makes ***collective action*** essential for improving returns.

4.6 Women's Market Challenges in Kenya's Dairy Value Chain

Women farmers in Kenya continue to face significant market-related constraints that limit their profitability and bargaining power within agricultural value chains, particularly in the dairy sector. Findings from this study show that low prices are the most severe challenge, reported by 85.3% of respondents (110 farmers).

Other major constraints included lack of market information (42.6%), post-harvest losses (36.4%), high transportation costs (34.1%), long distances to markets (31.8%), and payment delays (24.8%).

Figure 3: Top Market and Financial Challenges



The prominence of low prices as a concern suggests that women farmers remain price takers in fragmented, intermediary-driven markets. This finding aligns with studies in Kenya showing that dairy farmers often have weak bargaining power and are heavily dependent on brokers or cooperatives for market access. Research on Kenya's dairy sector indicates that delayed cooperative payments and unequal market structures frequently constrain household liquidity and reduce farmers' capacity to negotiate better returns (Bellemare et al., 2023). Limited access to market information, reported by 42.6% of respondents, reflects persistent information asymmetries that disadvantage women farmers. Studies in Kenya have shown that many smallholder dairy farmers lack timely access to milk price information, buyer networks, and market intelligence, limiting their ability to select profitable marketing channels and negotiate effectively (Ongwech et al., 2022). Transaction cost studies in Kenya similarly show that poor access to information, inadequate infrastructure, and limited bargaining capacity increase farmers' dependence, which could shift marketing channels towards informal buyers and brokers (Kipkoech, 2016).

Logistical barriers remain substantial. More than one-third of respondents cited transport costs and post-harvest losses as major constraints, while nearly one-third identified long distances to markets as a challenge. These barriers disproportionately affect women, who often have lower mobility, fewer transport assets, and heavier unpaid care responsibilities. In highly perishable dairy systems, inadequate cold-chain infrastructure and poor road connectivity contribute directly to spoilage and income losses (Kipkoech, 2016). Payment delays, reported by 24.8% of respondents, further undermine women's financial stability and household cash flow management.

> Critical Data: Top Market Challenges: Low prices: 85.3% | Lack of market information: 42.6% | Post-harvest losses: 36.4% | Transport costs: 34.1% | Distance to market: 31.8% | Payment delays: 24.8%

INSIGHT: Price is the overwhelming concern. Cooperative dependence (64%) makes *collective action* essential for improving returns.

4.7 Cooperative Governance and Women's Leadership

Women constitute a substantial proportion of Kenya's dairy workforce and cooperative membership, yet their representation in cooperative leadership and governance remains persistently low. Findings from this study reveal that 86% of respondents were members of dairy cooperatives, demonstrating strong integration into collective marketing systems. Participation in cooperative activities was also relatively high, with 18% of women reporting always attending meetings, 12% attending often, and 41% attending sometimes. However, this high membership and participation has not translated into equitable leadership representation. In some of the assessed cooperatives, women held only 2 of 8 leadership positions, while another had only 3 of 7. Overall, women constituted up to 70% of cooperative membership in some cases but held less than 30% of leadership positions, highlighting a significant membership–leadership gap.

"Women currently make up a larger proportion of members than men — approximately 70% women to 30% men. This shift has been driven by increased awareness of the benefits of cooperative membership, improved access to financial services, and deliberate efforts to encourage women's participation". Meru county cooperative official

"Out of eight leadership positions, only two are held by women. Several factors contribute to this imbalance:

- Lack of confidence among women, often due to limited exposure to leadership roles.
- Fear of criticism or disciplinary action, which discourages women from stepping forward.
- Cultural norms and gender biases that favour men as leaders.
- Male dominance in decision-making spaces, which makes leadership environments less inclusive" Cooperative leader Kiambu

This imbalance is particularly paradoxical in the dairy sector, where women contribute an estimated 50% of dairy labour and make up a significant share of cooperative membership (Kenya Broadcasting Corporation, 2026). Despite their central role in production and marketing, leadership structures remain predominantly male-dominated. The study further found that most cooperatives lacked gender-responsive by-laws or affirmative governance provisions, reinforcing structural barriers that limit women's advancement into leadership positions. A critical institutional gap was also identified in cooperative by-laws, most of which contained only vague references to women's representation, without enforceable quotas, reserved seats, or gender-sensitive election procedures.

> *"Currently, the cooperative does not have gender-specific provisions in its bylaws. There are therefore no formal mechanisms to ensure women's representation, protect their interests, or promote gender equality within the organisation".*
>
> *-Cooperative member Kiambu County KII*

> *"Our bylaws currently require that each society has at least one woman on the board, and this provision is being implemented effectively. However, beyond this minimum requirement, we do not have additional gender-specific provisions. I see this as a significant gap in strengthening gender inclusivity within our governance structures".*
>
> — Meru County Cooperative Official (KII)

The findings align with broader evidence on gender disparities in cooperative governance in Kenya. Mochoge and Momanyi (2024) found that men "predominantly occupied various roles, including personnel, supervisory committees, delegates, and leadership positions" (p. 25) across agricultural cooperatives, while Bitange et al. (2025) noted that women "rarely hold important positions in market-based agricultural and mixed cooperatives" (p. 12), even where membership is high. These patterns suggest that women's exclusion from leadership is structurally embedded in cooperative governance systems.

The consequences of this exclusion are significant. Women's under-representation limits their influence over pricing, investment decisions, and strategic priorities that affect their livelihoods (Mukeku, 2024). It also undermines cooperative principles of democratic participation and represents a missed development opportunity, given evidence linking women's leadership to improved cooperative performance and household welfare. Evidence from the Wakulima Dairy model shows that long-term cooperative membership strengthens women's livelihood assets and household food security (Walton et al., 2025). However, these benefits can be wiped out if women's decision-making is limited. Women's participation in formal dairy markets can still weaken their control over income where men dominate cooperative leadership and payment systems (Tavenner et al., 2021). Thus, economic participation alone does not necessarily guarantee decision-making power.

The women's participation and leadership gap is an emerging concern in Kenya. The country is establishing a robust framework to enhance women's leadership in cooperatives, reflecting growing recognition of these inequalities. In March 2025, the International Cooperative Alliance-Africa launched the National Cooperative Gender Platform (NCGP) in Nairobi as "a gender-responsive platform that empowers women and marginalized groups in cooperative governance and decision-making" (ICA Africa, 2025, p. 11). Similarly, in August 2025, the State Department of Cooperatives directed cooperatives with over 10,000 members to amend their by-laws to reflect diversity in gender and age, and to include persons with disabilities (County Champion, 2025). However, the directive remains limited in scope because it does not establish mandatory gender quotas or accountability mechanisms. Also, some of these provisions need to be anchored in social realities.

> *"Many bylaws now include non-discrimination clauses aligned with the Constitution of Kenya 2010 and the County Gender Policy. Specific provisions such as reserved seats for women exist in some updated societies but are often weakly enforced. Implementation is challenged by low awareness, cultural resistance, and the absence of strong monitoring mechanisms to hold cooperatives accountable."*
>
> — KENAFF officer

> *"Women currently make up a larger proportion of members than men — approximately 70% women to 30% men. This shift has been driven by increased awareness of the benefits of cooperative membership, improved access to financial services, and deliberate efforts to encourage women's participation."*
>
> — Meru County Cooperative Official (KII)

> *"Out of eight leadership positions, only two are held by women. The main hindrances are: lack of confidence; fear of criticism; cultural norms and gender biases that favour men as leaders; and male dominance in decision-making spaces, which makes leadership environments less inclusive."*
>
> — Cooperative Leader, Kiambu (KII)

> *"Kenya has made real progress in encouraging women into leadership through the two-thirds gender rule, and this is being adopted in dairy development contexts with positive effects. However, society remains reluctant to fully accept that women can lead effectively. The gap between constitutional commitment and social reality is Kenya's most important unfinished work."*
>
> — Nyandarua SACCO Official (KII)

Critical findings

- Membership: 86% are cooperative members; ▯ Meeting attendance: Always 18%, Often 12%, Sometimes 41%, Rarely 18%, Never 11%;
- Leadership: Very low representation (2/8 positions in one coop, 3/7 in another)
- Bylaws: Most cooperatives lack gender provisions.

MEMBERSHIP-LEADERSHIP GAP: High membership (86%) but minimal leadership — women constitute up to 70% of members but hold <30% of leadership positions.

4.8 Economic Impact and Food Security

Dairy engagement impact on household nutrition, and food security outcomes

Beyond its income-generating role, women's engagement in Kenya's dairy sector is strongly motivated by its contribution to household nutrition, food security, and health outcomes. Findings from this study — based on respondents' self-reported perceptions — indicate that women dairy farmers associate their engagement in the sector with positive household welfare outcomes. A majority of respondents reported increased availability of milk for household consumption (78%), improved dietary diversity (70%), improved child nutrition (61%), increased income for healthcare expenditure (56%), and improved overall household health (55%). These findings suggest that women's participation in dairy farming is driven not only by commercial objectives, but also by the need to secure better nutrition and wellbeing for their families.

> *"For a woman, dairy enterprise can be a sole source of income, and that changes everything. When women have their own money, they gain the confidence to speak up for themselves and for others. Milk and other dairy products are always saleable regardless of volume. That reliability is particularly important for women who have no other income source."*
>
> — Uasin Gishu Women Dairy Farmer (KII)

The findings align with broader evidence that dairy production directly increases household milk consumption and food security. In coastal Kenya, intensive dairy farming was linked to significantly higher milk intake among farming households, and women were more likely to allocate milk to children's diets (Mullins et al., 2018). National initiatives such as the "Maziwa Ni School Fees" programme further reinforce the nutritional role of dairy by enabling households to convert small daily milk deliveries into school fee payments while retaining milk for home consumption (New Kenya Cooperative Creameries, 2025). At the national level, Kenya's annual per capita milk consumption is estimated at about 110 litres, with the government aiming to double this by 2030 (Kenya Dairy Board, 2025).

Improved dietary diversity emerged as another key outcome of dairy engagement. Milk is a nutrient-dense food rich in protein, calcium, vitamin B12, and essential fatty acids necessary for child growth and household nutrition. Dairy interventions targeting women in Kenya have reported: "improved dietary diversity (consumption of vegetables, fruit, milk, eggs) for women, girls, boys and men" (Food and Agriculture Organisation, 2025). Similarly, the Nourishing Prosperity Alliance initiative positions women as key actors in increasing access to nutritious dairy products within local communities (National Agricultural Value Chain Development Project & Gates Foundation, 2026). Improvements in food security have been reported in areas where women control dairy income (Walton et al., 2025). Additional evidence from Nyandarua County and Kiambu County indicates that regular income from milk improves households' ability to purchase vegetables, fruits, and animal-source proteins, thereby supporting diversified diets (Kenya Broadcasting Corporation, 2026).

The study's findings on child nutrition and household health are also consistent with existing literature linking dairy consumption to improved health outcomes. A multi-country study by Headey et al. (2018)

found that owning dairy animals and higher milk consumption were significantly associated with lower rates of stunting among children under five. In Kenya, dairy-intensive areas have consistently recorded lower levels of undernutrition than non-dairy zones, due to both direct milk consumption and increased household purchasing power from dairy income (Mullins et al., 2018). The International Livestock Research Institute and the Kenya Dairy Board further report that even a modest daily milk intake of 100–200 ml can substantially improve micronutrient adequacy and reduce vitamin A and iron deficiencies among children (ILRI & Kenya Dairy Board, 2025).

Importantly, women's control over dairy income appears central to these positive welfare outcomes. Research demonstrates that when women manage dairy earnings, households are more likely to prioritise spending on food, healthcare, and child welfare (Walton et al., 2025). The finding that 56% of respondents reported increased healthcare income and 55% reported improved household health illustrates how dairy income contributes not only to food access, but also to broader health investments such as clinic visits, medication, and maternal care.

Critical findings

- Increased milk for household consumption: 78%
- Improved dietary diversity: 70%
- Improved child nutrition: 61%
- Increased healthcare income: 56%
- Improved overall household health: 55%

4.10 Financial Access Challenges

The findings reveal glaring structural weaknesses in formal financial systems, where interconnected inequalities, institutional biases, and technological barriers continue to exclude women and reinforce low-productivity, subsistence-oriented production systems.

Critical data: cited by 65% — the most significant barrier. High upfront costs: 44%. Lack of product awareness: 33%. Institutional unwillingness to lend: 24%. Low digital literacy: 24%.

> *"Land title deeds and guarantors are our standard requirements. Land titles are the primary challenge for women, as many do not own land in their own names. This effectively excludes them from accessing larger loans, regardless of their demonstrated repayment capacity."*
>
> — Meru County SACCO Representative (KII)

> *"Women are key clients for us because they manage milk income and are consistent savers. They are reliable borrowers when given the opportunity — they fully commit to repayment and maintain much better credit records than many of our male clients."*
>
> — SACCO Officer, Meru County (KII)

"More women are opening accounts and accessing loans independently, especially through our SACCO. Five years ago, many women accessed financial services only through their husbands' accounts. The growth of women's groups and cooperative-linked products has been the primary driver of this change."

— Meru SACCO Representative (KII)

"More women are accessing training from NGOs and government programmes, which is changing their perspective on dairy as a serious enterprise rather than a subsistence activity. Women are also increasingly taking up leadership positions. Access to smartphones has made it significantly easier for women to receive their milk payments independently and to access farming information without having to rely on intermediaries".

— Uasin Gishu Representative (KII)

Limited collateral emerged as the most significant barrier, cited by 65% of respondents. This reflects the persistent gender disparities in asset ownership and control. The patriarchal property regimes in Kenya have continued to favour men's property ownership, with land titles and high-value livestock predominantly registered in men's names (KIPPRA Analysis, 2025). Research by Maina et al. (2024) similarly found that women dairy farmers face systematic exclusion from agricultural credit markets because they rarely possess titled land or independently owned livestock that can be pledged as security. This challenge is compounded by customary inheritance practices that continue to favour men despite constitutional protections for gender equality in property rights.

High upfront investment costs were identified by 44% of respondents as another major obstacle to accessing finance. Dairy intensification requires substantial capital investment in improved breeds, zero-grazing structures, fodder production, veterinary services, and commercial feeds. For many rural women operating at subsistence level, these costs exceed available household savings and make borrowing financially risky.

The study highlights significant information asymmetries within rural financial ecosystems. 33% of respondents were unaware of available financial products and services. Women rely heavily on informal savings groups, family networks, and rotating savings schemes because formal institutions rarely tailor their outreach and communication strategies to rural women (KIPPRA, 2025). Limited financial literacy also constrains women's ability to understand loan terms, repayment schedules, insurance products, and investment opportunities. According to the Central Bank of Kenya (2024), women in rural Kenya consistently exhibit lower levels of financial literacy and lower use of formal banking services than men, particularly in agricultural communities.

Institutional unwillingness to lend, cited by 24% of respondents, further reflects the gendered biases embedded in agricultural financing systems. However, we see some good examples of Saccos that trust women, making them a promising avenue to support women's financial needs. (1) Women's smaller asset base leaves them disproportionately vulnerable to climate shocks — with 65% lacking collateral, they cannot stockpile feed before droughts or absorb price spikes. (2) Case study evidence (Mama Shiku, Charity Mwarirwa, Florence Wambui) shows women are already adapting through silage, biogas, and water harvesting — but informally and without institutional support. (3) Ann Chepkorir's trajectory — from 10 cows to 1 shared cow after disease outbreaks and storms — illustrates how climate shocks interact with asset insecurity to permanently reverse empowerment gains. She has no livestock insurance, no documented cattle ownership for collateral, and no titled land. Her 15-year trajectory is a case study in gendered climate vulnerability, not individual misfortune. Recommendation 17 (Credit Guarantee Fund) should explicitly include livestock insurance and set gender-disaggregated access targets as a climate resilience mechanism.

Financial institutions often view women-led agricultural enterprises as high-risk because they are typically small-scale, informal, and vulnerable to climate shocks and price fluctuations (KIPPRA, 2025). Women's lower asset ownership, irregular cash flows, and limited credit histories further reinforce perceptions of uncreditworthiness. Studies on agricultural finance in Kenya have shown that women frequently receive smaller loans, pay higher interest rates, and face shorter repayment periods than men, despite evidence that women borrowers generally exhibit strong repayment performance (African Development Bank, 2024).

Digital exclusion also emerged as a critical challenge, with 24% of respondents identifying low digital literacy as a barrier to financial participation. This finding is particularly significant given the increasing digitisation of agricultural finance and payment systems in Kenya. Low digital literacy undermines income control: "It was reported that women use men's numbers (husbands and sons) to receive funds; hence, women's Mpesa statements cannot be used to gauge creditworthiness". Mobile banking platforms, digital wallets, and app-based loan products have become central channels for accessing agricultural credit, savings, and market payments. Digital financial exclusion could undermine women's financial autonomy within the household, especially where payments are directed to male-controlled mobile or bank accounts (Tavenner et al., 2021).

The study also identifies women's participation in cooperatives as a key enabler of financial inclusion. Key informant interviews with SACCO representatives highlighted that group lending models, cooperative-based check-off systems, and mobile banking services have significantly improved women's access to credit. The cooperative check-off model is particularly effective because loan repayments are deducted directly from milk delivery income, thereby reducing lending risks for both borrowers and financial institutions. In addition, mobile banking has strengthened women's financial autonomy by enabling them to manage transactions independently, without relying on male family members. These findings underscore the importance of strengthening women-centred cooperative and digital finance systems and the need for comprehensive, gender-responsive financial inclusion strategies within Kenya's dairy sector.

✶ SPOTLIGHT ON ACHIEVERS : FROM LABOURER TO LEADER — ONE HEIFER, ONE LEGACY

Meru County, Kenya | Enterprise Case Study

SUCCESS STORY

Behind every statistic in Kenya's dairy sector lies a woman's story. From Labourer to Leader, she left the security of a salary for the uncertainty of farming. This is the story of a woman who turned a single gift into a thriving enterprise, broke through barriers, and now lights the way for others.

She started as a tea factory worker, earning a steady salary but dreaming of something more. When her parents-in-law gave her a heifer, she saw not just a cow but a possibility. Leaving formal employment to farm full-time took courage, friends warned her; family worried. But she believed that with hard work and smart decisions, dairy could build a better future. That one heifer became the foundation of a growing herd. Today, she owns six dairy cows, two heifers, and three calves, producing 126 litres of milk daily. She adopted three-times-a-day milking, a simple but powerful innovation that boosted productivity far beyond the usual twice-daily routine.

"People thought I was making a mistake. Leaving a paying job to keep cows? They said, 'You will suffer.' But I looked at that one heifer and saw something bigger. I told myself: This animal can grow into wealth. And I was right."

She didn't stop at milking. She installed a biogas system that turns farm waste into clean cooking energy, cutting costs and reducing smoke in her kitchen. She learned to make silage, ensuring her cows have quality feed even during dry seasons. Improved feeding practices from training helped her animals stay healthy and productive.

Her dairy income has done more than pay bills. She purchased land, a critical asset that most women in dairy still lack. She educated her children and now supports her grandchildren. She makes financial decisions independently, something many women in the sector are denied the opportunity to do. Her neighbours took notice. She became a union delegate, representing other farmers and training them in modern practices. What began as a personal journey has become a community movement.

None of this came easily. She had limited land ownership, a challenge she solved by negotiating land use with her husband. She faced competing demands for her time and money. But key supports made the difference: her husband's willingness to allow her land access and respect her independent income management, plus training opportunities she seized with both hands. ""I did not own the land. It was my husband's. But I asked to use a portion for my cows. He agreed because he saw I was serious. Now I have bought my own land with dairy money. That land is in my name."

This is a message of Hope to Young Women

"Start small and grow gradually. Begin with a manageable herd and expand over time. Young women should embrace innovation and position themselves as leaders in modern dairy farming."

Her story proves that age, starting capital, or formal employment are not destiny. Vision, persistence, and the right support can turn a single heifer into a legacy.

This story did not come without challenges. “Water is still a problem. When there is no rain, I walk far or buy expensive water. And feed prices go up and down. We need government help – boreholes, feed subsidies, and extension officers who actually visit us.”

She calls on leaders to multiply her success across Kenya:

- Invest in water – support the establishment of boreholes and other reliable sources so women don’t walk for hours
- Subsidise animal feeds – quality feed is the difference between survival and profit
- Strengthen feed quality regulation to avoid counterfeit and low-quality products
- Deploy more government extension officers with targeted training for women dairy farmers
- Subsidise inputs, like sexed semen and AI services, to ensure herd health does not wipe all the good income from dairy.
- Support livestock insurance through cooperatives, which will protect women from devastating loss

This woman’s journey is not a miracle – it is a model. Where supportive families, accessible training, and enabling policies come together, women in dairy do not just participate; they lead, they own assets, and they transform whole communities. Her story shows that Kenya’s dairy sector can be a powerful engine of inclusive prosperity – one cow, one woman, one innovation at a time.

4.10. Differentiated County Performance

The study, however, shows a general trend across most aspects studied, but with significant variation in some areas. For the studied counties Kiambu, Nakuru, Meru, Uasin Gishu, and Nyandarua, findings reveal that women’s empowerment varies dramatically from place to place. This is not a minor statistical detail. It means that a national dairy policy applied uniformly will produce very unequal results for women. Some counties have made real progress; one county, Nyandarua, is stuck far behind. Implying that effective interventions must be tailored to each county’s specific combination of strengths and barriers.

The Nyandarua composite empowerment score (1.92) was 1.41 points lower than Kiambu’s (3.33) — a meaningful absolute gap — and well below the five-county average. Only 7.7% of women in Nyandarua own land in their own name. That is 70% below the average of all five counties and 4.2 times lower than Nakuru’s rate of 32.3%. This result underscores the importance of land in dairy, where land is not just a field it is the key that unlocks critical investments in the sector. In Nyandarua, even the most skilled and hardworking women hit a structural ceiling. This is not about individual capability. It is about decades of customary tenure systems and settlement patterns that have systematically excluded women from owning land.

There is a unique learning provided by the higher-performing counties, the other four counties all operate within a similar empowerment range, but each has a different profile of strengths and weaknesses. Understanding these differences is the key to effective programming[4].

Women's empowerment varies dramatically across counties. Nyandarua's composite empowerment score (1.92/9.0) is 1.41 points lower than Kiambu's (3.33/9.0) — well below the five-county average. A uniform national policy will produce very unequal results for women.

County	Composite Score / 9.0	Female Land Ownership	Status
Kiambu	3.33	19.0%	HIGHEST
Nakuru	3.10	32.3%	Above Average
Meru	3.07	24.1%	Above Average
Uasin Gishu	3.05	27.3%	Above Average
Nyandarua	1.92	7.7%	LOWEST — 39% below average ***

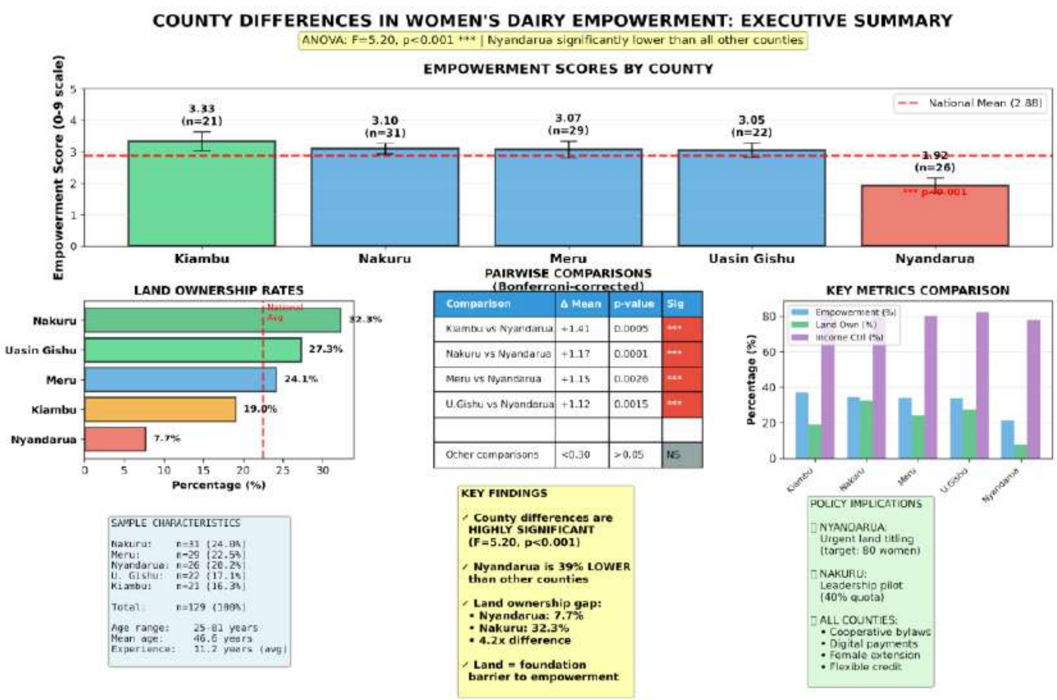


Figure 4.9.1: County Empowerment Overview — Key Indicators Summary

[4] *'Differences between Nakuru, Meru, and Uasin Gishu are not statistically significant given sub-sample sizes (n=21–31 per county) and should be interpreted with caution. Nyandarua's gap (1.41 points) is the only difference large enough to be analytically reliable.' The four higher-performing counties are best treated as a broadly similar cluster, with Nyandarua as a clear outlier.*

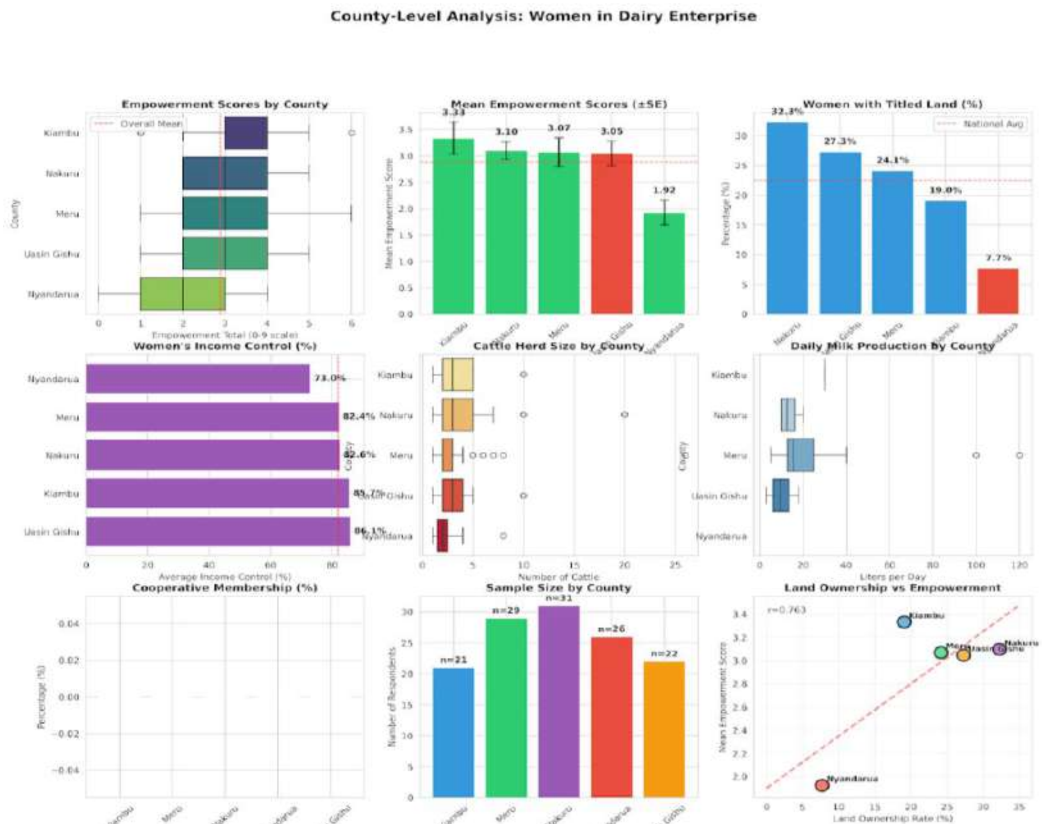


Figure 4.9.3: Nine-Panel Analysis — Empowerment, Land, Income, Production, Cooperative Membership and Correlations by County

4.10.1. County Profiles

Kiambu: Market-Rich but Asset-Poor

Kiambu recorded the highest overall empowerment score (3.33 out of 9). This is largely due to its proximity to Nairobi, better market access, higher household incomes, and longer history of dairy commercialisation. Women in Kiambu have relatively strong control over milk income and household food security. However, Kiambu's land ownership rate is only 19%, the second lowest of the five. This creates hidden vulnerability. Empowerment built on market income rather than asset ownership may collapse under a market shock (e.g., a drop in milk prices) or a personal shock (e.g., divorce or death of a spouse). For Kiambu, the priority should be about converting income gains into secure asset ownership.

Nakuru: Strong Land Base, Lagging Decision-Making

Nakuru has the highest female land ownership rate (32.3%) and a well-developed cooperative infrastructure. This gives women the most structurally robust foundation for empowerment. Yet Nakuru's composite score (3.10) falls below Kiambu's. Why? The data suggest that asset ownership may have not yet fully translated into intra-household decision-making power or leadership roles. Women may own land but still have limited say over how milk income is spent or whether they can attend cooperative meetings. For Nakuru, the next step is to link asset ownership to governance and household bargaining power.

“Membership was traditionally male-dominated because land and cattle titles were registered in men's names. This is shifting: cooperatives are increasingly allowing household memberships or recognising the primary labourer, often the woman as the member. The change has been gradual but is accelerating where deliberate policies are in place”. Nakuru county officer

✶ SUCCESS STORY: GENDER INTEGRATION IN NAKURU COUNTY’S DAIRY SECTOR

County Policy Case Study | Nakuru County, Kenya

Case Study: Gender Integration in Nakuru County’s Dairy Sector

Nakuru County has integrated gender inclusion into its Agriculture and Livestock Sector Plan and Annual Work Plans, aligning with the Kenya National Dairy Master Plan and national gender mainstreaming guidelines. The county applies affirmative action measures, targeting at least 50% women participation in agricultural training programmes and promoting women-friendly technologies such as chaff cutters and improved housing structures.

To strengthen women’s economic empowerment, the county operates an Enterprise Fund that provides low-interest loans to registered women’s groups and facilitates linkages with commercial banks such as KCB Group and Equity Bank Kenya for specialised dairy loans. In 2024, Nakuru adopted a Gender Inclusive Procurement Policy that prioritises milk collection routes for women’s groups and cooperatives, guarantees equal quality-based milk pricing, and expands targeted training and extension services for women farmers. The county also participates in the Kenya Dairy Board Women in Dairy initiative, while promoting women’s leadership in cooperatives and supporting value-addition activities, such as yoghurt and cheese production, to improve incomes and market opportunities.

Meru: Young Farmers, Surprising Results

Meru’s empowerment score (3.07) is notable because its women farmers were, on average, the youngest (38.7 years). Younger women typically face greater barriers, have less time to accumulate assets, have weaker inheritance rights, and hold lower seniority in cooperatives. Yet Meru performed as well as Nakuru and Uasin Gishu. This suggests something positive is happening. Possibly, Meru has more progressive household negotiation norms, or youth-led dairy intensification is creating new pathways to empowerment that bypass traditional asset inheritance. Either way, Meru offers a replicable model. Programmes should document and scale whatever is working in the area. Consistent with this, Bitange et al. (2025) reported that age significantly influences women’s participation in the dairy sector, with younger and more educated women more likely to pursue leadership roles, while older women with lower educational attainment face compounded disadvantages.

"Women play a critical and increasingly visible role at all levels. Traditionally, cattle ownership was dominated by men, but this is gradually changing. Women are now actively participating in SACCOs, which has improved their access to financial resources, even though payments are often still made to men as the registered livestock owners. Women largely manage household finances derived from dairy income — investing in housing, enhancing food security, adopting clean energy solutions such as biogas, and paying school fees. Their involvement has significantly strengthened household welfare and community resilience". Cooperative officer Meru

"Women are now more informed and confident. They come directly to purchase inputs and request specific drugs or services, something that was less common a decade ago. Many are part of SACCOs and cooperatives, which has improved their financial independence and their ability to act as primary decision-makers in their farms". Agrodealer Meru county

Uasin Gishu: New Farmers with Strong Assets

Uasin Gishu has a high proportion of recently established dairy farmers. Despite being newer to the sector, women there enjoy the second-highest land ownership rate (27.3%). This means women entering dairy in Uasin Gishu do so with a relatively strong asset base. The challenge is not structural exclusion but deepening the gains that land access makes possible. Many of these women are not yet fully engaged in cooperatives, extension services, or premium market channels. The priority in Uasin Gishu is linkage and capacity building. This level of empowerment could be attributed to existing initiatives: the community cited KENAFF empowerment trainings and also mentioned the NCBA CLUSA Cooperative Ecosystem and Social Inclusion Project, which facilitated amendments to cooperative by-laws to reduce barriers to women's participation in both Meru and Uasin Gishu (NCBA CLUSA, 2024). Cordaid International reported similar results: interventions by development partners in these counties encouraged cooperatives to actively involve women and youth in leadership and decision-making processes (Cordaid International, 2023).

"Women are taking up the challenge and overcoming cultural norms slowly, but visibly. We see more organisations focusing on women specifically. A key change for our group came when KENAFF offered us the opportunity to attend training in Nairobi. That exposure changed our thinking and our confidence significantly". Uasin Gishu woman farmer.

Table: Empowerment Scores by County (Scale: 0–9)

County	Score / 9.0	Status
Kiambu	3.33	HIGHEST
Nakuru	3.10	Above Average
Meru	3.07	Above Average
Uasin Gishu	3.05	Above Average

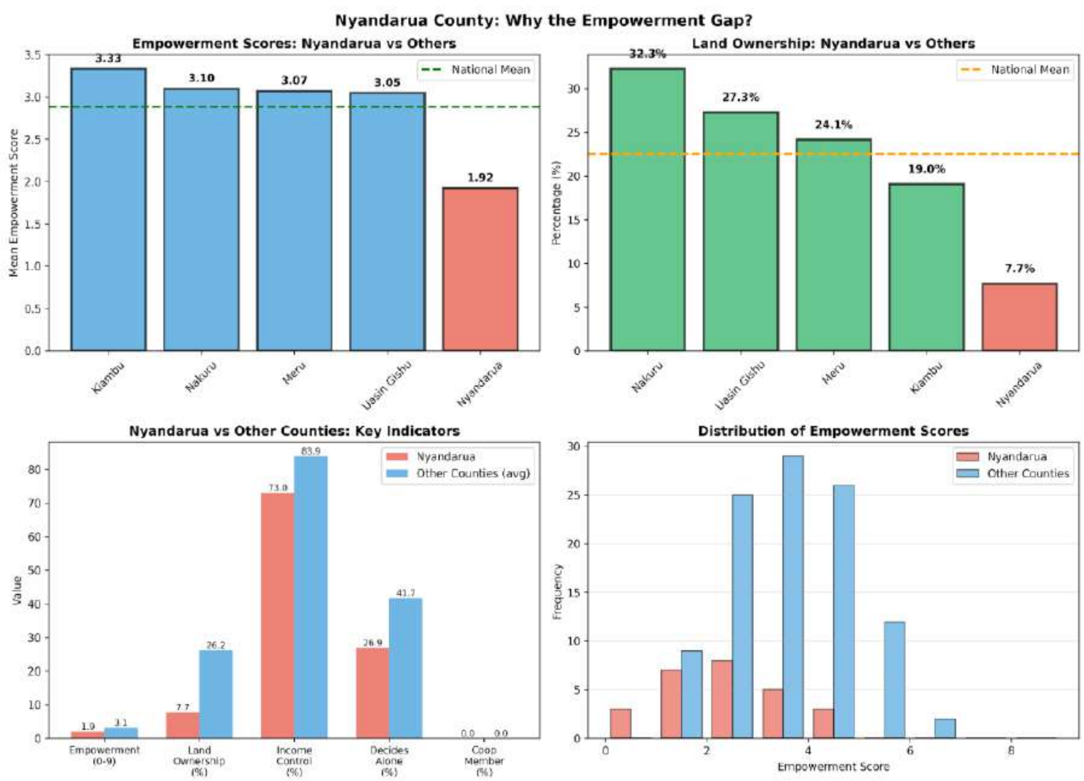
Nyandarua	1.92	LOWEST — 39% below average ***

Figure 3.8.1: County Empowerment Overview — Key Indicators Summary

County	Land Ownership Rate
Nakuru	32.3% (HIGHEST — 4.2x Nyandarua)
Uasin Gishu	27.3%
Meru	24.1%
Kiambu	19.0%
Nyandarua	7.7% (LOWEST — 70% below average)

Figure 3.8.3: All-Indicators Heatmap — Five Counties Across Ten Variables

FIG 4: Comparison Nyandarua county Vs Other counties on key empowerment indicators.



4.10.2. County-Specific Policy Implications

The statistical evidence supports differentiated, county-specific interventions rather than a uniform national approach:

- **Nyandarua (URGENT):** Fast-track land titling campaign targeting 80 women; estimated cost USD 115,000–150,000 over 12–18 months. Structural land access must be addressed before other empowerment gains will hold.
- **Nakuru:** Leverage highest land ownership (32.3%) to pilot women's leadership in cooperatives; introduce 40% gender quota for governance positions.
- **Kiambu:** Consolidate gains by focusing on full income control, inheritance rights, and intergenerational asset transfer.
- **Meru:** Youth-focused acceleration programme — youngest cohort (mean age 38.7 years) is best positioned for technology adoption and business scale-up.
- **Uasin Gishu:** Foundational capacity building — newest entrants to dairy but strong land access (27.3%) provides a viable foundation for rapid empowerment gains.

This evidence base is ready for use in WFO 2026 presentations, county government engagement, and donor proposals requiring geographic targeting and differentiated programming rationales.

4.11. Political Economy Of Kenya Dairy Sector:

How power asymmetries constrain women participation and benefits

The study shows that the dairy sector in Kenya represents a critical livelihood system for rural households, yet it embodies a fundamental contradiction of contemporary agricultural development: women provide the majority of labour while men retain strategic control over assets, decision-making, and commercial benefits. This paradox is not accidental but systematically produced through deeply embedded power relations operating across households, markets, institutions, and policy frameworks. A political economy analysis reveals that women's exclusion from ownership and governance is not a function of inadequate participation or capability, but rather the deliberate reproduction of gendered power asymmetries that serve entrenched interests.

The study identifies several ways in which controls and power asymmetries affect women's participation in and benefits from the sector.

a) *The Labour-Control Dichotomy*

The most salient feature of Kenya's dairy political economy is the structural separation of labour from control. Women perform the daily, time-intensive tasks; milking at 5:00 am, feeding, cleaning sheds, sourcing water and fodder, calf care, and day-to-day milk sales. Yet men dominate land ownership, livestock registration, cooperative leadership, financial decision-making, and market negotiations. This arrangement is economically rational for male household heads and commercial actors, as it allows them to capture value from women's unpaid or undercompensated labour while bearing none of the reproductive burden.

The payment paradox crystallises this dynamic: women reportedly control 82 per cent of dairy income in practice, yet payments are routinely deposited into husbands' accounts. Women manage operations but lack authority over large expenditures, asset purchases, savings decisions, or loan applications. This is not an incidental oversight but a deliberate mechanism of patriarchal accumulation—men retain veto power over strategic economic decisions while women absorb the physical and temporal costs of production.

b) *Institutional Capture and Governance Exclusion*

Cooperatives constitute the most powerful governance institutions in the dairy value chain, controlling milk pricing, market access, credit, and extension services. While 86 per cent of women are cooperative members, their participation in leadership remains abysmally low. Evidence from specific cooperatives shows that women hold only two of eight leadership positions or three of seven. The barriers are explicitly political: cultural beliefs that leadership belongs to men, fear of criticism, lack of family support for meeting attendance, and institutional designs that prioritise male convenience.

Men as Gendered Actors: The political economy analysis correctly identifies what men do (control assets, dominate governance) but does not analyse why, which limits intervention design. The "payment paradox" — payments deposited into husbands' accounts — may be a cooperative registration-system default rather than active male appropriation; the distinction fundamentally changes which intervention will work. Similarly, the report notes that some households demonstrate supportive male behaviour (e.g., Charity Mwarirwa's husband) but never asks what enabled this. Men are not monolithic barriers; they are themselves shaped by gendered norms and incentives that shift under the right conditions. The household dialogue recommendation (Rec. 11) should be grounded in a theory of change that specifies what men are being asked to give up, what they might gain, what material interests currently protect the status quo, and what enabling conditions make change more likely. Crucially, cooperatives lack gender quotas, gender-responsive bylaws, disaggregated data, or accountability mechanisms. Male-dominated governance, therefore, shapes pricing negotiations, procurement decisions, resource allocation, and investment priorities in ways that systematically invisibilise women's needs. In some cases, women complained that extension officers mainly talked to men, and veterinary service providers always wanted men to be available when treating animals, implying that even extension services reproduce the same logic, reinforcing the ideological fiction that men are the "official farmers" and women mere assistants.

c) *Asset Ownership as the Foundation of Power*

Economic power in dairy derives fundamentally from ownership of land and cattle, access to credit, cooperative shares, and market contracts. Only 23 per cent of women own titled land; 77 per cent lack land titles entirely. Sixty-five per cent cite lack of collateral as their main financial barrier. Because land and cattle are registered in men's names, women cannot independently access loans, insurance, or investment capital. This is not market failure but market design; financial institutions reproduce gender inequality through collateral requirements that reflect and reinforce patriarchal property relations.

The consequences are stark: women remain economically dependent despite providing most labour; their bargaining power within households is systematically weakened; they cannot invest in productivity improvements; their enterprises remain small-scale and vulnerable. Economic power thus determines not merely income access but women's broader social and political influence or the absence thereof.

d) Policy Gaps and Implementation Failures

At the national and county levels, gender policies exist but lack enforcement, gender-tagged budgets, and meaningful women's participation in planning processes. Women's priorities, such as access to water, roads, cooling facilities, feed subsidies, and affordable services, remain systematically underfunded. The gap between policy commitment and implementation reflects weak accountability systems, male-dominated governance institutions, limited financing for gender programming, and the low political prioritisation of unpaid care work. National gender commitments remain largely symbolic.

Pathways to Transformation

Despite these structural constraints, opportunities exist. Women already dominate operational dairy management, providing a foundation for empowerment. Their high levels of cooperative membership create organising potential. Some households demonstrate supportive male engagement and shared decision-making, proving norms can shift. Women's relatively high levels of education increase readiness for technology adoption and leadership. Digital innovations like mobile banking and group lending offer pathways around traditional collateral barriers. However, transformational change requires more than participation; it requires redistribution. Joint land titling, alternative collateral systems, direct digital payments to women, minimum 40 percent leadership quotas in cooperatives, gender-responsive bylaws, and enforceable cooperative gender standards are not incremental reforms but structural prerequisites. Without shifting ownership power, decision-making authority, financial control, and governance representation, women's labour will continue to fuel a sector from which they are systematically excluded. The dairy sector's productivity and Kenya's agricultural transformation depend on resolving this contradiction—not as a matter of charity, but of political-economic necessity.

KEY PRINCIPLE: Transformational change requires not just participation but ***redistribution***: of land titles, financial control, governance representation, and decision-making authority.

5. RECOMMENDATIONS FOR POLICY MAKERS AND PRACTITIONERS:

Increasing Women's Participation and Benefits in Kenya's Dairy Sector

We have developed a set of recommendations that would help the sector to move beyond symbolic participation to structural redistribution of power, assets, and decision-making. Our recommendations address the root causes of unequal land rights, financial exclusion, institutional bias, and deep-seated norms rather than symptoms. For policymakers, the priority is enforcement and funding. For practitioners, the focus is on tailoring interventions to local contexts (e.g., land reform in Nyandarua, leadership quotas in Nakuru). With the International Year of the Woman Farmer (2026) approaching, Kenya has a unique opportunity to become a global leader in gender-inclusive dairy development. Action must start now.

5.1. Immediate Actions

1. Fast-track joint land titling and reduce registration fees

- *Background:* Land ownership is the foundation of economic power in dairy. Only 7.7% of women in Nyandarua own land, compared to 32.3% in Nakuru. Without titles, women cannot access credit, register cattle, or join cooperative leadership.
- *Action:* County lands departments should encourage and fast-track joint spousal titling, waive or reduce fees for women smallholders, and set a target (e.g., 1,000 women dairy farmers titled in the first year).

2. Enforce increased women's representation in cooperative leadership

- *Background:* While 86% of members are women, leadership remains male-dominated (e.g., only 2 of 8 positions in one cooperative). Cultural norms, lack of family support, and fear of criticism exclude women.
- *Action:* Amend cooperative bylaws to reserve seats for women on boards and management committees. Tie government support (subsidies, training, market access) to compliance. Bylaw reforms must also include provisions for meeting accessibility: scheduling at times compatible with women's caregiving responsibilities; childcare provision or support; and alternative participation mechanisms (e.g., subgroup representatives) for women unable to attend in person. Without these, quotas alone will not translate into meaningful participation.

3. Introduce dairy-specific loans with flexible collateral

- *Background:* Women's lack of land titles excludes them from traditional credit, yet they show strong repayment performance. Alternative collateral (cattle, milk delivery records, group guarantees, warehouse receipts, livestock-based financing) is underutilised.

- *Actions:* Financial institutions and SACCOs accept livestock as collateral (with proper documentation), use milk delivery records as credit history, offer group guarantees via cooperatives, and pilot interest subsidies for women borrowers and Expand collateral substitutes: group guarantees, warehouse receipts, livestock-based models that do not rely solely on land ownership.

4. Target extension to women dairy farmers

- *Background:* Extension services often talk primarily to men, assuming men are the "official farmers." Women report fewer visits and less useful information. Female officers are more likely to effectively reach women farmers.
- *Action:* The National government should help set gendered recruitment targets/standards through policy directions, and county governments should train officers in gender-responsive delivery, and link performance evaluations to outreach to women.

5. Establish county-level milk price floors with mandatory women's participation

- Background: 85% of women cite low milk prices as a major challenge, and they have little bargaining power ("Price is already set"). Price-setting committees are male-dominated.
- Action: Create county minimum price committees with seasonal adjustments and transparent formulas. Require women's representation on these committees.

6. Direct digital payments to women for milk deliveries

- *Background:* Despite women reportedly controlling 82% of dairy income in practice, payments are often deposited into husbands' accounts ("payment paradox"), reducing women's financial autonomy.
- *Action:* Cooperatives/processors pay women directly via mobile money; offer split-payment options for joint household accounts. Provide targeted financial literacy and business development programmes for rural women dairy farmers. Strengthen digital inclusion through smartphone access, digital literacy training, and secure mobile payment systems.

5.2. Medium-Term Actions

7. Develop county-level gender-responsive agriculture policies with tagged budgets

- *Background:* National gender policies exist but lack enforcement and funding. County-specific frameworks with dedicated budgets ensure accountability.
- *Action:* Each dairy-producing county should adopt a gender agriculture policy, allocating at least 30% of agricultural budgets to women-targeted programmes.

8. Subsidise feed and value addition equipment for women

- *Background:* Women's enterprises remain small-scale due to a lack of capital for productivity improvements. Many express interest in yoghurt, butter, and cheese production, but cannot afford the equipment.
- *Action:* Create a national feed subsidy programme prioritising women farmers. Provide grants or low-interest loans for milk coolers, pasteurisers, and processing tools.

9. Comprehensive reform of cooperative bylaws

- *Background:* Most cooperatives lack gender quotas, responsive bylaws, or disaggregated data. Male-dominated governance shapes pricing, procurement, and service priorities.
- *Actions:* Mandate gender audits, establish women's desks, collect gender-disaggregated membership and benefit data. Create pathways from members to leaders: quotas, reserved committee seats, mentorship programs, gender-sensitive electoral procedures. Ensure explicit gender-responsive measures across bylaws.

10. Establish women's collective marketing groups

- *Background:* Women sell primarily through cooperatives (64%) or roadside (significant share). Individual bargaining power is weak. Collective groups increase leverage and reduce dependency on intermediaries.
- *Action*: Support formation of women-only or women-led marketing groups with training in negotiation, contracting, and quality assurance. Link them to premium market channels. Link them to premium market channels. Strengthen cooperative governance, improve price transparency, ensure timely access to market information, reduce transport and post-harvest costs, and promote reliable and flexible payment systems. Women-centred collective marketing structures improve incomes and economic empowerment.

11. Launch household dialogue programmes engaging men

- *Background:* Social norms are not fixed – some households already demonstrate shared decision-making. Engaging men as allies can reduce conflict and redistribute workloads.

- *Action:* Facilitate community-based dialogues on gender roles, unpaid care work, and joint decision-making. Include religious and traditional leaders as champions. Household dialogue programmes should track and seek to reduce women's total daily work burden as an explicit outcome indicator — not only their participation in decision-making. Target a measurable reduction in women's unpaid care hours alongside increases in cooperative meeting attendance.

12. Scale digital extension platforms (SMS, WhatsApp, voice messages)

- *Background:* Women face time poverty and mobility constraints. Digital tools can deliver timely advice on animal health, breeding, and markets without requiring travel.
- *Action:* Train women's groups in digital literacy. Partner with telecoms to provide free or low-cost agricultural advisory messages in local languages.

13. Promote Women's Entrepreneurship, Leadership, and Decision-Making in Dairy

- *Background:* Many women lack confidence, business exposure, and access to information on dairy farming as a profitable enterprise. Dairy is often perceived as a traditional, low-status activity rather than a viable commercial opportunity. In addition, many women remain dependent on spouses for decisions related to land use, investments, and dairy management, limiting their autonomy, long-term planning, and ability to grow dairy enterprises.
- *Action:* Establish targeted women-focused dairy entrepreneurship and leadership programmes that combine technical training, business development, mentorship, and confidence-building. Support peer learning networks, role-model campaigns, and financial literacy training to strengthen women's decision-making capacity and enterprise management skills. Community dialogue programmes should also engage men and households to promote joint decision-making, women's ownership rights, and recognition of women as independent dairy entrepreneurs.

5.3. Transformational Actions

14. Enact a National Women in Agriculture Policy with a Binding Implementation Framework

- *Background:* Existing policy commitments remain largely symbolic due to weak enforcement, inadequate financing, and fragmented coordination across ministries and counties. Women are central to Kenya's dairy sector, yet structural barriers continue to limit their access to resources, markets, income control, and decision-making opportunities. Evidence shows that empowering women through cooperatives, training, and market access significantly improves household welfare, productivity, and community resilience.
- *Action:* Develop and implement a standalone National Women in Agriculture Policy with clear targets, dedicated budget lines, monitoring indicators, and accountability measures for non-compliance. Establish an inter-ministerial oversight committee to coordinate implementation

across national and county governments and ensure gender-responsive investments in the dairy sector.

15. Reform legal frameworks: recognise movable assets (cattle) as collateral and strengthen community land rights

- *Background:* Kenyan law has not fully operationalised provisions for movable collateral or gender-equitable community land registration. This locks women out of finance.
- *Action:* Amend the Movable Property Security Rights Act to explicitly include livestock. Accelerate implementation of the Community Land Act with gender safeguards.

16. Launch a national gender norms change campaign

- *Background*: Patriarchal norms that "leadership is for men" and "women are assistants" are the deepest barrier. Mass media, schools, and religious institutions can shift attitudes over time.
- *Action:* Develop a multi-year campaign using radio, TV, social media, school curricula, and faith-based networks to promote women as farmers, owners, and leaders. Include male role models.

17. Establish a national Women in Dairy Credit Guarantee Fund

- *Background:* Women's lack of collateral is systemic, not individual. A guarantee fund de-risks lending, encouraging financial institutions to serve women without traditional security.
- *Action:* Capitalise a national fund (e.g., KES 2 billion) that guarantees up to 70% of women's dairy loans. Partner with commercial banks, SACCOs, and microfinance institutions.

18. Mandate gender-inclusive value chain standards and certification

- *Background:* Private sector actors (processors, exporters, retailers) increasingly adopt sustainability standards. Gender criteria can drive change through market incentives.
- *Action:* Kenya Dairy Board should issue gender equality standards covering payment practices, leadership representation, and harassment policies. Offer preferential procurement to certified actors.

19. Set a 50% women in dairy leadership target by 2030

- *Background:* Without explicit numeric targets, voluntary approaches have failed. Binding targets with accountability mechanisms drive structural change.
- *Action:* Adopt a sector-wide target for women in cooperative boards, county dairy committees, and Kenya Dairy Board leadership. Publish annual scorecards.

20. Dairy development programmes to prioritise nutrition outcomes

- *Background:* Dairy production creates a positive nutrition–income feedback loop. Increased milk production improves household dietary diversity and child nutrition; dairy income – especially when women control it – supports healthcare, education, and food security.
- *Action:* Dairy development strategies must prioritise household nutrition and women's economic empowerment alongside commercialisation objectives.

5.4. County Specific Recommendations

Nyandarua – Extremely Low Land Ownership (7.7%)

Primary barrier: Structural exclusion from land ownership, the foundation of all dairy empowerment.

Recommendations:

- Launch intensive land titling campaigns targeting married women and widows; waive or subsidise registration fees.
- Provide paralegal aid and community education on inheritance rights and joint spousal titling.
- Introduce alternative collateral systems – group lending, mobile credit scoring, and milk delivery records – to bypass land requirements for loans.
- Establish women's land rights desks at county lands offices.

Kiambu – Weak Asset Ownership Despite Good Income

Primary barrier: Market-driven empowerment without secure asset backing; income gains are vulnerable to shocks.

Recommendations:

- Promote joint land registration and retroactive spousal titling for married women.
- Develop financial products that recognise consistent market income (milk sales, cooperative payments) as alternative security for loans.
- Build household resilience to market shocks (price drops, divorce, widowhood) through asset-building savings groups and legal literacy.

Nakuru – Asset-Rich but Low Decision-Making Power

Primary barrier: High female land ownership (32.3%) has not translated into household or cooperative governance influence.

Recommendations:

- Mandate minimum 40% leadership quotas for women in cooperative boards and management committees; enforce through county bylaw reforms.
- Run facilitated household dialogue programmes that address income control, expenditure decisions, and workload sharing.
- Train women in negotiation, public speaking, and governance to convert land ownership into active voice.

Meru – Unknown Success Factor (Young Farmers Performing Well)

Primary barrier: Success drivers are unclear – requires documentation before scaling.
Recommendations:

- Commission a rapid qualitative study to identify Meru's positive norms (e.g., progressive household bargaining, youth dairy intensification models).
- Test replication of promising practices in one additional county with similar agro-ecological conditions.
- Support youth-inclusive dairy programmes – mentorship, flexible credit, and digital extension – to build on Meru's young farmer advantage.

Uasin Gishu – Underused Asset Base

Primary barrier: New female landowners have high asset ownership (27.3%) but weak linkage to cooperatives, extension, and markets.
Recommendations:

- Fast-track new women landowners into cooperative membership (waive entry fees, provide orientation).
- Prioritise these women for extension visits and artificial insemination subsidies within the first six months.
- Link them directly to premium market channels (processors, bulk buyers) through collective marketing groups.

Overarching Policy Lessons for County Implementation

1. Land reform is the foundation – Without addressing land ownership (especially in Nyandarua), other investments have limited impact.
2. Income alone is fragile – Kiambu shows market gains must be paired with asset security to be durable.
3. Assets decision-making power – Nakuru proves ownership must be accompanied by governance quotas and household bargaining support.
4. Youth and new farmers are not disadvantaged – Meru and Uasin Gishu demonstrate that with the right conditions, younger and newer women can thrive.
5. Data must drive differentiation – Counties must collect gender-disaggregated asset and empowerment data to allocate resources effectively.

CONCLUSION: KENYA'S GLOBAL LEADERSHIP IN GENDER-INCLUSIVE DAIRY

This study has shown that the economic and social case for gender-inclusive dairy development is overwhelming. This report confirms that women are not passive beneficiaries of development interventions; they are already the primary drivers of the sector, managing most day-to-day dairy operations and controlling a significant share of household dairy income.

Yet evidence continues to reveal a persistent participation–control paradox. Despite their central role, women still face structural inequalities in land ownership, access to finance, representation in leadership, and decision-making power. Women provide the labour that sustains the dairy economy, yet men continue to dominate ownership of productive assets, governance structures, and formal market systems. This imbalance is not inevitable; it results from policy, institutional, and social barriers that can and must be addressed. Closing gender gaps in agriculture can significantly increase productivity, improve food security, strengthen household nutrition, and accelerate poverty reduction. In Kenya's dairy sector, empowering women through equitable access to credit, extension services, markets, cooperative leadership, and digital technologies would improve milk quality, increase productivity, reduce post-harvest losses, and strengthen climate resilience. Importantly, when women control dairy income, households invest more in nutrition, healthcare, and education, creating a powerful cycle of inclusive rural development.

The diversity of experiences across counties also shows that a one-size-fits-all approach will not work. Counties facing severe land inequality require land reform and legal support, whereas others need governance reforms, financial inclusion strategies, or household-level dialogue programmes. A county-sensitive, data-driven approach is therefore essential for effective policy implementation.

However, transformational change requires more than increasing women's access and participation; it requires the redistribution of power, assets, and opportunities. Joint land titling, alternative collateral systems, direct digital payments to women, enforceable cooperative gender standards, and minimum leadership quotas are not optional reforms; they are structural necessities. Without addressing ownership and governance inequalities, women's labour will continue to sustain a sector from which they remain systematically excluded.

Kenya stands at a defining moment in the transformation of its dairy sector. For generations, dairy farming has sustained rural livelihoods and national food security, with women forming the backbone of production. The upcoming 2026 World Farmers Organisation General Assembly, coinciding with the International Year of the Woman Farmer, offers Kenya a unique opportunity to position itself as a continental leader in gender-inclusive dairy development. The path forward is clear. Women dairy farmers have already demonstrated their resilience, innovation, and leadership. What is needed now is the political will to match their contribution with equal rights, equal opportunities, and equal power.

There is a need to adopt bold reforms. Kenya needs a National Women in Dairy Strategy. The country needs to showcase the dairy case as an evidence-based solution to gender in agriculture and as a global example of how agricultural transformation and gender equality can advance together.

ANNEXES:

Annex A: Acronyms

AfriCCLAN	Africa Centre for Climate, Agri-Food and Nature
AMS Kenya	Animal and Market Systems Kenya (SNV-led programme)
ASTGS	Agriculture Sector Transformation and Growth Strategy
CDCS	Country Development Cooperation Strategy (USAID)
CIDP	County Integrated Development Plan
FOLU Kenya	Food and Land Use Coalition Kenya
KAFC	Kenya Agricultural Finance Corporation
KDB	Kenya Dairy Board
KENAFF	Kenya National Farmers' Federation
NGEC	National Gender and Equality Commission
SACCO	Savings and Credit Co-operative Organisation
WFO	World Farmers' Organisation

Annex B: Case Studies

Introduction

This section presents seven in-depth profiles of women who have built and led dairy enterprises across four counties in Kenya's dairy belt: Meru, Nakuru, Nyandarua, and Uasin Gishu. The profiles were collected in April 2026 through structured enterprise case study interviews conducted as part of the Kenya National Women in Dairy Report 2025, which was commissioned by the Kenya National Farmers' Federation (KENAFF) in partnership with the Africa Centre for Climate, Agri-Food and Nature (AfriCCLAN).

Each profile documents a woman's journey into dairy — her starting point, the obstacles she overcame, the innovations she introduced, and the transformation she has driven within her household and community. Collectively, they span a spectrum of scales and contexts: from subsistence farmers rebuilding after setbacks to commercial producers supplying national processors. What they share is resilience, enterprise, and a determination to assert their agency within a sector that has historically marginalised women's leadership and ownership.

These stories are intended to serve multiple audiences: as evidence for policymakers that targeted investment in women's dairy enterprises yields multiplier effects across nutrition, education, and community development; as inspiration for women farmers who see themselves in these journeys; and as a foundation for county-level engagement in gender-responsive dairy policy and investment.

COUNTY	FARMER	HEADLINE
Meru	Charity Mwarirwa	*From tea factory worker to commercial dairy leader*
Nakuru	Martha Kirukmet	*Scaling with purpose — from survival to enterprise*
Nakuru	Mary Komen	*Building from one cow: patience, records, and results*
Nyandarua	Mirriam Wanjiru (Mama Eric)	*Clean energy, clean income, clean independence*
Nyandarua	Florence Wambui (Mama Shiku)	*Resilience rewarded: 200 litres a day and counting*
Uasin Gishu	Beatrice Chepkurui	*Treasurer, farmer, trail-blazer*
Uasin Gishu	Ann Chepkorir	*Rising again: leadership beyond setback*

PROFILE 1 OF 8: KIAMBU COUNTY

Nelly Chepng’etich

Silage pioneer: adapting and producing in peri-urban Kiambu

> *“Plan for animal feed before you buy the cows. Do your research on the source of your dairy cow — and don't believe the seller when they say the cow is pregnant. Get your vet to confirm.”*

HER JOURNEY

Nelly Chepng’etich is 32 years old, born and raised in Bomet County, in a Kipsigis household where milk was not a commodity but a daily staple — consumed after every meal as a cultural norm. That upbringing instilled a deep instinct for dairy, which she carried with her when she married and moved to Kikuyu in Kiambu County. In 2020, she made her first independent investment in the sector: a four-month-old heifer.

The early years were defined by frustration rather than failure, and by the kind of methodical persistence that separates farmers who endure from those who do not. Three heifers were artificially inseminated and sold after the services failed to result in pregnancy. Nelly learned — at cost — the hard reality of AI service quality in peri-urban Kiambu: expensive, inconsistent, and lacking institutional accountability when it fails. She eventually purchased an in-calf cow at a premium of KES 180,000 or more, a decision she made only after exhausting lower-cost alternatives. There were miscarriages. There were droughts that forced her to feed her cow avocado and grevillea tree leaves when fodder ran out. Leased land for fodder production proved unreliable — landlords regularly refused to renew agreements after Nelly had invested two full seasons in soil preparation and cropping.

Today, Nelly manages one high-producing cow that yields 13 litres of milk daily and generates approximately KES 360,000 in annual revenue, sold directly through retail channels to neighbours whose demand consistently exceeds her supply. She uses family labour, is a member of a mixed women's SACCO, and has operated for six years — a tenure that belies how hard each of those years has been.

INNOVATION IN ACTION

Nelly's most significant technical contribution to her community has been introducing underground silage bags in Kikuyu — a practice she brought from knowledge she acquired independently and applied in a context where other farmers had not yet made it work reliably. The method reduces wastage of green fodder, ensures feed availability throughout a two-month fermentation cycle, and gives farmers a buffer against the feed shortages that droughts and land-access instability regularly cause. Neighbours have since adopted the practice, making Nelly an informal knowledge anchor in her area.

She also produces manure that has eliminated her previous KES 150-per-bucket expenditure, reduced household milk purchasing costs, and contributed to her children's nutrition. These are not headline innovations, but they represent the careful integration of resources that characterise well-managed smallholder operations.

TRANSFORMATION AND LEGACY

The transformation Nelly describes is primarily about food sovereignty and financial stability rather than scale. She now has a steady supply of milk for her children — something she previously had to pay for. She has manure for her crops. She has a daily income from retail milk sales, giving her a degree of financial autonomy unavailable to women dependent on seasonal crop income or erratic employment.

Her prior life as a Community Health Worker and Red Cross First Aider in Bomet between 2012 and 2015 — where she served expectant women, the elderly, and those with chronic conditions across a large, dispersed farming landscape — shaped a disposition towards care, practical problem-solving, and community service. She brings those qualities to dairy. Her message to young women is not abstractly aspirational; it is precise and operational: plan your feed supply, verify your cow's status, build a proper shed, and start with an animal that is already producing or confirmed in-calf. Hard-won knowledge, given freely.

ENTERPRISE AT A GLANCE	
Scale	Subsistence / semi-commercial
Herd size	1 dairy cow
Daily production	13 litres/day
Annual revenue	KES 360,000
Market channel	Direct retail (neighbours)
Cooperative / SACCO	Women's SACCO member
Key innovations	Underground silage bags (introduced to local area)
Employment	Family labour

PROFILE 2 OF 8: MERU COUNTY

Charity Mwarirwa

From tea factory worker to commercial dairy leader

> *"Start small and grow gradually. Young women should embrace innovation and position themselves as leaders in modern dairy farming."*

HER JOURNEY

Charity Mwarirwa grew up in Kibaranyaki, in the heart of Meru County's farming country. For a decade, she worked in a tea factory — a stable income, but not her vision for the future. Everything changed when her paternal family gifted her a heifer. That single animal became the seed of an enterprise that would reshape her life.

The decision to leave formal employment was not taken lightly. But Charity had a plan. She invested in knowledge before she invested in animals. She travelled to Nyeri County for training in improved feeding practices, learning to milk three times a day instead of twice — a seemingly small change that significantly increased her yields. Where others might have waited for resources to grow, Charity grew her knowledge first, then let it grow her herd.

Today, she manages 11 animals — six dairy cows, two heifers, and three calves — which produce approximately 126 litres of milk per day and generate annual revenues of approximately KES 2,000,000. She employs one permanent and one seasonal worker. Her cooperative, Githongo Dairy Cooperative Society, is not just a market channel: Charity serves as a union delegate, attending seminars and training fellow farmers in artificial insemination.

INNOVATION IN ACTION

Charity's farm exemplifies integrated thinking. She installed a biogas system that converts waste from her zero-grazing unit into clean cooking energy, eliminating household fuel costs. She produces silage to buffer against dry seasons and feed-price volatility that threaten so many smallholder operations. These are not isolated technologies — they form a connected system in which each element supports the others, reducing costs while protecting productivity.

Climate change has sharpened her resolve. Prolonged dry spells in Meru have made feed security a critical planning concern; Charity's silage reserves ensure her production does not falter when others' does. She has turned a structural risk into a competitive advantage.

TRANSFORMATION AND LEGACY

The numbers tell one story — land purchased, children educated to tertiary level, grandchildren now supported — but the more important transformation is one of agency. Charity makes independent financial decisions, manages her own business, and mentors other farmers. From a single gifted heifer to a thriving commercial enterprise, she embodies the multiplier effect that is possible when women in dairy are given the conditions to lead.

ENTERPRISE AT A GLANCE	
Scale	Commercial
Herd size	11 animals (6 cows, 2 heifers, 3 calves)
Daily production	126 litres/day
Annual revenue	KES 2,000,000
Cooperative	Githongo Dairy Cooperative Society
Leadership role	Union delegate; farmer trainer
Key innovations	Biogas, silage production, triple milking
Employment	1 permanent, 1 seasonal

PROFILE 3 OF 8: NAKURU COUNTY

Martha Kirukmet

Scaling with purpose — from survival to enterprise

> *"Believe in yourself, seek knowledge and mentorship, start with what you have, and focus on quality. Dairy can be a powerful tool for women's empowerment."*

HER JOURNEY

Martha Kirukmet is 48 years old, a mother of four, from Visoi Ward in Nakuru County. She grew up helping her grandmother with local Zebu cattle — an early familiarity with dairy that lay dormant during her early married life, when financial pressures took precedence over farming ambitions. Around 2018–2019, a World Vision programme provided her with training and initial support to begin again, this time with purpose.

The early years were hard. Her first cow died of disease. She struggled with the basics of milking and could not reliably access markets. But Martha's response to these early failures was characteristically methodical: she sought knowledge, joined networks, and built competence from the ground up. Five years later, she manages a herd of 10 dairy cows that produce 100 litres per day, employs three permanent and two seasonal workers, and is a recognised community figure in her area.

Her cooperative membership has been central to this growth. Selling through cooperative collection channels has given her price stability and access to information she could not have obtained on her own. She has parlayed that platform into leadership: Martha is a lead farmer in a women's dairy group, training others in best practice and speaking at local forums. Her ambitions within cooperative governance extend further — she is explicit about her leadership aspirations.

INNOVATION IN ACTION

Martha introduced zero-grazing, improved breeds, and basic milk cooling to her operation — a combination that increased yields, improved milk quality, and reduced her enterprise's environmental footprint. She has diversified into by-products, generating additional income streams that make her business more resilient to milk price fluctuations. Her approach to climate adaptation is practical and forward-looking: conserved feeds, drought-resistant grasses, and improved water harvesting have kept her operation stable despite increasingly erratic rainfall.

TRANSFORMATION AND LEGACY

Martha's household has been transformed in ways that go beyond income. Financial independence has brought better housing and better education for her children, and — crucially — a shift in household decision-making dynamics. She no longer depends solely on her husband's income. In her community, the ripple effect is visible: neighbouring women, inspired by what Martha has built, have begun investing in dairy themselves. Her most pointed message to policymakers is a call for gender-responsive extension services and women's representation in cooperative leadership — rights she has had to earn through demonstrated competence in a system that did not offer them freely.

ENTERPRISE AT A GLANCE	
Scale	Semi-commercial approaching commercial
Herd size	10 dairy cows
Daily production	100 litres/day
Annual revenue	KES 800,000
Market channel	Cooperative collection
Leadership role	Lead farmer; women's dairy group trainer
Key innovations	Zero-grazing, improved breeds, milk cooling
Employment	3 permanent, 2 seasonal

PROFILE 4 OF 8: NAKURU COUNTY

Mary Komen

Building from one cow: patience, records, and results

"Start small but think big. Learn continuously, join women's groups for support, keep good records, and don't fear taking calculated risks."

HER JOURNEY

Mary Komen is 50 years old, married with six children, and grew up in the Ol Rongai area of Rongai Sub-County, Nakuru County. As the eldest daughter in a farming family, she milked cows and collected fodder before she was a teenager. After marriage, dairy farming receded into the background. A decade of struggle — low yields, food shortages, dependence on casual labour income — preceded her return to the sector in 2018, when she joined a women's group and received training in improved dairy farming.

She began with a single crossbreed cow bought on credit. The early barriers were formidable: no capital, limited knowledge of animal health, poor market access, and — perhaps most corrosively — cultural norms that positioned men as the rightful controllers of livestock income. Milk spoilage during transport was another recurring setback. Mary responded by keeping meticulous records, building a repayment history through group table banking, and persistently advocating within women's networks until her competence could no longer be overlooked.

Seven years on, she manages eight dairy cows that produce 40–60 litres per day, sells through Tuluomoi Dairy Cooperative, and earns approximately KES 500,000 in annual revenue. Two of her children are now in tertiary education — fully funded by dairy income. She has been elected to represent women farmers within her group's leadership structure.

INNOVATION IN ACTION

Mary's technical contribution has focused on fodder management. She introduced improved fodder systems that combined Napier grass with Desmodium and began producing silage to combat dry-season feed shortages. The results have been tangible: milk yields increased by 30–40% and feed costs fell. Her approach to fodder is now a training module she delivers to other women in her group, multiplying the benefit beyond her own farm.

On climate adaptation, Mary has planted drought-tolerant forages and conserves water at the farm level. She credits county extension support with providing the technical guidance on climate-smart practices that enabled these transitions. She believes this partnership should be deepened and made more gender-equitable.

TRANSFORMATION AND LEGACY

Mary's story is, above all, one of sustained determination in the face of compounded disadvantage. The combination of land-access constraints, credit barriers, domestic time burdens, and exclusion from cooperative governance would have stopped most people. She navigated each through a different strategy: group banking for credit, network advocacy for voice, and demonstrated results for recognition. Her message to policymakers — prioritise women-friendly credit without heavy collateral, set women's quotas on cooperative boards, and invest in climate-adaptation training — is grounded in ten years of hard experience.

ENTERPRISE AT A GLANCE	
Scale	Semi-commercial / commercial
Herd size	8 dairy cows
Daily production	40–60 litres/day
Annual revenue	KES 500,000
Cooperative	Tuluomoi Dairy Cooperative
Leadership role	Women's group leader; trainer
Key innovations	Napier + Desmodium intercrop, silage making
Employment	1 permanent, 2 seasonal

Mirriam Wanjiru Kamangu

Clean energy, clean income, clean independence

> *"When I had my first cow, I realised that income comes every day. As a woman who is not employed, that guaranteed daily income changed everything."*

HER JOURNEY

Known in her community as Mama Eric, Mirriam Wanjiru Kamangu was born and raised in Maili Kumi, Central Ward, Ndaragwa Sub-County. She is married and has three children, all now adults and independently employed. She first encountered dairy farming in 2018 through a local training programme, joining a farmer group through Jomuga Dairy that introduced her to fodder production, feed conservation, and zero-grazing unit construction.

She began with a single heifer. The early constraint was capital — there was no surplus to invest — but she had land and the knowledge she had gained from the group. She planted her own fodder crops: Napier grass for green feed and maize for silage. She understood instinctively that before bringing in an animal, you must be able to feed it. That discipline has defined her enterprise ever since.

Eight years in, she manages two high-performing dairy cows through the Nyala Dairies Society, producing 14 litres per day and generating KES 151,200 in annual revenue. For a two-cow operation in Nyandarua — a county where structural constraints on women's land ownership have historically suppressed empowerment — her operation demonstrates what technical capability and strategic land use can achieve.

INNOVATION IN ACTION

Mama Eric's farm is a study in integrated resource use. A zero-grazing unit feeds a biogas system; the biogas replaces firewood and commercial gas for cooking; the bio-sludge from the biogas plant fertilises the vegetable garden, where she grows organic indigenous vegetables that have become popular among her neighbours. The smartphone she uses to attend online dairy meetings also helps her formulate her own feeds using online resources — cutting her input costs and strengthening her independence from agrovets.

A chaff cutter has freed up the hours she previously spent manually slicing fodder, which are now spent on other productive and household activities. This substitution — technology-for-time — has had a quality-of-life impact that goes beyond revenue figures.

TRANSFORMATION AND LEGACY

What Mama Eric describes most vividly is the shift from dependence to independence. A decade ago, she had no personal income. Today she has money of her own, makes her own decisions, and is recognised as a county-level coordinator for grassroots women's groups. She has mentored younger women and used her leadership of a women's potato-growing group to develop interpersonal skills — public speaking, guidance, and confidence — that underpin her broader community role. Her message to development partners is practical: train grassroots women, help them form groups, and support them in writing proposals and accessing resources themselves. She is asking for capability, not just support.

ENTERPRISE AT A GLANCE	
Scale	Semi-commercial
Herd size	2 dairy cows
Daily production	14 litres/day
Annual revenue	KES 151,200
Market channel	Nyala Dairies Society
Leadership role	County women's coordinator; women's group leader
Key innovations	Biogas, chaff cutter, smartphone-based learning, organic vegetables

Employment	1 seasonal

PROFILE 6 OF 8: NYANDARUA COUNTY

Florence Wambui Ng'ang'a

Resilience rewarded: 200 litres a day and counting

> *"Starting any business is challenging. Don't lose hope so early. There are times for profit and times for loss — plan well during the good times for the hard ones."*

HER JOURNEY

Florence Wambui Ng'ang'a — Mama Shiku to her community — has built one of the most productive women-led dairy enterprises in Nyandarua County. She now manages ten cows and about eight calves, produces 200 litres of milk per day, and sells directly to Brookside, generating annual revenues of about KES 3,600,000. This achievement is all the more extraordinary given that she lost several animals to disease and deception in her early years and came close to abandoning the sector entirely.

Mama Shiku moved from Njoro, Nakuru County, to Kasuku, Weru, in Oljororok Sub-County after her marriage. Crop farming in the new environment proved unreliable — the seasons were less predictable and the climate less forgiving than what she had known. Motivated by a neighbour's obvious success, she turned to dairy but immediately faced compounded challenges of inexperience, unscrupulous brokers, and inadequate knowledge of feed. Four heifers died or were sold at a loss before she rebuilt. What carried her through was not capital — she had little — but conviction, and the training she continued to attend even after she had no cow left to apply the knowledge to.

Two years of training without a cow produced a farmer who was technically prepared when the moment came. She prepared silage before acquiring animals. She sourced a heifer from a neighbour in need of quick cash and received a bull calf for free, which she fattened and sold to buy a second heifer. From that foundation, built on resilience and strategic patience, the enterprise has grown without pause.

INNOVATION IN ACTION

The technical architecture of Mama Shiku's operation is sophisticated. She maintains a diversified fodder base — super Napier, Kakamega 1 Napier, Lucerne, super vines, Desmodium, Juancao Napier, and maize for silage — and has transitioned from silage tubes to silage pits as her volumes have grown. Each pit is designed to last two months and is sequenced to ensure continuity across seasons. An electric chaff cutter has replaced manual chopping, dramatically reducing feed preparation time. Her zero-grazing unit generates biogas for cooking, and solar-powered security lights further reduce energy costs. She uses artificial insemination to improve her breed stock and aims to develop a certified breeding programme for her community — addressing the very problem she faced as a beginner, when low-quality breeds and dishonest brokers blocked her entry.

The impact of this enterprise has been total: it sustains the household so completely that her husband resigned from his salaried position to manage the bull fattening side of the operation. The enterprise has grown into a family business, with spill-overs into organic vegetable production using bio-sludge manure.

TRANSFORMATION AND LEGACY

Mama Shiku serves as secretary of a local farmers' group — a role she takes seriously and finds genuinely challenging. Leading adults, she observes, requires perseverance; not everyone welcomes the changes she advocates, such as improved market linkages. But she leads anyway, and her community is better for it. Her call to policymakers is clear: milk prices must be increased to incentivise small-scale farmers, including women. The sector cannot empower women if the fundamental economics work against them.

ENTERPRISE AT A GLANCE	
Scale	Commercial
Herd size	10 cows + 8 calves
Daily production	200 litres/day

Annual revenue	KES 3,600,000
Market channel	Direct to Brookside (processor)
Leadership role	Farmers' group secretary
Key innovations	Silage pits, electric chaff cutter, biogas, solar, AI breeding
Employment	2 seasonal

PROFILE 7 OF 8: UASIN GISHU COUNTY

Beatrice Chepkurui

Treasurer, farmer, trail-blazer

> *"Develop the passion and start small. Dairy farming will surely pay you off — but women need training, financial support, and power in decision-making at the household level."*

HER JOURNEY

Beatrice Chepkurui is 33 years old, born and raised in Kesses Sub-County, Uasin Gishu. Her secondary education gave her a foundation, but it was her childhood experience of tending her father's cattle that planted the seed of her dairy identity. She is married with two children, and what began as a joint project between her and her husband — a subsistence initiative to improve household nutrition — has grown into a commercial enterprise with a stable income.

Beatrice's husband is trained in agricultural extension, and his technical expertise has been a valuable support. But the enterprise is hers in the ways that matter: she manages it, governs it, and represents it within the cooperative. As Treasurer of Kapsaimen Cooperative, she has built a reputation for accuracy, transparency, and trust — qualities that have elevated her standing within the broader farming community.

INNOVATION IN ACTION

Beatrice has established a dedicated dairy unit on her farm and planted Napier grass and Boma Rhodes grass to ensure a reliable feed base. Her approach to climate adaptation is ongoing — she candidly acknowledges that she has not yet done enough to build resilience against erratic rainfall and feed shortages, and she stores animal feed as a first measure. This honesty reflects a strategic self-awareness that distinguishes the most effective farm managers: she knows the risks and is working to address them, even if the journey is incomplete.

TRANSFORMATION AND LEGACY

Over eight years of operation, Beatrice has generated a steady, reliable income stream of approximately KES 350,000 per year from three dairy cows producing 30 litres per day — income that has contributed materially to her family's needs and partially supported her children's education. Within her cooperative, the savings culture she has helped nurture has created a shared resource that benefits all members. Her call to stakeholders mirrors what women across all five study counties have said: provide training, extend financial support, and, critically, ensure women have real decision-making power over land and assets at the household level. Without that, income gains remain fragile.

ENTERPRISE AT A GLANCE	
Scale	Commercial
Herd size	3 dairy cows
Daily production	30 litres/day
Annual revenue	KES 350,000
Cooperative	Kapsaimen Cooperative

Leadership role	Cooperative Treasurer
Key innovations	Napier grass, Boma Rhodes, feed storage, dairy unit
Employment	Family labour

PROFILE 8 OF 8: UASIN GISHU COUNTY

Ann Chepkorir

Rising again: leadership beyond setback

> *"Nature that interest and with proper planning and management you will prosper. We need support to rebuild — but we have the land, we have the water, and we have the will."*

HER JOURNEY

Ann Chepkorir is 48 years old, born in Kericho County and now residing in the Kapteldet area, Kapseret Sub-County, Uasin Gishu. She studied to certificate level in teaching, is married with four children, and has been involved in dairy farming for fifteen years. That tenure has not been easy or linear: disease struck her growing herd years ago, reducing a ten-cow operation to near zero. Heavy rains and strong winds subsequently destroyed her dairy unit. Today, she is rebuilding — holding one cow, a shared asset, and a collaborative enterprise with Star Shine Self-Help Group that demonstrates precisely what a community-based organisation can achieve when individual circumstances are most fragile.

Ann began with one cow and steadily built to eight, largely driven by ambition, before disease took them. She has been in the industry for fifteen years, but as she notes with characteristic wry clarity, the operation now looks as though it started three years ago. The gap between tenure and appearance measures what she has endured — and makes her resilience all the more remarkable.

LEADERSHIP AS THE THROUGH-LINE

Through every setback, Ann has led. As Chairperson of Star Shine Self-Help Group, she has motivated other women to enter the dairy sector, guided the group through diversification projects, and built institutional assets that outlast individual misfortunes. The group now owns three water tanks, is constructing a storage dam, hires out tents and chairs, and operates a silage machine. These communal assets have generated income and economic empowerment that are shared among members — a model of collective resilience that individual ownership cannot replicate.

Ann's group has also attracted the attention of development organisations, whose support has been channelled into infrastructure serving the whole community. Her ability to translate personal setback into collective action — to turn individual loss into organisational gain — reflects a quality of leadership that is not easily taught.

REBUILDING AND LOOKING FORWARD

Ann and her group are replanting grass, have harvested water, and are seeking support to restock with cows. She believes climate change contributed to the disease outbreak that devastated her herd and to the storm that destroyed her dairy unit. Her adaptation response is methodical: produce your own fodder, harvest and store your own water, and build physical structures to withstand what comes next.

Her message to stakeholders is direct: women need training, financial support, and genuine power in household decision-making over land and assets. Without land, women in dairy cannot plan for the long term. Without finance, they cannot recover from setbacks. And without decision-making power, even income earned through their own labour can be controlled by others. Ann has experienced all three constraints. She continues to farm anyway. Ann's 15-year trajectory — from a growing 10-cow operation to 1 shared cow — illustrates how climate shocks (disease, storms) interact with asset insecurity to permanently reverse women's empowerment gains. With no livestock insurance, no documented cattle ownership, and no titled land, she has no recovery buffers. This is a case study in gendered climate vulnerability.

ENTERPRISE AT A GLANCE	
Scale	Subsistence (rebuilding)
Herd size	1 cow (shared)
Daily production	3 litres/day
Annual revenue	KES 50,000
Market channel	Home sales
Leadership role	Chairperson, Star Shine Self-Help Group
Key innovations	Water harvesting, silage machine, group asset model
Years in sector	15 years

Cross-Cutting Themes and Lessons

Across seven profiles and four counties, several themes recur with sufficient consistency to constitute findings in their own right — insights that should inform how support for women in dairy is designed and delivered.

1. KNOWLEDGE BEFORE CAPITAL

Almost every woman in this sample began her enterprise with minimal capital but invested early in knowledge — attending training sessions, joining groups, and applying what she learned before scaling up investment. Mama Shiku continued attending training sessions for two years after losing all her animals. Charity Mwarirwa travelled to Nyeri for exposure visits. This pattern challenges the assumption that finance is the binding constraint: for many women, the technical confidence that knowledge provides is what unlocks the courage to invest.

2. GROUPS AS INFRASTRUCTURE

Women's groups appear in every profile — as sources of initial training, credit through table banking, market information, and solidarity during hard times. Ann Chepkorir's Star Shine Group owns assets that no individual member could acquire alone. Mary Komen's group provided the social guarantee that served as collateral she could not offer to formal lenders. Groups are not a soft social intervention; for women in dairy, they function as critical economic infrastructure.

3. INTEGRATED TECHNOLOGY ADOPTION

The most successful farms are not those that adopted a single technology, but those where technologies were combined into mutually reinforcing systems. Zero-grazing enables biogas; biogas produces bio-sludge; bio-sludge fertilises fodder and vegetable gardens; silage buffers against climate variability. This systems logic delivers efficiency gains and resilience benefits that single-technology adoption cannot replicate. Programme design should support integrated adoption rather than promoting isolated innovations.

4. LAND AS THE FOUNDATIONAL CONSTRAINT

Every woman in Nyandarua — and several in other counties — cited land access as a defining barrier. Land is not just a productive asset in the dairy value chain; it is the precondition for planting fodder, installing infrastructure, and making the long-term planning decisions that distinguish enterprise from survival. Where women cannot own or control land, the ceiling on their empowerment is structurally fixed. All other interventions operate within that ceiling.

5. RESILIENCE AS A CORE COMPETENCY

Every woman in this sample has experienced significant setbacks: animal deaths, market failures, climate-related events, domestic resistance, or financial losses. None has left the sector. The ability to absorb losses and rebuild — not once but repeatedly — is perhaps the most underappreciated competency in the smallholder dairy sector. Programmes that support women in dairy should be explicitly designed for resilience: through livestock insurance, emergency credit facilities, group solidarity mechanisms, and climate-smart infrastructure subsidies.

Annex C: Summary Data Tables

1: Tables

The following tables and charts provide detailed statistical analysis of the survey data.

Table 1: Demographic Profile Summary Statistics

Variable	Statistic	Value
Age	Mean	46.6 years
Age	Median	45.5 years
Age	Range	25-81 years
Education	Secondary or higher	70%
Marital Status	Married	67%

Table 2: Age Distribution of Respondents

Age Group	Frequency	Percentage	Cumulative %
Youth (<35 years)	23	17.8%	17.8%
Middle-aged (35-55)	74	57.4%	75.2%
Older (55+ years)	29	22.5%	97.7%
Missing	3	2.3%	100.0%

Table 3: Educational Attainment

Education Level	Frequency	Percentage
No formal education	4	3.1%
Primary	35	27.1%
Secondary	54	41.9%
Certificate/Diploma	26	20.2%
Degree+	10	7.8%

Table 4: Dairy Enterprise Characteristics

Enterprise Metric	Measure	Value
Cattle Ownership	Mean	3.5 cattle
Cattle Ownership	Median	3.0 cattle
Cattle Ownership	Range	1-26 cattle
Daily Milk Production	Mean	23.3 liters
Daily Milk Production	Median	15.0 liters
Daily Milk Production	Range	3-120 liters

Table 5: Enterprise Scale Distribution

Enterprise Scale	Production Range	Frequency	Percentage
Subsistence	<5 L/day	3	12%

Semi-commercial	5-20 L/day	16	64%
Commercial	>20 L/day	6	24%

Table 6: Land Ownership Patterns

Land Tenure Status	Frequency	Percentage
Titled in own name	29	23.2%
Jointly titled	30	24.0%
Use family land (no ownership)	34	27.2%
Untitled/customary	24	19.2%
Rent/lease	2	1.6%
Other	6	4.8%

Table 7: Top Market Challenges Reported

Challenge	Frequency	Percentage
Low prices	110	85.3%
Lack of market information	55	42.6%
Post-harvest losses	47	36.4%
Transportation costs	44	34.1%
Distance to market	41	31.8%
Payment delays	32	24.8%
No reliable buyer	16	12.4%

Table 8: Financial Access Barriers

Barrier	Frequency	Percentage
Limited collateral	84	65.1%
High upfront investment costs	57	44.2%
Lack of awareness of products	43	33.3%
Institutions unwilling to lend	31	24.0%
Low digital finance literacy	31	24.0%

Table 9: Cooperative Membership and Participation

Participation Indicator	Measure	Value
Cooperative membership	Percentage	86%
Primary sales channel	Via cooperative	64%
Meeting attendance	Always/Often	30%
Leadership positions	Hold/held position	<30%

Table 10: Economic Impact on Food Security and Wellbeing

Impact Area	Frequency	Percentage

Increased milk for household consumption	101	78.3%
Improved dietary diversity	90	69.8%
Improved child nutrition	79	61.2%
Improved household health	71	55.0%
Increased healthcare income	67	51.9%
Income control (mean)	82%	Average control

2: Visualizations

The following charts provide visual representation of key findings from the quantitative survey.

Figure 1: Sample Distribution by County

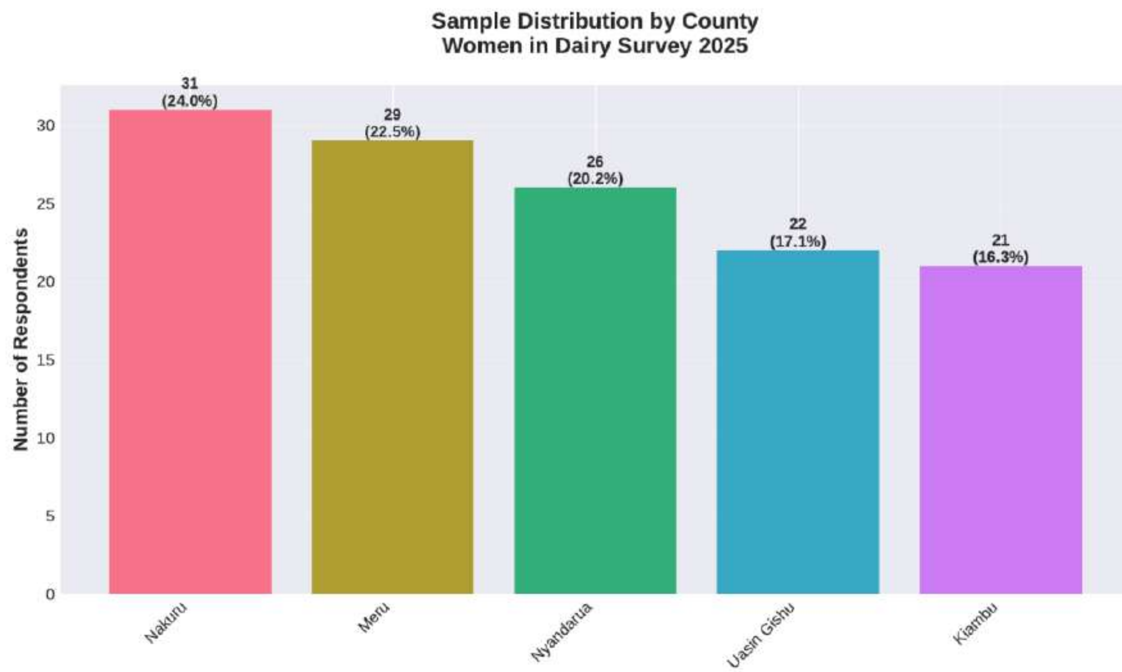


Figure 2: Age Distribution of Women Dairy Farmers

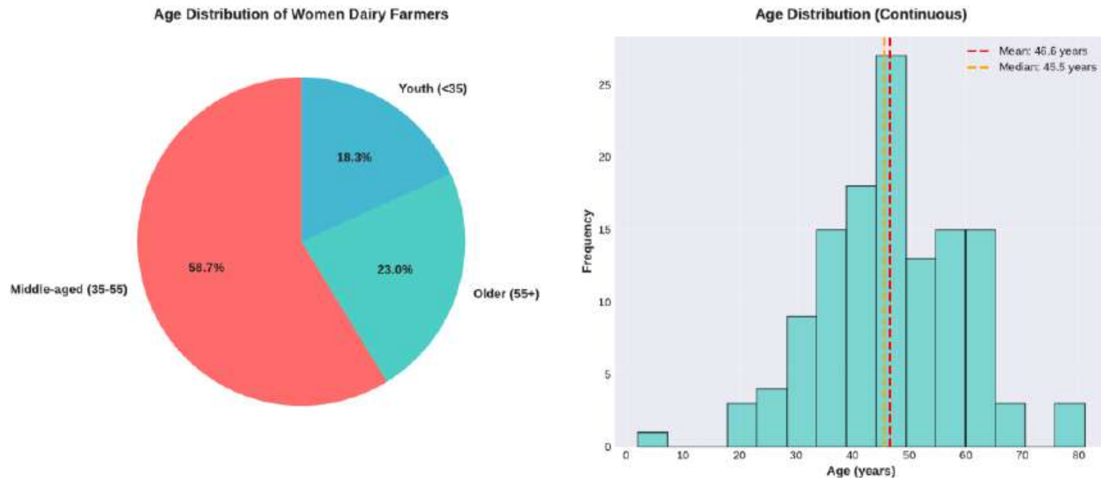


Figure 3: Education Levels and Marital Status

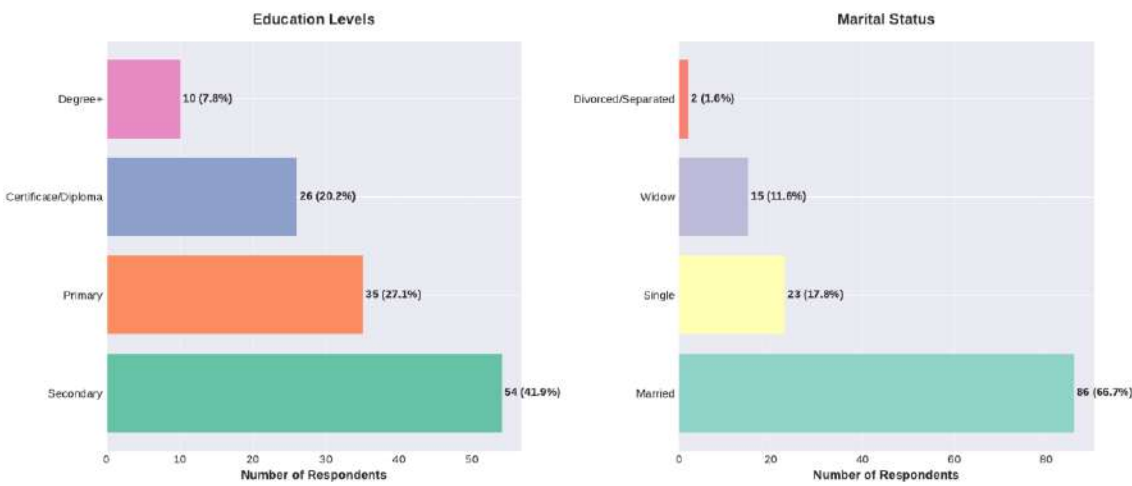


Figure 5: Enterprise Scale Classification

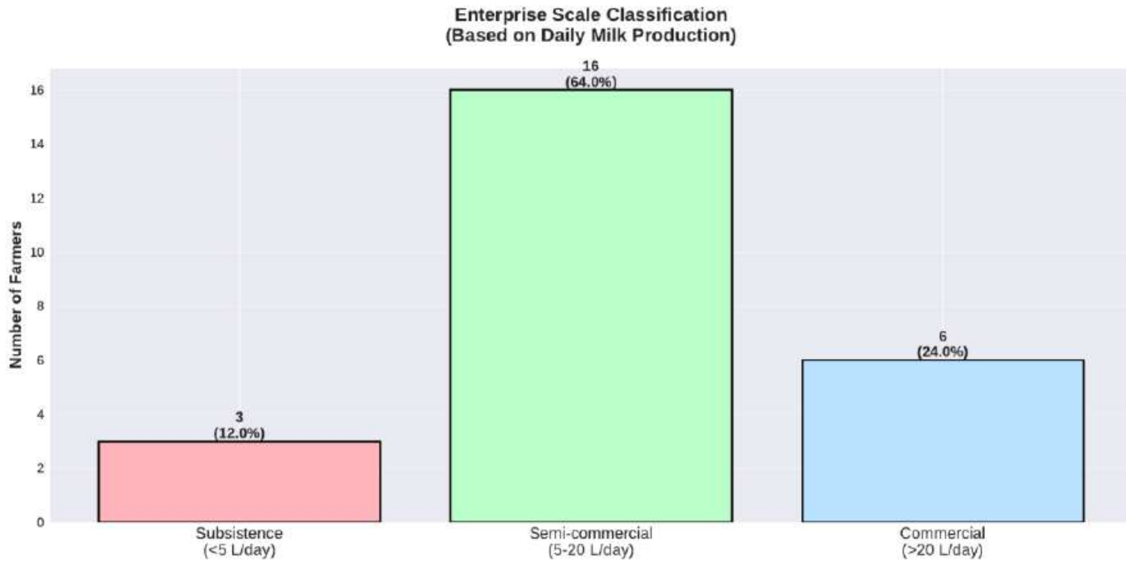


Figure 6: Primary Milk Sales Channels

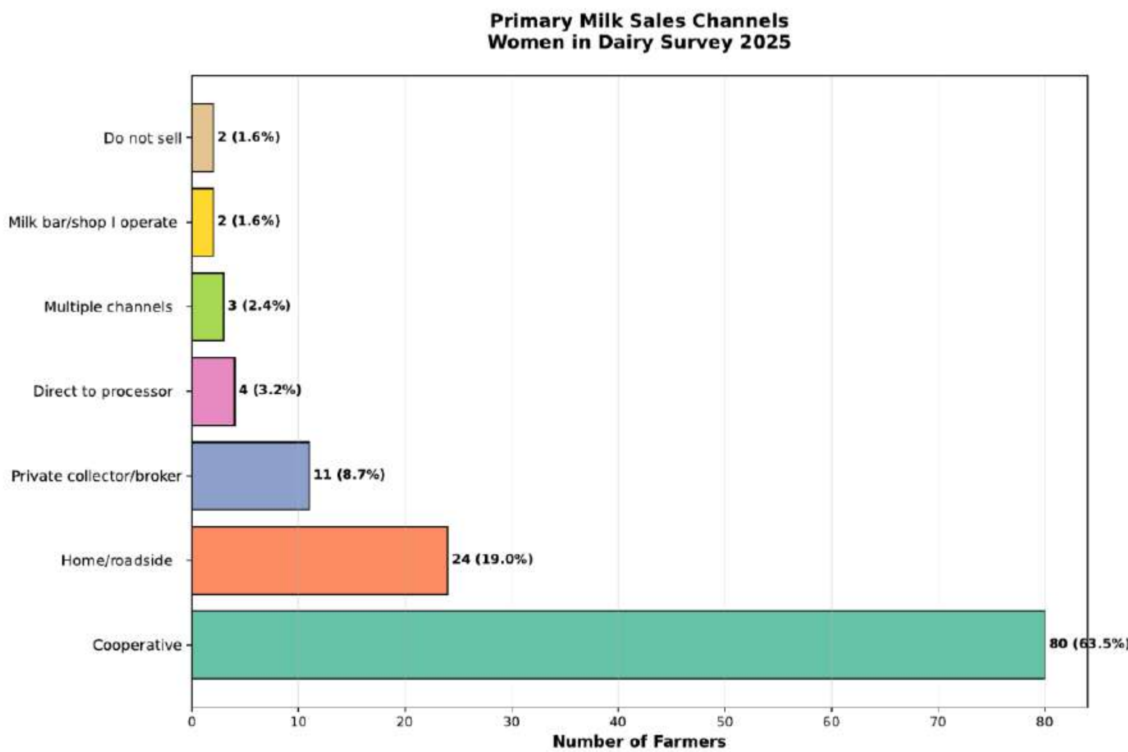


Figure 7: Cooperative Engagement Metrics

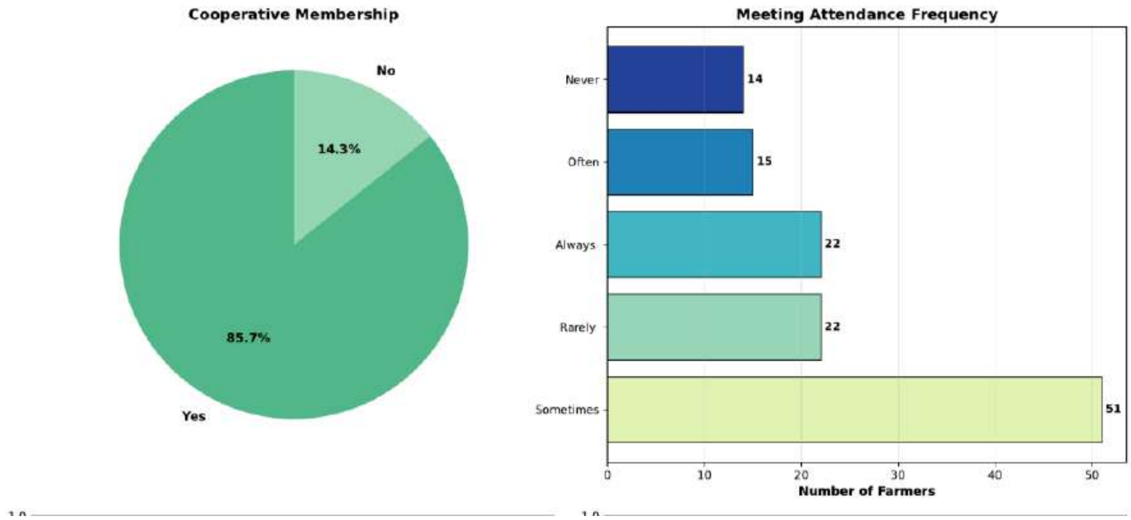


Figure 8: Top Market and Financial Challenges

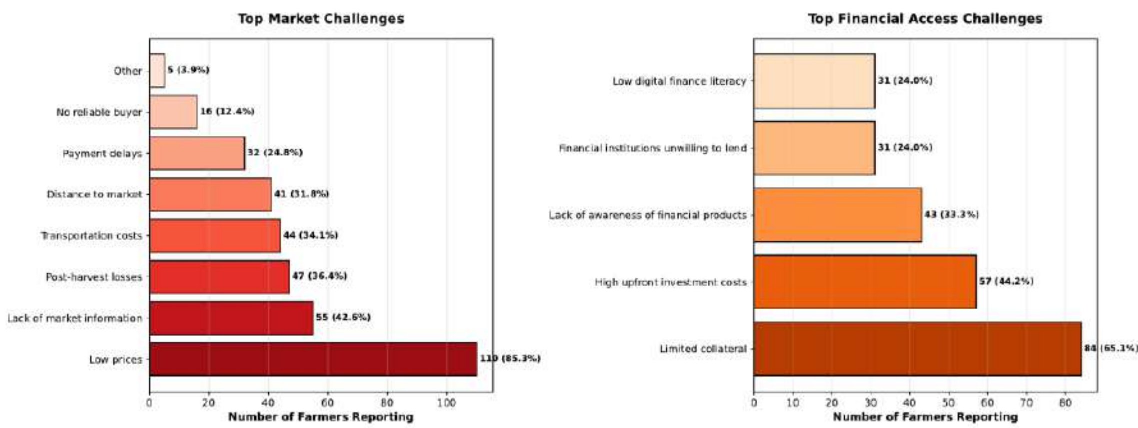


Figure 9: Dairy Enterprise Impact on Food Security

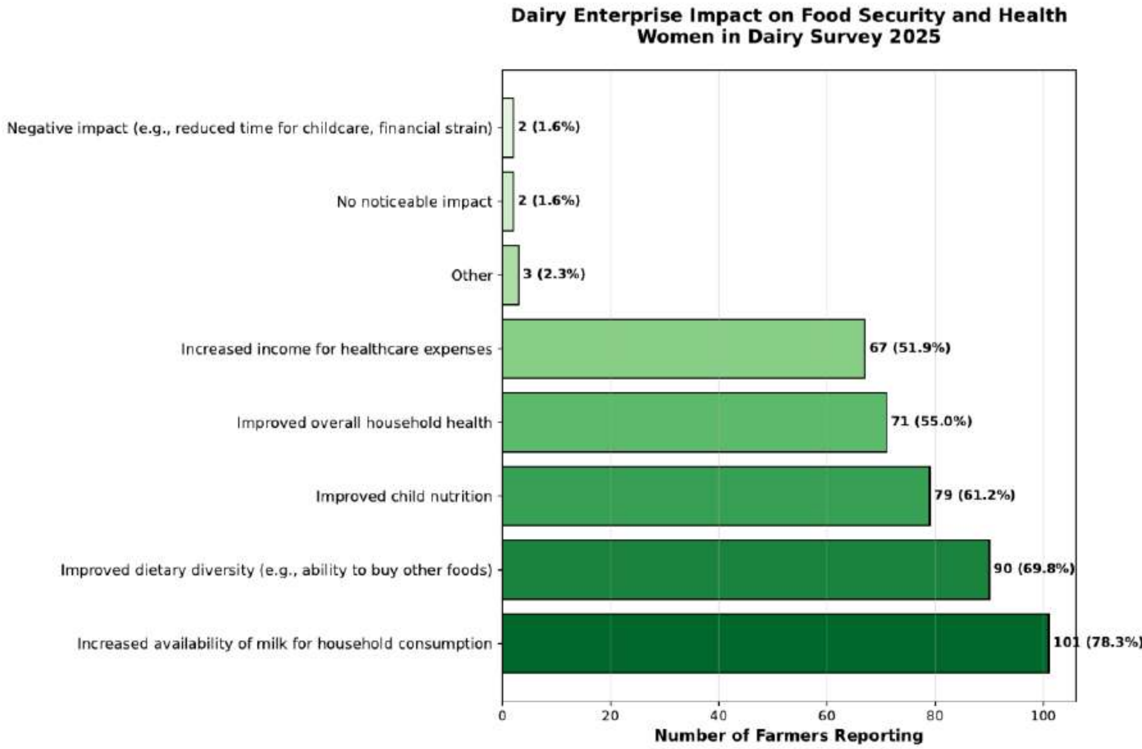
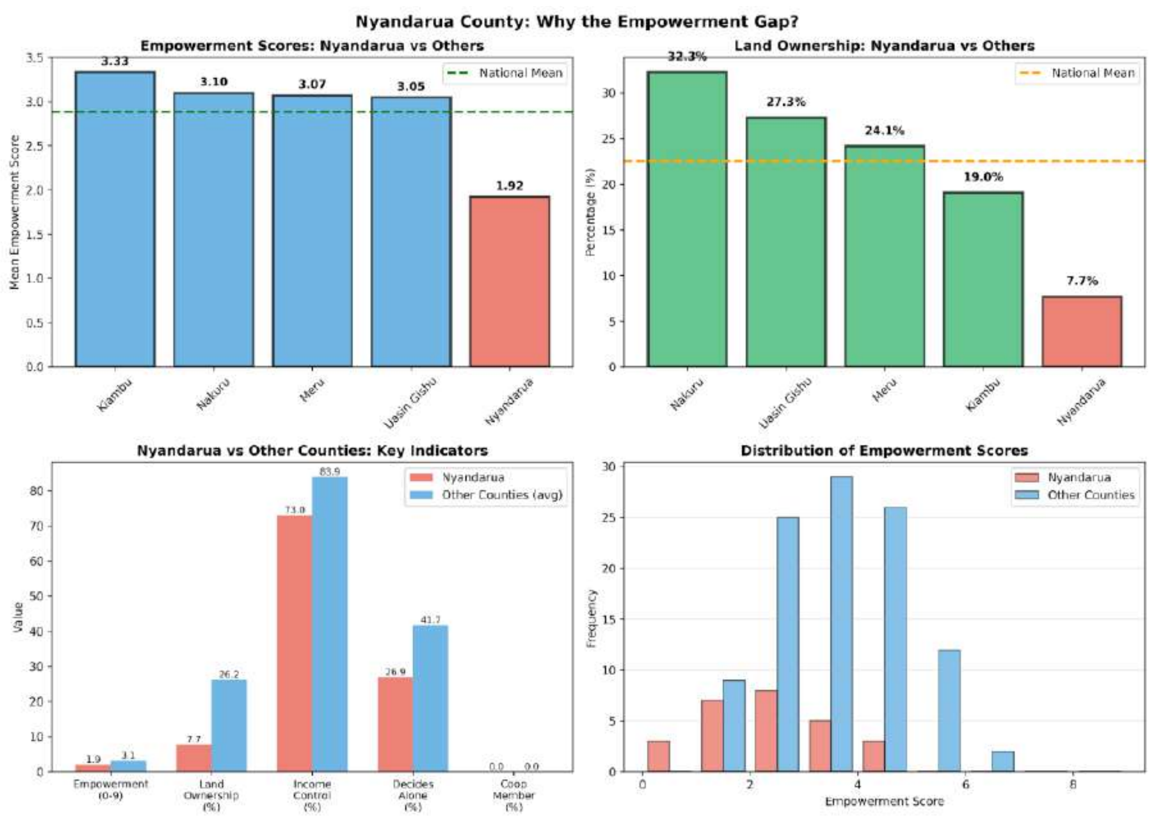


Figure 3.8.2: Nyandarua Gap Analysis — Four-Panel Breakdown of the Empowerment Deficit



Annex D: Political Economy Analysis Matrix

The following matrix systematically examines how power, interests, institutions, and incentives shape women's participation in Kenya's dairy value chain. Analysis is based on triangulation of survey data (129 respondents), key informant interviews (24), focus group discussions (8), and case study evidence.

PEA Dimension	Key Questions	Evidence / Findings	Policy/Programme Implications
1. Land Tenure & Ownership	• Do women have statutory right to own land? • What customary norms govern access? • How does tenure affect credit access?	CRITICAL BARRIER: • Only 23% own titled land • 77% lack land titles • FGD: "Without land in your name, getting a loan is very difficult" • KII: "Cows and land registered under men's names even when women are primary caregivers" • Survey: 65% cite limited collateral as financial barrier • Case study: Land ownership identified as biggest barrier	IMMEDIATE: • Fast-track land titling for women • Promote joint land titling • Strengthen widow inheritance rights MEDIUM-TERM: • Alternative collateral systems • Group guarantee schemes TRANSFORMATIONAL: • County gender-responsive land policies
2. Cooperative Governance	• Do bylaws mandate gender quotas? • Are voting rights protected? • Is gender data tracked?	MEMBERSHIP-LEADERSHIP GAP: • 86% are members but low leadership • KII: 2/8 positions (Coop 1), 3/7 (Coop 2) • Barriers: lack of confidence, fear of criticism, cultural norms, time constraints • FGD: "Leadership is for men, family won't support meeting attendance" • Most cooperatives lack gender provisions in bylaws • No gender-disaggregated data collection	IMMEDIATE: • Mandate 40% women leadership quota • Gender-responsive meeting schedules • Voting rights protection MEDIUM-TERM: • Capacity building for women leaders • Gender data collection systems • Gender-specific services TRANSFORMATIONAL: • National policy framework for gender in cooperatives
3. Credit & Financial Systems	• What collateral systems disadvantage women? • Are there gender-responsive products?	PRIMARY CONSTRAINT: • 65% cite limited collateral as barrier • KII (SACCO): "Land title requirements exclude women" • BUT: "Women are reliable borrowers, disciplined	IMMEDIATE: • Dairy-specific loans, flexible collateral • Subsidized interest rates • Financial literacy training MEDIUM-TERM: • Asset finance for

	• What is approval disparity by gender?	financially" • Emerging innovations: group lending, check-off systems, mobile banking • FGD: "Fear loans because milk income not stable"	equipment • Value chain financing • Women's credit guarantee fund TRANSFORMATIONAL: • Policy reforms on collateral • Gender lens investing incentives
4. Extension & Technology	• Is extension gender-responsive? • Equal access to technologies? • % of female extension workers?	SERVICE GAPS: • FGD: "Extension officers come but not often" • FGD: "Talk more to men even when we're caring for cows" • KII: Lack technical knowledge, poor feeding practices BUT STRONG FOUNDATION: • 70% secondary education+ provides capacity • Case study: Successfully adopted biogas, silage, 3x/day milking	IMMEDIATE: • Deploy female extension officers (50% target) • Gender-responsive delivery • Subsidized AI/vet services MEDIUM-TERM: • Demo farms • Digital platforms • Farmer field schools TRANSFORMATIONAL: • National policy with gender mandates • Public-private partnerships
5. Market Power Relations	• Who controls farm-gate prices? • Do women have bargaining power? • Gender-differentiated channels?	PRICE POWERLESSNESS: • 85% cite low milk prices • 64% sell through cooperatives • FGD: "We don't have power to negotiate. Price is already set" PAYMENT PARADOX: • Women control 82% income • BUT: "Payment goes to husband's account" VALUE ADDITION UNTAPPED: • FGD: "Would like yogurt/butter but don't have equipment"	IMMEDIATE: • Milk price floors • Digital payments direct to women • Market information systems MEDIUM-TERM: • Women's collective marketing • Value addition equipment/training • Quality premiums TRANSFORMATIONAL: • Women's voice in pricing decisions • Alternative market channels
6. County Government Policies	• County gender & agriculture policy? • Women in planning?	POLICY VOID: • No county-specific gender agriculture policies mentioned • Infrastructure needs: water,	IMMEDIATE: • County gender/agriculture policy • Gender-tagged budgets

	• Gender-tagged budgets?	roads, cooling facilities NEEDED INTERVENTIONS: • KII: "Government subsidies for feeds" • KII: "Clear livestock extension policies" • KII: "Services at no cost to farmers"	(30% minimum) • Women in planning processes MEDIUM-TERM: • Infrastructure investments • Extension strengthening • Feed subsidy programmes TRANSFORMATIONAL: • County dairy development funds • Performance contracts for officials
7. National Policy Framework	• How does Kenya Dairy Policy address gender? • National gender quotas? • IYWF commitments?	POLICY-PRACTICE GAP: • Policies exist but weak enforcement IYWF OPPORTUNITY: • 2026 IYWF provides platform for commitments NEEDED NATIONAL ACTIONS: • KII: "Policies promoting women's land/livestock ownership" • KII: "Gender quotas for cooperatives" • KII: "Clean energy (biogas) promotion"	IMMEDIATE: • National Women in Agriculture Policy • IYWF National Action Plan • Gender quota directives MEDIUM-TERM: • Harmonized ministry alignment • National dairy gender strategy • Legislative reforms TRANSFORMATIONAL: • Kenya Dairy Board gender policy • 50% women leadership target by 2030
8. Social Norms & Intra-household Dynamics	• Norms governing income control? • How does time burden constrain growth? • Norms on mobility/market access?	HEAVY TIME BURDEN: • FGD: "Day starts 5am—milking, cleaning, feeding, water, grass. Men come for buying/selling" WORK-OWNERSHIP GAP: • FGD: "We do most work but ownership belongs to men" BUT POSITIVE: • KII: "Financial empowerment reduced household conflicts" • Case study: "Husband supportive, allows independent income management"	IMMEDIATE: • Household dialogue/men engagement • Time-saving technologies • Gender-transformative training MEDIUM-TERM: • Community childcare • Recognition campaigns • Workload redistribution TRANSFORMATIONAL: • National gender norms change campaign • Legal protections

9. Private Sector Incentives	• Gender-inclusive processor procurement? • Do input suppliers target women? • Market incentives for inclusion?	INFORMAL ENGAGEMENT: • KII (Agrovet): "60-70% customers are women, frequently visit" • Informal accommodations: flexible purchasing, simple advice BUT NO FORMAL POLICIES: • Barriers: women's limited cash flow, men control finances, delayed decisions	IMMEDIATE: • Gender-inclusive processor procurement • Input supplier gender training • Public-private partnerships MEDIUM-TERM: • Processor farmer development programmes • Agrovet-based extension • CSR targeting women TRANSFORMATIONAL: • Gender-inclusive value chain standards • Investment incentives

Cross-Cutting Findings from PEA

- Persistent participation-control gap across all dimensions
- Asset ownership (land, cattle) as foundation barrier affecting all else
- Cooperative governance as critical leverage point (86% membership)
- Social norms changing but slowly; men engagement essential
- Strong human capital base (70% secondary education) underutilized
- Payment systems and informal norms can undermine formal rights
- Climate change impacts disproportionately burden women
- Private sector recognizes women as key clients but lacks formal policies

Three-Tier Policy Framework Summary

Tier 1: Immediate Actions

1. Fast-track land titling for women dairy farmers
2. Mandate 40% women in cooperative leadership
3. Dairy-specific loans with flexible collateral
4. Deploy female extension officers (50% target)
5. Milk price floor mechanisms
6. Direct digital payments to women

Tier 2: Medium-Term Actions

1. County gender-responsive agriculture policies
2. National feed subsidy programme

3. Cooperative bylaw reforms
4. Women's collective marketing groups
5. Value addition equipment and training
6. Household dialogue programmes

Tier 3: Transformational Actions

1. National Women in Agriculture Policy
2. Legal reforms on collateral and asset ownership
3. Kenya Dairy Board gender policy
4. National gender norms change campaign
5. Gender-inclusive value chain standards
6. 50% women in dairy leadership by 2030

Annex E: Research Tools

1. Quantitative Survey Questionnaire

2. Key Informant Interview Guide

3. Focus Group Discussion Guide

4. Case Study / Enterprise Profile Guide

5. Political Economy Analysis Matrix

Annex F: References

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