

# NIGERIAN DAIRY DEVELOPMENT PROGRAMME (NDDP)

## Gender Analysis of Smallholder Dairy Farmers in Oyo and Kano States

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## Disclaimer

The report has been prepared by Sahel Consulting Agriculture & Nutrition (Sahel).

This report is based on findings from field research conducted by Monii Development Consult (MDC) among smallholder dairy producing communities in Oyo and Kano states as part of the Nigerian Dairy Development Programme (NDDP).

The findings of this report are solely based on information provided by the respondents interviewed and the literature review. This report is for the exclusive use of NDDP.

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## LIST OF ACRONYMS

<b>A-WEAI</b>	Abbreviated Women Empowerment in Agriculture Index
<b>DFID</b>	Department for International Development
<b>FBFI</b>	Food Basket Foundation International
<b>FCW</b>	FrieslandCampina Wamco
<b>FGD</b>	Focus Group Discussion
<b>GPI</b>	Gender Parity Index
<b>IDI</b>	In-depth Interview
<b>KII</b>	Key Informant Interview
<b>LGA</b>	Local Government Area
<b>L&amp;Z</b>	L&Z Integrated Farms Nigeria Ltd.
<b>MACBAN</b>	Miyetti Allah Cattle Breeders Association
<b>MCC</b>	Milk Collection Centre
<b>MDC</b>	Monii Development Consulting
<b>NDDP</b>	Nigerian Dairy Development Programme
<b>NGN</b>	Nigerian Naira
<b>RA</b>	Research Assistant
<b>SPSS</b>	Statistical Package for Social Sciences
<b>UNICEF</b>	United Nations International Children's Emergency Fund
<b>WEAI</b>	Women Empowerment in Agriculture Index
<b>WHO</b>	World Health Organization
<b>5DE</b>	Five Domains of Empowerment

## OPERATIONAL DEFINITIONS

<b>Cluster</b>	Groups of smallholder dairy farmers within a Local Government Area (LGA).
<b>Community</b>	A group of people with a common characteristic or interest living together within a larger society.
<b>Fulani homestead</b>	Usually called the <i>bukkaaru</i> or <i>ruga</i> (Hausa word for 'cattle encampment'), the Fulani homestead includes one to several households: cooked pots of food may be shared, but the herds of the individual households are usually managed separately, and household heads generally farm individually and control separate stores of grain.
<b>Household</b>	A group of people who live together and take food from the "same pot".
<b>Integrated Household</b>	Households currently supplying milk to Friesland Campina Wamco (FCW) and L&Z Integrated farms (L&Z).
<b>Islamiyah</b>	Arabic schools for children.
<b>Milk men or milk vendors</b>	Men who collect milk from dairy farmers and transport it to the Milk Collection Centers for a small fee.
<b>Non-Integrated Household</b>	Identified households that have cows but do not supply milk to the processors.
<b>Non-Farm Economic Activities</b>	Activities that bring in income but are not classified by this study as farming. This includes transportation, selling of milk and milk-related products.
<b>Processors</b>	Companies currently engaged in fresh milk collection and formal processing. Processors in scope for this study are FCW in Oyo State and L&Z in Kano state.
<b>Traditional Milk-related products</b>	Traditional milk products produced by the Fulani: <ul style="list-style-type: none"> <li>▪ <i>Wara</i>: Yoruba cheese made from fresh milk</li> <li>▪ <i>Nono</i>: Sour milk</li> <li>▪ <i>Kindirmo</i>: Sour yoghurt made from fresh milk</li> <li>▪ <i>Maishanu</i>: Local butter made from milk</li> <li>▪ <i>Chuku</i>: Fulani cheese made from fresh milk</li> <li>▪ <i>Madara</i>: Hausa word for 'fresh milk'</li> </ul>
<b>Sarkin</b>	Refers to the king, emir or traditional ruler.
<b>Sullubawa</b>	A Fulani clan in Northern Nigeria found mainly in Kano and Katsina states.
<b>Settlement</b>	A colony or any small community of people

## EXECUTIVE SUMMARY

### Background

The Nigerian Dairy Development Program (NDDP) is a processor-led program implemented by Sahel Consulting, in partnership with leading dairy processors; Friesland Campina WAMCO in Oyo State and L&Z Integrated Farms in Kano State, Nigeria. The program seeks to enhance the livelihoods of participating Fulani dairy farmers in both states by improving the productivity of their cattle and integrating them into the formal dairy value chain in Nigeria.

The program also seeks to improve women empowerment and the nutrition outcomes of the participating dairy communities.

In order to design effective women empowerment and nutrition interventions, it is critical to better understand the cultural beliefs, knowledge, attitudes, and practices of Fulani dairy producing households and how they influence social norms.

To that end, Sahel Consulting partnered with gender consultant Monii Development Consult (MDC) to undertake a systematic gender study in the NDDP's focus states.

### Study Overview

The overall goal of the study was to analyze gender relations among smallholder dairy households targeted by NDDP, with the view to design interventions for greater inclusion and empowerment of female members in dairy households. The study used a mixed approach, integrating a formal survey study tool, the Abbreviated Women's Empowerment in Agriculture Index (A-WEAI) with Focus Group Discussions (FGDs) and Key Informant Interviews (KIs). Using the A-WEAI tool, quantitative data was collected from 9 LGA's, 33 communities, and 515 households in Oyo and Kano states. In addition, 15 FGDs and 10 KIs were conducted to gather information on roles in decisions-making on agricultural production, access to and decision-making power over productive resources, control over use of income, leadership in the community and time use. The findings and recommendations from the study were presented at stakeholder meetings in Abuja, in Oyo State and in Kano State to raise awareness on gender and nutrition opportunities and challenges in the dairy sector, and to secure participants' buy in and support around proposed interventions. Attendees included representatives from the public, private and social sectors. Meetings were also conducted with respondents in both states at the community level to validate the report's findings. The feedback provided by meetings' participants was used to further refine the report.

### Key Findings

#### **Background characteristics of participating smallholder dairy households**

Over 1,115 respondents were involved in the study. 54% of the respondents are from Oyo and 46% of the respondents are from Kano. 51% of the respondents are women and 49% men. Majority of the households are integrated (i.e., they currently supply milk to FCW in Oyo State or to L&Z in Kano State). More than 95% are married and in the labor market productive age group of 18 to 59 years old. 81% of the women are of childbearing age or were pregnant at the time of the study. Households predominantly practice Islam and are engaged in polygamous marriages. Over 90% of the households are male-led. 80% of the population in Oyo and 60% in Kano have not benefited from formal education training. The low literacy level among women limits their access to information. Similarly, adolescent girls are mainly enrolled in Islamiyah schools and many of them do not receive any form of formal education.

Patriarchy, culture and religion (Islam) influences gender roles and household dynamics among the study's communities. There was no evident distinction between women's roles in integrated households versus those that were not integrated or in female-led households versus male-led households. Women (including widows and adolescent girls) are typically tasked with household duties. Their role in the livestock sector covers milk production, processing and selling as well as caring for calves and sick animals. Men and adolescent boys are typically responsible for the security of the family and for activities outside of the home, including cattle rearing. Across Oyo where the cows often graze far from the homestead and in some communities in Kano, men and boys also milk the cows for their wives and mothers. The milk is used for home consumption, is sold to the dairy processors (for integrated households) and/or is processed into milk products for onward sale to the informal market (mostly non-integrated households).

Cultural norms limit the interactions the women can have with men from outside the community as their husbands/fathers usually have reservations with other men engaging with their wives/daughters during meetings or trainings. Men and women also typically socialize and meet separately.

## A-WEAI

The study focused on the first wife, who traditionally and culturally is expected to be the most empowered because of her strategic position within the household. This may have had a positive bias that contributed to the very high A-WEAI scores seen for both Oyo and Kano. In both states, input into productive decision-making, access to credit, group membership and time (workload) are factors contributing to the disempowerment of women. This aligns with the qualitative findings from the study, demonstrating that women have limited access to productive resources and are not the primary decision makers in the household. The main exception is their involvement in the dairy business. Moreover, the results show that women in Oyo State have a much higher gender parity with adult males than those in Kano.

### Oyo

The A-WEAI for Oyo State is 0.755. The 5DE index value for women is 0.986 and 0.981 for men. Overall, about 95% of women have achieved some level of empowerment; however, since only 1<sup>st</sup> wives were interviewed, this might have had the unintended consequence of introducing a positive bias on empowerment as the 1<sup>st</sup> wife is traditionally and culturally more empowered than the other wives. Those who are not yet empowered (about 5%) have a mean 5DE score of 0.279. The GPI for Oyo State is 0.927. 44% of women have gender parity with the primary male in their households. The average empowerment gap between the 56% of women who have not achieved gender parity and the primary male in their household is 13%.

### Kano

The A-WEAI for Kano State is 0.663. The 5DE index value for women is 0.990 for women and 0.986 for men. Overall, about 96.5% of women have achieved some level of empowerment. Those who are not yet empowered (about 3.5%) have a mean 5DE score of 0.267. The GPI for Kano State is 0.947. This shows that 23% of women have gender parity with the primary male in their households. The average empowerment gap between the 77% of women who have not achieved gender parity and the primary male in their household is 7%.

## Descriptive A-WEAI Data and Qualitative Findings

### Decision Making about Agricultural Production

In general, women's role in decision-making tends to be restricted to child care and minor household expenditures, while men drive other key decisions within the household and the communities. Men tend to have input into most decisions around crop farming (57% in Kano, 65% in Oyo). Meanwhile, 58% of women in Kano and 54% of women in Oyo indicated having no input at all or input in only some crop farming decisions. Men make most of the decisions regarding livestock raising. Some men mentioned that as the head of the household they do this solely. Others noted making decisions in consultation with their wives. 67% of women in Kano indicated having input in some decisions made around livestock raising, compared to 50% in Oyo. Men have more control over major household expenditures e.g. land & cattle. Women's roles in decision making is more evident in the purchases of minor household items like food and daily consumables. 22% of women reported making most or all these minor decisions. Meanwhile, 57% of them indicated having an input in some minor expenditures decisions in consultation with their husbands, as men, particularly in Kano, plays a critical role in food purchase and consumption decisions.

Women also have more input into the dairy business (53% of female respondents), consistent with tradition and cultural norms described by the respondents. Nevertheless, it is worth noting that men have taken on greater roles in key areas, such as coordinating milking activities (men milk the cows in most communities in Oyo where the cows graze far from the homestead). In addition, with the integration into the formal dairy sector, men are also playing larger roles in the transportation of milk to the collection centers and in the financial exchange between the processors and the women. These changing dynamics create a risk to women's control of the dairy business.

Despite these clearly defined roles in decision-making, there is some room for negotiation and shared decision-making among men and women in the studied households. For example, it was noted that even when men appear to be in control of decision-making, they usually consult their wives, especially the first wife, who can have a strong influence on the outcome. In addition, most women indicated consulting their husbands before making business decisions. In female-headed households however, the woman has full authority over all households' decisions. Nevertheless, even in these cases, she tends to do so in consultation with her male relatives.

### Access to Productive Resources

Ownership and access to land is a major challenge across both states for dairy farmers. The percentage of women who own land is particularly low in Oyo (6%) compared to Kano (17%), as the Fulani people are not indigenous to Oyo. When land is owned, it is mostly owned solely by the men.

Men also typically own most of the livestock, particularly large livestock such as cattle. Only 21% of women in Oyo and 27% of women in Kano own cattle solely, which most times is usually received from dowry (given by father upon marriage), inheritance, bought with own resources and/or given by the husband. However, this ownership does not always translate into decision-making power and/or control over the assets, as the cattle is typically kept with the husband's cattle. Women tend to own and have more control over small livestock such as rams, goats, rabbits, and chickens. Similarly, as with large livestock, sole ownership among women is higher in Kano (41%) than in Oyo (34%).

In both states, milking is usually done manually as women lack the necessary technology and equipment for efficient milk production. In both Kano and Oyo, 90% of women own basic milking equipment which include aluminum milk containers (mostly provided by the processors), plastic bowls and filters.

Moreover, women's access to means of transportation is extremely limited. Less than 10% of women in both states noted owning a means of transportation. Most of the time, women travel on foot or rely on transportation provided by men. This limited access restricts women's ability to transport their milk to the MCC when it is not within walking distance from the homestead. In these cases, women rely on their husbands or milkmen from the community or from nearby localities to get their milk to the MCC. This in turn can affect their control over milk sales and quick access to payment.

Ownership of productive assets differ for men and women. For instance, the percentage of women who reported owning a mobile phone in Kano (34%) is particularly low when compared to women in Oyo (56%). Men on the other hand, have higher mobile phone ownership (84% in Oyo and 71% in Kano). Apart from mobile phones, ownership of other productive assets (mechanized and non-mechanized farm equipment, house and other structures) is low. Both men and women have limited access to finance, formal loans and credit facilities. The main form of borrowing for both gender across both states is through family and friends (over 70% of respondents). Informal lenders and credit groups are also moderately active in both states. In addition, borrowing cash and/or in-kind from NGOs is fairly popular in Kano (25%), while less than 1% of respondents in Oyo indicated doing so.

### **Control over Use of Income and Resources**

Income in Fulani households is generally derived from sales of cattle, milk and milk products, and agricultural produce. Men tend to control all of the income that comes into the household apart from the income derived from the sale of milk and milk products, which is mostly controlled by the women. More than half of the women (51%) stated that they make most decisions on how the income from milk is used while 66% of women reported controlling how much is set aside for household use. In Oyo, women use the milk income to make some minor purchases for the household and for their personal needs. In Kano, the money is typically used for their personal needs as the men give them money for household expenses. Money for food purchases in both states is primarily provided by the men.

### **Group Participation**

While both women and men have support structures in the community, the structures for men are more formalized with limited inclusion of women. More than 50% of women indicated knowing about the existence of various cooperatives and associations. However, women support structures and organizations remain mostly informal and disconnected from opportunities that might further promote the empowerment of their members. In addition, in Oyo and some parts of Kano, women's access to public places is often limited to the stream or river, and to the mosque. Women are also able to attend market days to sell their milk products and other items. In that sense, production of milk products allows women a certain level of mobility and movement which may not be emphasized by the women and may not be recognized by men. Additionally, visits to friends and family is not restricted.

## Relevant Insights from the Nutrition Study

The gender study was conducted in parallel with a nutrition study that assessed the nutritional status of the same target population in Oyo and Kano states, characterized the food systems and factors that likely influence their food choices and determined potential entry points for improving their nutritional status, with a focus on food systems entry points.

Findings from the nutrition study show a high prevalence of malnutrition among smallholder dairy households in both states. Assessed immediate, underlying, and basic determinants of malnutrition including the Minimum Dietary Diversity for Women (MDD-W), Food expenditures as a share of total expenditures (FES), access to care and health are inadequate in both states, but particularly in Oyo. The prevalence of food insecurity and hunger was significantly lower in Kano than in Oyo at the time of data collection; though key informants reported them to be higher in both states at other times in a year. Nutrition knowledge is inadequate. Food consumption is heavily dependent on staple cereals and tubers and a comparatively high consumption of milk and vegetables. Food choices are heavily influenced by culture and religion as well as food availability, accessibility and affordability.

The nutrition study also confirmed that men play a critical role in food purchase and consumption decisions. In Kano, 95% of men (husbands) are the primary providers of money for food purchases; 58% are the primary influencer of the food prepared for the household on a daily basis. Men's involvement in food decisions, though still high, is less significant in Oyo. 73% of men in Oyo are the primary providers of money for food purchases and 38% are the primary influencer of the food prepared for the household on a daily basis.

These findings were considered along with those derived from the gender study to develop nutrition-sensitive gender recommendations.

## Recommendations

The following recommendations build on the findings from this gender study and insights from the nutrition study to ensure greater inclusion and empowerment of women in smallholder dairy households and to influence nutrition outcomes.

### 1. **Promote Women's Participation and Leadership in Dairy Cooperatives:**

Women dairy farmers need to be better organized and included into formal structures that can be leveraged to build their capacity, maintain their control over their dairy businesses, and improve their access to productive resources.

The formation of women-only cooperatives and inclusion into existing social associations may be the most effective way to organize the women while respecting cultural norms governing interactions between both genders in Fulani communities. These organizations can be used as an entry point for interventions around capacity building, and to support joint ownership of cows and equipment for dairy production. Existing men-led livestock cooperatives that are open to the participation of women can also be supported with technical capacity building, training and participatory planning methodologies in order to increase women's membership and their involvement in decisions affecting dairy activities.

In addition, given the cultural norms, it critical to make deliberate efforts to build a cadre of female extension agents equipped with information and skills to train women dairy farmers. The opportunity to identify, recruit and engage young women from within and outside communities and to train them as extension agents, will enable them to build their capacity, improve their livelihoods, and support their communities. This will also enhance the level of engagement of the women in the communities given their increased comfort

level with female extension workers. These extension agents can be recruited by the processors, the government and/or development partners funding projects to support the dairy sector as done in NDDP.

**Proposed Implementers:** Dairy Processors, Development Partners, State Ministries of Agriculture, ADPs, and NGOs

## 2. **Improve Women’s Decision-Making Skills and Control of the Dairy Business by Increasing Direct Engagement with Processors:**

Women dairy farmers should have direct access to and manage their relationships with processors in order to retain control of the dairy business. It is particularly important for them to be at the decision table to negotiate prices and terms for milk sales and to be able to collect direct payments without using intermediaries. Methods for the dairy processors to improve their engagement with women dairy farmers include leveraging the cooperatives for effective communication and to pay into each woman’s account, conducting regular meetings with an elected body of representatives, and employing female staff that can interface directly with the women leaders.

**Proposed Implementers:** Dairy Processors

## 3. **Improve Women’s Financial Inclusion, Income and Education Levels**

Dairy processors can play an important role in improving women dairy farmers’ access to finance. They can link integrated households with financial institutions to receive services such as bank accounts and mobile banking as well as to assess their eligibility for government credit programs such as the Anchor Borrower Scheme.

The dairy cooperatives can be used to help women dairy farmers generate additional income for their household needs. Potential initiatives include vocational training to learn new trades for income diversification, communal ownership of improved dairy equipment and/or livestock to improve their yields and income, as well as group savings and lending to fund new businesses.

Adult education focused on numeracy and literacy, coupled with tailored training in culturally adapted languages can be provided by the government and NGOs by investing in teacher placement and training as well as by supporting nomadic and Islamiyah schools. Community-based classes can also be provided through the cooperatives. Topics covered should include nutrition awareness and should be targeted at both women and men, given the role of both genders in household’s food purchases and consumption decisions.

Technology should be leveraged to provide better access to finance and to markets as well as to training and extension services to women dairy farmers. The technology used should however take into account the low literacy levels of the dairy farmers and the connectivity and data challenges in their communities. As such, farmers can be provided with simple smartphones and mobile e-solution platforms with limited data needs and with offline features, to allow financial institutions, extension agents, teachers and other providers to engage with them remotely and provide them with relevant services.

**Proposed Implementers:** Dairy Processors, State Government, Development Partners, Financial Institutions, Mobile Money Providers, CSOs & NGOs

#### 4. Engage Men to Influence and Support Women’s Empowerment in the Communities

Women empowerment cannot be achieved among smallholder dairy communities without an active involvement and support from the men, given the influence of patriarchy, cultural norms and religion on household dynamics and decision-making patterns in these communities. Key interventions should be centered on:

- Sensitizing and educating community leaders on the benefits of women empowerment on their community.
- Engaging the men to identify potential reservations they raise against women empowerment, in order to develop mitigation strategies to be incorporated in operationalizing women empowerment’s interventions in their communities
- Identifying and engaging ‘male advocates/champions’ to support the establishment of the women cooperatives and other interventions targeted at women and adolescent girls.
- Providing men and adolescent boys with training on nutrition and business practices.
- Developing specific interventions targeted at male empowerment e.g., financial inclusion, alternative income generation activities to ensure that they are comfortable leaving the milk production and distribution to capable women.

**Proposed Implementers:** Dairy Processors, Men-only cooperatives & associations, State Government, Traditional and Religious Leaders, Financial Institutions, NGOs

## Conclusion

The NDDP Gender study highlights how religion, culture and tradition influence social norms and economic processes, reinforce patriarchy and limit the roles of women in smallholder dairy communities. Changes in economic activities, including increased integration of women into the formal dairy sector are yet to counter the gendered vulnerabilities, roles and dynamics in smallholder dairy households and communities. In fact, these roles seem to be reinforced and reproduced even within new contexts and changes to the dairy value chain. It is therefore critical that these norms are addressed to provide women with a wider platform for participation and empowerment.

In addition, women lack structured support systems and networks but utilize social systems, which should be formalized and strengthened. Direct access to economic inputs, most especially those that are related to dairy production and improved access to finance and credit are paramount. Women have some degree of control when it comes to minor household decision-making like food consumption. However, their low control over available resources is a limiting factor for improving nutritional status. As a result, nutrition education for women as well as men is critical, as without it, increasing household income and dairy production would by themselves not necessarily improve nutrition outcomes.

Furthermore, to ensure greater meaningful inclusion and empowerment of women in small dairy producing households, men, boys and community leaders must be integrated into any kind of intervention which supports behavioral change and modifications of social, cultural and religious norms.

Finally, processor-led dairy development programs, which integrate smallholder dairy farmers into the formal sector can provide several benefits to improve farmers’ productivity and livelihoods, while helping to address challenges and constraints around capacity building, access to information, finance, and infrastructure. Deliberate efforts must however be made

to ensure women maintain control over their dairy businesses. Government actors at the federal and state level, financial institutions, development partners and NGOs all have critical roles to play in supporting these programs and ensuring they achieve the intended benefits.

# 1 INTRODUCTION

## 1.1 Background

The Nigerian Dairy Development Program (NDDP) is a processor-led dairy program implemented by Sahel Consulting Agriculture & Nutrition Limited ("Sahel") in partnership with leading dairy processors – FrieslandCampina Wamco (FCW) in Oyo State and L&Z Integrated Farms Nigeria Ltd. (L&Z) in Kano State. The aim of the NDDP is to strengthen the Dairy Transformation Agenda of the Federal Government of Nigeria by demonstrating proof-of-scale in Nigeria's processor-led initiatives for dairy development. The program seeks to enhance the livelihoods of participating dairy farmers in Nigeria by improving the productivity of their cattle and integrating them into the formal dairy value chain in Nigeria. The program includes a gender component geared towards promoting women empowerment in smallholder farming communities.

This report presents findings and recommendations from a gender analysis of smallholder dairy producing communities in the two states with the aim of gaining increased insight into gender dynamics and providing recommendations for the inclusion of women in the program and beyond. The gender study was conducted in parallel with a nutrition study, within the context of the Nigerian Dairy Development Program.

## 1.2 Literature Review

### 1.2.1 Smallholder Dairy Households

The dairy industry in Nigeria, as in other parts of the world is dynamic and plays an important role in food security, employment creation and income generation. It has the potential to enhance the lives of smallholder dairy farmers thereby reducing poverty through integration into formal local, national and international dairy markets.

Nigeria has an estimated 20 million cattle and 2.3 million milking cows (FAOSTAT, 2014), with Fulani farmers controlling 95% of the cattle population. These farmers mostly nomadic, are based mainly in the northern parts of the country, though they migrate to the South in search of pasture. Southern states like Oyo attract small numbers of the Fulani who are engaged in cattle rearing, milk production and commercial beef production. Fulani rear indigenous cattle breeds primarily for their beef. The milk, considered a by-product, accounts for 70% of Nigeria's raw milk production. Local production and processing of milk in Nigeria has typically revolved around women who manage the process and the proceeds from the sale of the milk. Yields are very low due to poor genetic composition of local cattle breed, poor feeding practices and archaic production practices. A portion of the produced milk and related domestically processed milk-products are sold in the informal market and to formal dairy processors and some kept for home consumption.

As the local dairy production becomes more profitable, it is important for women to maintain control over the milk—both in terms of the household level decision making about how much to sell versus consume, and on any income, that they generate from its sale.

### 1.2.2 Policy Context

Desk review of existing policies on agriculture in Nigeria shows the existence of the Gender Policy in Agriculture (2016) and the National Gender Policy (2008) at the national level. The Gender Policy in Agriculture is a sectorial gender mainstreaming strategy document that seeks to complement existing policies in the agricultural sector and the National Gender Policy as well as its strategic implementation framework and plan. The policy recognises the different roles of women and men in agriculture. It also promotes and ensures the adoption of gender sensitive and responsive approaches towards engendering agriculture plans and programmes in such a way that men and women have access to and control of productive resources and facilities to bridge gender gaps. The policy on Agriculture is expected to drastically reduce the vulnerability of women to biases in agriculture and address the unequal gender power relation.

Both Oyo and Kano States in which this study focused, are yet to domesticate the new agricultural policy and currently do not provide adequate support for women dairy farmers. Each state however, runs state-led agricultural programmes that provides some level of support for dairy production. Some of those interventions include provision of grants and interest-free loans to farmers and associations; provision of boreholes, pasture and other facilities for nomadic herdsman and training and engagement of extension workers to reach targeted communities.

### 1.2.3 Conceptual Framework

This study was framed around the understanding of women's role in African agriculture, recognizing women as key actors in food production whose potential is challenged by underlying structural limitations in comparison to men. It is anchored on a 'gender mainstreaming paradigm' used for addressing unequal distribution of resources, benefits and opportunities in the agricultural sector (Ogunlele and Muhtar, 2009).

The study used the Abbreviated Women's Empowerment in Agriculture Index (A-WEAI), the first comprehensive and standardized measure to directly capture women's empowerment and inclusion levels in the agricultural sector. It was developed jointly by the United States Agency for International Development (USAID), the International Food Policy Research Institute (IFPRI), and the Oxford Poverty and Human Development Initiative (OPHI). The A-WEAI comprises two sub-indexes. The first assesses the degree to which women are empowered in five domains of empowerment (5DE) in agriculture:

1. **Decisions about agricultural production:** Sole or joint decision-making power over food or cash-crop farming, livestock, and fisheries, as well as autonomy in agricultural production.
2. **Access to and decision-making power over productive resources:** Ownership of, access to, and decision-making power over productive resources such as land, livestock, agricultural equipment, consumer durables, and credit.
3. **Control over use of income:** Sole or joint control over income and expenditures.
4. **Leadership in the community:** Membership in economic or social groups and being comfortable speaking in public.

5. **Time use:** Allocation of time to productive and domestic tasks, and satisfaction with the time available for leisure activities.

The second sub-index (the Gender Parity Index [GPI]) measures gender parity within surveyed households. GPI reflects the percentage of women who are equally empowered as the men in their households. For those households that have not achieved gender parity, GPI shows the empowerment gap that needs to be closed for women to reach the same level of empowerment as men.

The framework below depicts the way the study incorporated data from the A-WEAI tool with other assessments. In this case, the qualitative assessments were designed by the research team to present recommendations on specific activities and strategies that can be utilized to further enhance gender participation in the NDDP project.

**Process for Using the Intervention Guide for the WEAI with Other Feed the Future Resources**

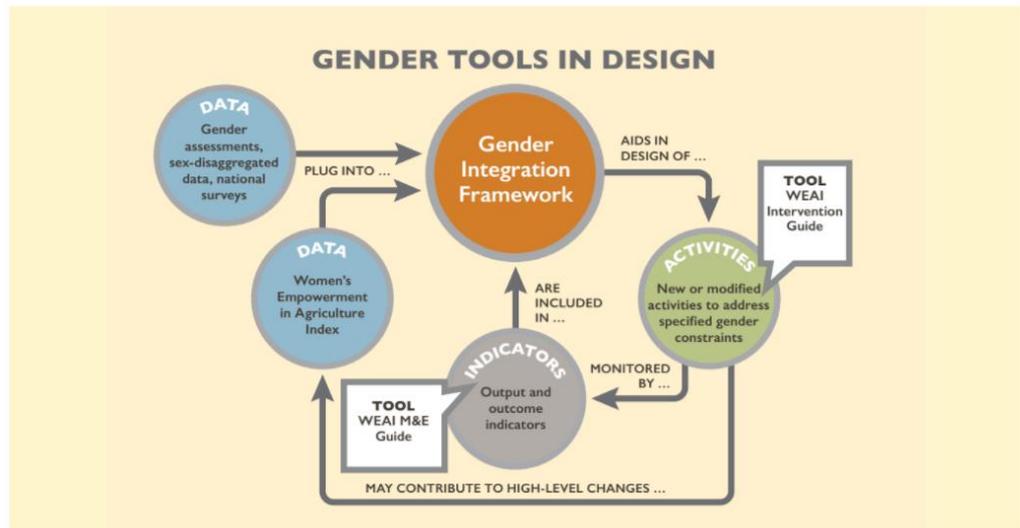


Figure 1: Gender Integration Framework Utilizing A-WEAI Tools and Guides

## 2 STUDY MANDATE

### 2.1 Study Objectives

The overall goal of the study was to analyze gender relations among smallholder dairy households targeted by NDDP with the view to design interventions for greater inclusion and empowerment of female dairy farmers. More specifically, it aimed to:

1. Understand and analyze gender roles, dynamics and power differentials in smallholder dairy households and communities.
2. Identify, analyze and examine gendered vulnerabilities and underlying structural norms that affect dairy production including religious, cultural, social and economic processes.
3. Identify existing support structures for men and women which they access on a regular basis and understand the dynamics of community structures that support or undermine women's efforts for economic empowerment.
4. Explore women's access to inputs, resources, capital and finance and the impact of this on their productivity and earnings.
5. Understand education backgrounds of women and attitudes towards women's education both for girls and adults.
6. Identify existing policies, structures and practices that promote gender equality in agriculture and propose specific interventions to address existing barriers and ensure that women continue to maintain significant control over the proceeds from the sale of their milk and other productive assets related to daily production.

### 2.2 Study Hypotheses

Sahel Consulting and Monii Development Consult (MDC) outlined a set of hypotheses that the study investigated:

- H1: Gender roles and dynamics of productive roles of women in dairy production are defined and rooted in gender norms and power differentials.
- H2: Gender norms and attitudes rooted in social, cultural, religious and economic practices limit women's productivity and economic potential.
- H3: There are support structures which women turn to that provide them with increased social capital.
- H4: Women's economic productivity is limited by lack of access to land, capital and decision-making power.
- H5: Lack of education limits earning potential of women and their ability to access resources.

## 3 METHODOLOGY

### 3.1 Design

The survey design incorporated a mixed method cross sectional approach, integrating a formal survey study tool, the Abbreviated Women's Empowerment in Agriculture Index (A-WEAI) with Focus Group Discussions (FGDs), Key Informant Interviews (KIIs) and In-depth Interviews. This study design was selected to provide a more complete understanding of the problems and issues and to provide multiple perspectives that would enhance knowledge and adequately inform further interventions and/or interrogations.

### 3.2 Sampling Method

The study targeted NDDP's intervention states, Oyo and Kano states. In Oyo State, the study covered 5 clusters - Saki, Alaga, Maya, Fasola, and Iseyin, 17 communities and 24 settlements. In Kano, the study covered 4 clusters - Kura, Dawakin Kudu, Gezawa, Garun Mallam and 16 communities.

The study used a multistage sampling which comprised of: (1) purposive sampling to first select the clusters, (2) purposive selection of LGAs based on the cluster locations, (3) proportionate allocation of cluster sample size relative to the population size of the cluster, (4) simple random sample selection of integrated and identified households, (5) selection of households/individuals. The criteria for household selection in the survey were in two categories of integrated and non-integrated:

- Integrated households are those already supplying milk to processing companies and receiving payment in return.
- Non-integrated are households within the community that own cows but do not supply milk to the processing companies. They are also known as 'identified'.

The selected sample for the survey included five hundred and fifteen households (515) in Oyo and Kano states. The study involved 1,115 respondents from Kano and Oyo states; 539 were male and 576 were female.

### 3.3 Procedures

#### Pre-Entry Phase

The study involved multiple actors and ran parallel to the NDDP's nutrition study. Sahel coordinated multiple meetings between the two research teams to harmonize the modalities of the studies and to coordinate the community engagement and field work.

After finalizing these plans, MDC conducted a two-day workshop with state coordinators and enumerators in Oyo State in September 2017. The field work began with pre-entry dialogues with community leaders and other 'gatekeepers'. The purpose of these meetings was to ensure community support and access to the different communities that were selected for the study. Training for the team in Kano took place in November 2017 and was immediately by community entry dialogue, field work and collection of data.

### **Development and Pretesting of Instruments**

The A-WEAI tool was modified for the dairy business context and for the Nigerian cultural context. The qualitative tools were developed by the research team to ensure adequate responses to the objectives of the study. Following this, the MDC team conducted a pre-test in Ibadan, Oyo State to assess the tools in a field setting. The tools were finalized, and field work commenced.

### **Team Selection and Training**

Two teams (24 - Oyo; 17 - Kano) comprising of the lead consultant, data analyst and entry, state coordinators and enumerators made up the team for the field work. In a two-day workshop with state coordinators and enumerators, in-depth sessions on the study objectives and methodology were carried out in September and November in Oyo and Kano states respectively. The objective was to increase the teams' understanding of the tasks, survey process, and ethical procedures to ensure accuracy of data quality. The training included definition of concepts and role-play; possible challenges were also identified and discussed. After each workshop, enumerators proceeded to the field to collect data with daily supervision by the coordinator and lead consultant.

## **3.4 Data Collection**

The field work was carried out during the harvest season in Oyo in September and October 2017 and in November 2017 for Kano.

The purpose and intent of the study was explained to all participants and each participant signed a written consent form afterwards. For respondents younger than 18, consent was sought from their parents or guardians.

### **3.4.1 Quantitative Data Collection**

The research team interviewed one male and one female head of household in each smallholder dairy household using a paper-based questionnaire. In households with more than one wife, only the first wife was interviewed. This may however have had the unintended consequence of introducing positive bias on empowerment as the 1<sup>st</sup> wife is traditionally and culturally more empowered than the other wives. Also, women in female-headed households might be considered empowered because of the tool's focus on decision-making domain.

### **3.4.2 Qualitative Data Collection**

Qualitative data collection included Interviews, Focus Group Discussions (FGDs), Key Informant Interviews (KIIs) and direct field observations to elicit deeper information on topics not well covered in the questionnaire. The discussions were conducted in Yoruba and Hausa. One FGD was carried out for men, women, and adolescent boys and girls in each state. The discussions were conducted by two trained enumerators (facilitator and a note-taker). A total of 15 FGDs and 10 KIIs were conducted for the study.

### *Focus group discussions*

FGDs were held with men, women, adolescent girls (12–14 & 14–18) and boys (16 - 18) in each state. Participants were selected using purposive sampling. They included members of the community not covered directly by the questionnaire. There was no mixed group for this study as one of the cultural practices in Fulani communities is the segregation of sexes. Where possible, the respondents were further separated according to age.

### *Key informant interviews*

KIIs were conducted with community leaders, women leaders, cooperative leaders, religious leaders and other respected gatekeepers of the community.

### *Direct field observation*

Direct observation was undertaken in milk processing enterprises/cooperatives, homes of dairy cow owners, fields where animal feeds are grown etc. Pictures were taken to record observations during the field visits.

## **3.5 Data Processing and Analysis**

### **3.5.1 Quantitative**

The collected data was entered in SPSS Version 20. The data was then cleaned and exported to Stata for analysis. The domains were weighted based on the standard provided in the instruction manual for analyzing the A-WEAI tool. Results generated include the empowerment score, disempowerment score, parity indices and A-WEAI scores for each state.

### **3.5.2 Qualitative**

The key informant interviews and focus group discussions were recorded (audio only) and transcribed. Considering that the surveys were conducted in the local language of respondents, the recordings were translated into English by bilingual enumerators. The surveys were coded, and emergent themes were developed by the Research Team.

## **3.6 Data Reporting**

A draft report including recommendations to improve women empowerment among smallholder dairy households was developed based on the results of the analysis. The findings and recommendations from the study were presented at stakeholder meetings in Abuja, in Oyo State (Ibadan, Fasola and Iseyin) and in Kano State (Kano GRA, Dawankin Kudu and Gezawa). The objectives of the meetings were to share findings from the study, raise awareness on gender and nutrition opportunities and challenges in the dairy sector, and to secure participants' buy in and support around proposed interventions geared towards improving gender empowerment and nutrition outcomes among smallholder dairy households in Nigeria. Attendees included representatives from the public, private and social sectors. Meetings were also conducted with the respondents at the community level

in both states to validate the report's findings. The feedback provided by the meetings' participants was used to further refine the report.

### 3.7 Challenges

The following challenges were encountered during the implementation of the gender study:

#### *Length and complexity of the questionnaire*

The A-WEAI tool was lengthy and complex. The respondents had limited time as they left early in the morning for their activities<sup>1</sup>. Some aspects of the A-WEAI tool were also difficult for respondents to understand and or/relate to. To address these, the research team commenced field work very early in the morning and used a large team of enumerators to ensure the work could be done simultaneously in multiple households. The team also spent time to provide adequate explanations for all aspects of the study.

#### *Outdated household counts*

Some household information received from the baseline study conducted by Sahel in February to May 2017 were no longer relevant as they had migrated. This mainly affected non-integrated households, which had to be replaced in the sample.

#### *Language barriers*

There were language barriers. The assumption was that respondents from the Fulani ethnic group will speak Hausa and/or Yoruba. However, in few locations in Oyo, the respondents did not speak Hausa or Yoruba, but Fulfulde. The research assistant had to get an interpreter who understood Fulfulde and Hausa to help bridge the communication gap.

#### *Community Entry Barriers*

Community gatekeepers needed to be engaged ahead of time to provide consent for the study to take place and for community members to be engaged. The team had to get to some communities as early as 6 a.m. to meet with the community heads before they set out for the day.

### 3.8 Ethical Considerations

For ethical reasons, the study engaged both male and female enumerators. Likewise, mixed gender groups were avoided, and male and female groups were engaged in accordance with the cultural practices in Fulani communities. Other considerations were to ensure confidentiality and safety of all respondents and communities. Consent forms was shared with respondents to ensure that that they expressed full willingness to participate in the study. In addition, precautions were taken to minimize respondent's fatigue during the study.

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<sup>1</sup> In Oyo, men leave to milk the cows after morning prayers, typically between 6am - 7:30am. They leave as early as 8am to take the cows grazing. In Kano, men left the homestead later in the day, typically by 9:30

## 4 KEY FINDINGS

This section first outlines key characteristics of the population surveyed. It then presents the aggregate A-WEAL scores for Oyo and Kano. Moreover, for the purpose of the study, disaggregated descriptive data generated from the tool was assessed to further explain and clarify the findings in the qualitative study.

### 4.1 Characteristics of Smallholder Dairy Farmers

#### 4.1.1 Background Characteristics

The study involved 1,115 respondents from Kano and Oyo states, 54% of the respondents were from Oyo and 46% of the respondents were from Kano. 51% of the respondents were women and 49% men.

The majority of the households are integrated (i.e., they currently supply milk to FCW in Oyo State or L&Z in Kano State). More than 95% are married and in the labor market productive age group of 18 to 59 years old. 81% of the women are still actively engaged in fertility process as being of childbearing age or pregnant at the time of the study. Most predominantly practice Islam. Over 90% of the households were male-led. Although the majority of the population does not have formal education training, respondents in Kano had more access to “Arabic education” (30%) vs. those in Oyo (15%). The primary occupation of at least 80% of the female respondents is the sale of milk and milk products.

The distribution of male and female respondents based on selected demographic and socioeconomic characteristics is presented in Table 1 below. The background data was collected from the gender and nutrition studies.

Background Characteristics		Oyo State		Kano State	
		N	%	n	%
Supply of milk to FCW or L&Z	Integrated household	217	77.0	132	56.7
	Identified household	65	23.0	101	43.3
Age	Less than 18	3	0.8	20	4.6
	18-30	180	45.2	187	43.4
	31-59	173	43.5	180	41.8
	60 and above	42	10.6	44	10.2
Level of education	No formal	237	79.8	120	59.7
	Primary	10	3.4	16	8.0
	Secondary	2	0.7	3	1.5
	Tertiary	2	0.7	4	2.0
	Arabic school	45	15.2	58	28.9
	Others	1	0.3	0	0.0
	Farming	6	2.1	0	0.0

Background Characteristics		Oyo State		Kano State	
		N	%	n	%
Women's Primary Occupation	Milk Processing	0	0.0	1	0.5
	Trading	24	8.5	2	1.0
	Rearing of Cattle	10	3.5	1	0.5
	Selling of milk and milk products	243	85.9	188	97.9
Marital status	Married	524	96.3	454	98.7
	Widowed	20	3.7	6	1.3
Status of wife	Childbearing age (15-49)	163	83.2	200	88.9
	Non-childbearing age (50+)	33	16.8	25	11.1
Type of Household	Male-led	262	92.9	227	97.5
	Female-Led	20	7.1	6	2.6

Table 1: Background Characteristics of Smallholder Dairy Farmers in Oyo and Kano

#### 4.1.2 Influence of Patriarchy, Religion and Culture

Fulani communities are highly patriarchal in nature. A typical family structure in the study communities has a husband as the head of the house, with wives (usually two or three). In polygamous families, each wife has her own private quarters (hut,) which she shares with her younger children while older adolescent boys and men have their own huts.

Religion (Islam) is an underlying factor that strongly influences the way of life and behavior of the participants. Religious influences are seen in the decision-making process of participants in public and private matters. Participants highlighted their religion as guiding their choice of family structure, gender roles, the number of children they have, and strategies they adopt for their businesses.

*"We are all Muslims and whatever we told you earlier is drawn from Islam. Islam is our tradition so you as a person can make any change even if you are not comfortable with it. It's just a way of life, there are things God didn't give you power over you must learn to live with it" - Men's FGD, Oyo*

Culture also plays a vital role and is reflected in the family dynamics. For example, it is culturally acceptable for women in the 'Sallubawa' community in Kano not to go out of their homes because they practice the 'purdah' culture. Cultural norms also limit the interactions women may have with men from outside their community, as husbands/fathers usually have reservations with other men engaging with their wives/daughters during meetings or trainings. Men and women also typically socialize and meet separately. Consequently, men are the ones who take the milk to the Milk Collection Centre, especially when far from the homestead and collect the money on their behalf.

The influence of religion and culture has many benefits for the communities. However, it may also have negative implications. For instance, in terms of the reproductive aspects of their lives, women in focus group discussions noted that they do not have control over the number of children they have. The perception on

children is anchored on the belief that children are from God, thus men and women are encouraged to have as many children as possible. In Fulani tradition, children are not counted, so most men do not know the number of children that they have. In both states, the average household size is larger than the Nigeria average house size of 5.9 (NBS, 2016); it is 10 in Oyo and 9 in Kano.

*“The 3 (children) I have are not enough. I even want to marry more wives and have more children. Because if I have more children I will have more money when they start working. Besides Prophet Mohammed allows it” - Men's FGD, Oyo*

Girls are expected to marry early, and, in most cases, these arrangements have already been made by their parents without their consent.

*“Our culture does not permit us to have the same roles” - Married Adolescent Girls, FGD, Kano*

#### **4.1.3 Domestic Violence**

Most of the respondents agreed that from a religious standpoint it is forbidden to beat your wife. A man's role is to care for his family. However, they also acknowledged that there are occasions of minor disputes within the household. Usually, this is settled quickly within the household. In a situation of domestic violence, the matter is reported to the woman's family where it is decided if she remains in the home or she comes back to her father's house.

*“Yes, our wives are allowed to disagree with us, but on rare cases...there were moments I hit my wife because we run into an argument, though I apologized to her later. That reason I am not comfortable saying it...(violence) to be honest, it's not okay, but these women sometimes you don't just understand them and they get on your nerves, before you realize you've hit them, later you regret your actions. So all I can say is temptation” - Men's FGD, Oyo*

#### **4.1.4 Gender roles and division of labor**

Men and women see their roles as pre-defined. Women (including widows and adolescent girls) are typically tasked with household duties. Their role in the livestock sector covers milk production, processing and selling as well as caring for calves and sick animals. There was no clear distinction between women's' roles in integrated households versus those that were not integrated or in female-led households versus male-led households. Men and adolescent boys are typically responsible for the security of the family and for activities outside of the home, including cattle rearing. In Oyo where cows often graze away from the homestead, cows' milking is typically done by men and boys.

##### *Role of Women*

According to the respondents, women are expected to handle activities carried out at or near the home such as domestic chores and the rearing of children, activities required for the day-to-day care of animals, as well as those related to the production and processing of milk.

Household duties include cleaning, cooking, fetching water, raising the children, caring for the needs of their husband and caring for the elderly. Women also generally contribute more labor than men and children in the areas of feeding and taking care of calves and small animals when they are sick. Their role in dairy production includes milking the cows, the production and sale of milk products.

*“Well, women are not expected to do much aside their normal duties at home and selling wara. When a woman wakes up in the morning, she goes to get water, cooks breakfast for the family, and bathes the children. While she's doing that, the husband is with the cows. Before he returns, breakfast is ready, and she serves the husband and her children. When she's done, if she's giving the milk to the company, she starts packing it in a container for measurement” - Men's FGD, Oyo*

*“Women are supposed to take care of the household chores, cook and clean, care for children and elders” - Women's FDG, Kano*

### *Role of Adolescent Girls*

Adolescent girls are being prepared for marriage, although some of the girls interviewed were already married. If unmarried, they are expected to support their mothers with household chores, take care of younger children, support the boys with the grazing of small animals, participate in feeding of domestic animals and cleaning of animal stalls, and preparing milk and milk-related products as well as selling them in the local markets.

Girls are expected to marry early, and, in most cases, these arrangements are made by their parents even before they are born. Due to the assumption that the girl child will grow and marry into another family, parents do not typically invest in educating their girls.

*“Right from when we are young our parents choose husbands for us. Usually, we do not know who the husbands are and whether you like it or not, you cannot go against your parents' wishes” - Adolescent Girl FGD, Kano*

*“I wanted to go to school but my parents did not let me because they believe I am supposed to be at home and do housework. According to them, only boys are allowed to go to school” - Adolescent Girl FGD, Kano*

### *Role of Single/Widowed Women and Female Heads of Households*

Widowed and single women do not always have the same opportunities as married women, but similar stereotypes on gender roles apply to them. A notable difference for widowed women is the heavy reliance on older sons or extended family members for support. Widowed women are protected by the community, and more especially by her own children.

Women-led households tend on average to be poorer than those headed by men. The female head of a household may enjoy greater control over resources than married women. However, she may also have limited access to information from development initiatives that target men, which results in more information 'trickling across' to married women.

### *Role of Men*

Men occupy a traditional role as head of the household. They are also seen as protectors and are in charge of security both for their families and the collective community. Men play a primary role in the care and daily lives of the cattle, determining grazing location and timing of cattle sale.

*“Males play important roles mostly on the security of animals in the community” – KII, Kano*

*“But for the men, we are the decision-makers and protectors. We protect both our lives and that of our cattle” - Men's FGD, Oyo*

### Role of Adolescent Boys

Adolescent boys play a critical role in taking care of the cattle and taking them for grazing, rising very early in the morning and often returning late at night. Adolescent boys are trained and brought up as decision-makers. Their role in decision-making begins with the kinds of friendships they form and some level of decision-making concerning domestic livestock and cattle.

*“As usual, we sleep by 8 or 9 or 10pm and wake up early as possible by 5am... we are expected to pray as soon as we wake up, then go for milking the cows and eat, bathe and dress before going outside the home, we go for grazing along with the animals (cattle, sheep, goats) ... we help with milking the cows for our mothers and wives, go for cattle rearing and other things that have to do with the animals, we don't farm because we're too busy” - Adolescent Boys' FGD, Oyo*

## 4.2 A-WEAI Score for Oyo

A-WEAI for Oyo State is 0.755. Key constraints contributing to women's disempowerment in Oyo are input into productive decision-making, time use, group membership and access to credit. The table below presents key empowerment indicators disaggregated by gender.

Indicator	Oyo	
	Women	Men
5DE (1 - M0)	0.986	0.981
Disempowerment score (1 - 5DE)	0.014	0.019
N (number of observations)	282	262
% of women achieving empowerment (1 - H)	95.04	92.91
% of women not achieving empowerment (H)	4.96	7.09
Mean 5DE score for not yet empowered women (1 - A)	0.721	0.732
Mean disempowerment score (1-5DE) for not yet empowered women (A)	0.279	0.268
GPI score (1 - HGPI x IGPI)	0.927	
N (number of dual-adult households)	524	
% of women achieving gender parity (1 - HGPI)	43.57	
% of women not achieving gender parity (HGPI)	56.43	
Average empowerment gap (IGPI)	0.129	
A-WEAI score (0.9 x 5DE + 0.1 x GPI)	0.755	

Table 2: A-WEAI table for Oyo

### 4.2.1 5DE for Oyo State

The A-WEAI's first sub-index, the 5DE assess women's empowerment with respect to decisions about agricultural production; access to and decision-making power over production resources; control over the use of income; leadership in the community; and time use (workload).

The 5DE index value for women is 0.986 and 0.981 for men. Overall, about 95% of women have achieved some level of empowerment. Those who are not yet empowered (about 5%) have a mean 5DE score of 0.279.

#### 4.2.2 Disempowerment Measures in Oyo

The disempowerment measures (M0) for women and men in Oyo State are broken down by domain and indicators are presented in Table 3. Based on the decomposition of M0 in Table 3, it shows the factors that have contributed most to women's disempowerment include time use (workload), input into productive decision-making, leadership, and access to productive resources. Almost 5% of women in the survey are not yet empowered and lack input in productive decisions.

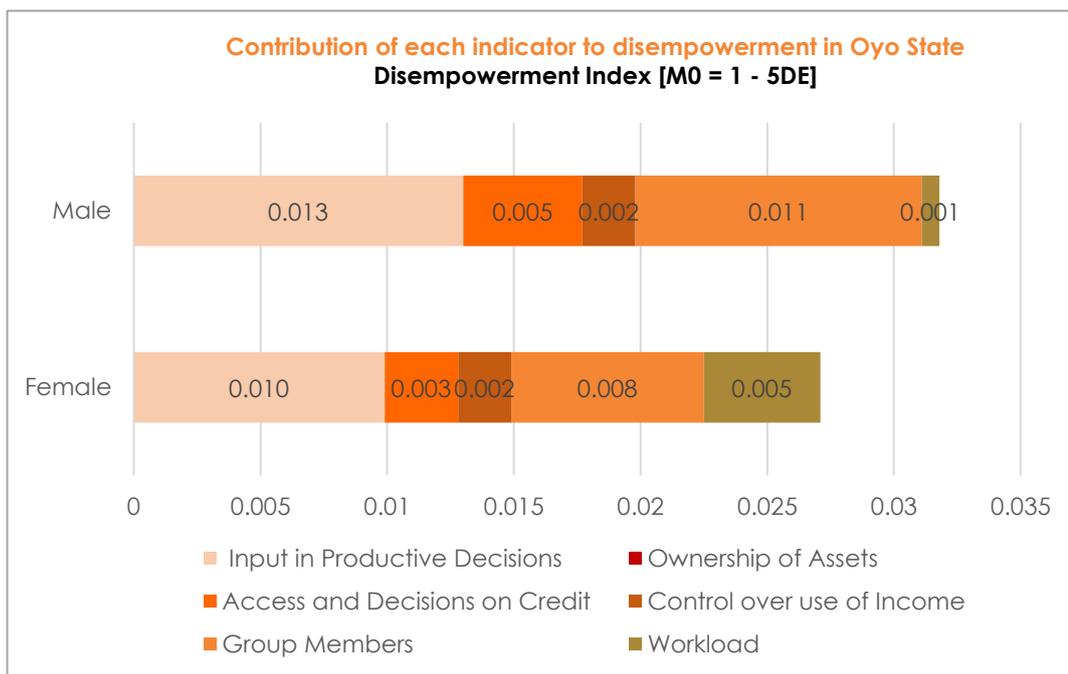


Figure 2: Contribution of each domain to disempowerment in Oyo

#### 4.2.3 GPI for Oyo

A woman is assumed to have attained gender parity if her achievements in the five domains of empowerment are as high as or higher than the achievements of her household's primary adult male. The GPI is calculated only for women living in a household with a primary male decision maker. The GPI Score reflects the inequality in 5DE scores between a household's primary adult male and its female. A higher number reflects greater gender parity.

The GPI for Oyo State is 0.927. This shows that 44% of women have gender parity with the primary male in their households. The average empowerment gap between the 56% of women who have not achieved gender parity and the primary male in their household is 13%.

### 4.3 A-WEAI Score for Kano

The A-WEAI for Kano State is 0.663. Key constraints contributing to women's disempowerment in Kano are the same as in Oyo and include input into productive decision making, time use (workload), group membership and access to credit.

Indicator	Kano	
	Women	Men
5DE (1 - M0)	0.990	0.986
Disempowerment score (1 - 5DE)	0.00935	0.0140
N (number of observations)	233	227
% of women achieving empowerment (1 - H)	96.50	94.90
% of women not achieving empowerment (H)	3.50	5.10
Mean 5DE score for not yet empowered women (1 - A)	0.725	0.733
Mean disempowerment score (1-5DE) for not yet empowered women (A)	0.267	0.275
GPI score (1 - HGPI x IGPI)	0.947	
N (number of dual-adult households)	454	
% of women achieving gender parity (1 - HGPI)	23.30	
% of women not achieving gender parity (HGPI)	76.70	
Average empowerment gap (IGPI)	0.069	
A-WEAI score (0.9 x 5DE + 0.1 x GPI)	0.663	

Table 3: A-WEAI table for Kano

#### 4.3.1 5DE for Kano State

The 5DE index value for women is 0.99 for women and 0.986 for men. Overall, about 96.5% of women have achieved some level of empowerment. Those who are not yet empowered (about 3.5%) have a mean 5DE score of 0.267.

#### 4.3.2 Disempowerment Measure for Kano State

The disempowerment measures (M0) for women and men in Kano State is broken down by domain and indicator are presented in Table 3. Based on the decomposition of M0 in Table 3, it shows that the factors which have contributed most to women's disempowerment include: input into production decision-making, time allocation, leadership, and access to credit. Over 3.5% of women in the survey are not yet empowered and lack input in productive decisions.

#### 4.3.3 GPI for Kano

The GPI for Kano State is 0.947. This shows that 23.3% of women have gender parity with the primary male in their households. The average empowerment gap between the 77% of women who have not achieved gender parity and the primary male in their household is 7%.

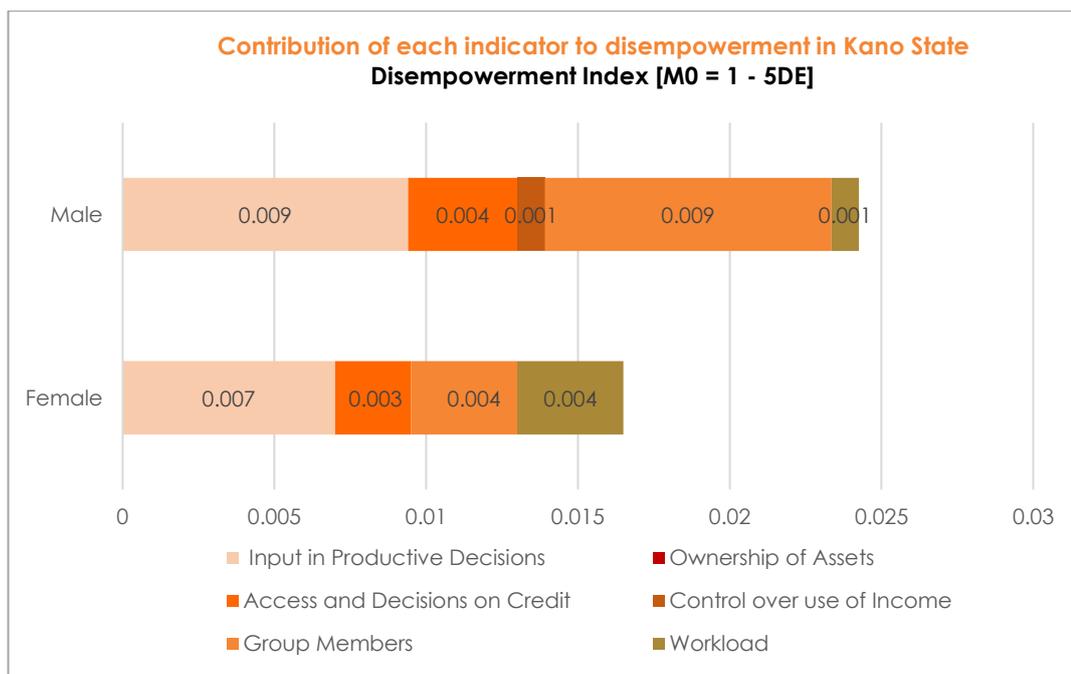


Figure 3: Contribution of each domain to disempowerment in Kano

#### 4.4 Descriptive A-WEAI Data and Qualitative Findings

##### 4.4.1 Decision Making Power of Agricultural Production

This section outlines the extent to which women have sole or joint decision-making power over food or cash-crop farming, livestock, and fisheries, as well as autonomy in agricultural production based on quantitative output from the A-WEAI tool. Where applicable, findings from the qualitative research conducted are also included.

In general, women decision-making power tends to be restricted to child care, and minor household expenditures, while men are usually the main decision-makers for other topics within the household and the communities. Men, particularly in Kano also play an important role in decisions around food purchase and consumption. The research team found that women have limited decision-making power over most aspects of agriculture production asides from dairy production. Despite these clearly defined roles in decision-making, there is room for negotiation and shared decision-making among men and women in the studied households. For example, it was noted that even when men appear to be in control, they usually consult their wives, who have a strong influence on the outcome. In addition, most women indicated consulting their husbands before making business decisions. In female-headed households, the woman has full authority over all households' decisions. Although in some cases she consults the family's male relatives.

*"I do not make decisions on my own because I need my husband's input" - Married Adolescent Girls FGD, Kano*

*"Myself and my wife will sit and decide. Though I have within my power to do that on my own, you must consider the place of your wife in your house, especially the first wife" - Men's FGD, Oyo*

### Input into Decision Making about Food Crop Farming

Not many Fulani are involved in farming due to land constraints. Findings from the nutrition study conducted in parallel to the gender study on the same households indicated that only 13% of households in Oyo and 38% of households in Kano own land while others either rent land or do not own at all.

For those practicing farming, women reported having limited input into decisions on food crop farming while men reported having input into most decisions as can be seen in Figure 4 below. More specifically, 58% of women in Kano and 54% of women in Oyo indicated having no input at all or limited input in decisions regarding food crop farming while 57% of men in Kano and 65% of men in Oyo reported to be involved in most decisions around food crop farming.

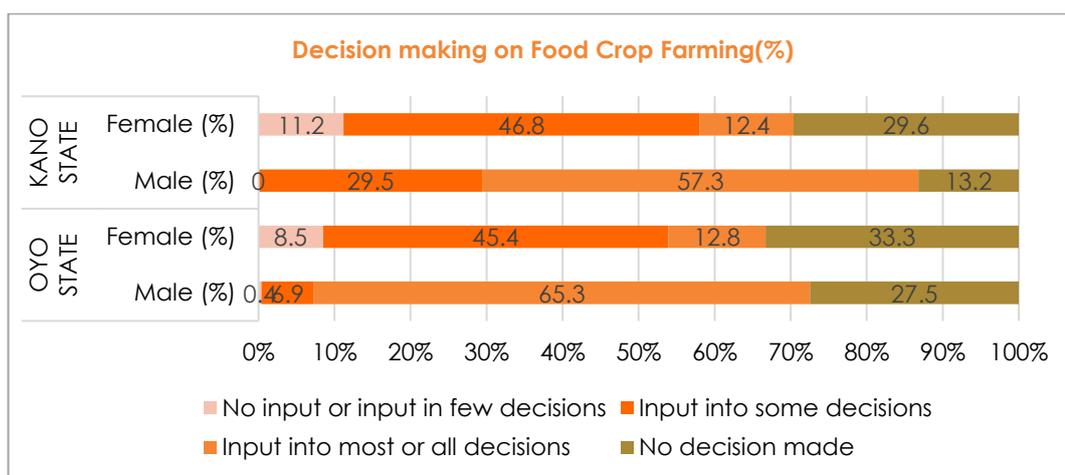


Figure 4: Participation in Food Crop Farming

### Input into Livestock Raising

As highlighted in Figure 5 below, men have more input in most of the decisions made in the household regarding livestock. Some men mentioned that as the head of the household they can do this solely. Others said they take decisions in consultation with their wives. Figure 5 shows that 67% of women in Kano indicated having input into some decisions on livestock while only 50% in Oyo were able to do the same.

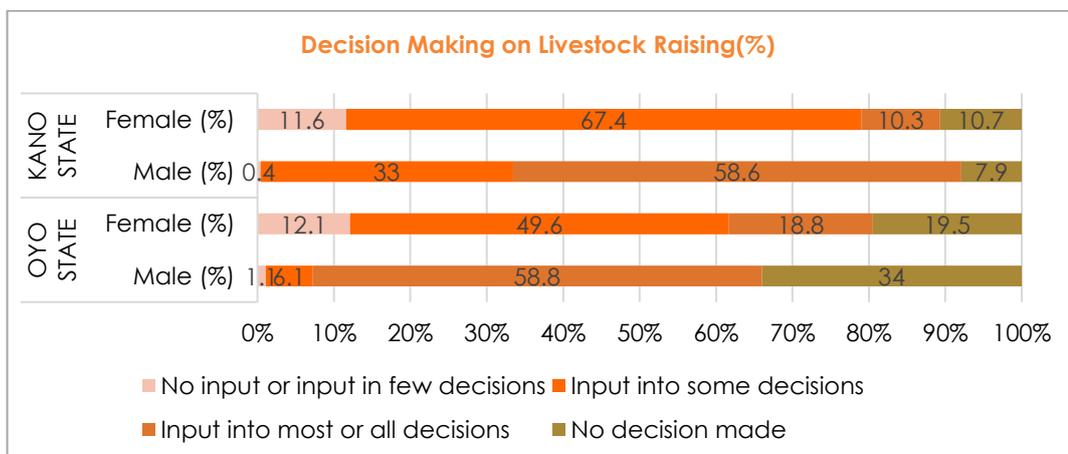


Figure 5: Participation in Livestock Raising in the last 12 months.

*Decision-Making on Non-farm Economic Activity: Dairy Business*

The dairy business tends to be a family operation, involving almost every member of the household. Men and adolescent boys are responsible for animal husbandry, grazing, veterinary care and ensuring security for the cows. Women and girls milk the cows or receive the milk from the men in cases where the cows graze far from the homestead, which is prevalent across most communities in Oyo. They keep some for household consumption, process a portion into local dairy products for sale in informal channels and sell the remaining into the formal dairy processing sector (if they are integrated). Traditionally, cows are milked twice a day (morning and evening) by hand. The morning milk is typically for sale while the evening milk is for household consumption or production of cheese, yoghurt and other products.

Most women reported to be the main decision-maker in their dairy business. However, their degree of sole decision-making when compared to men is not as significant.

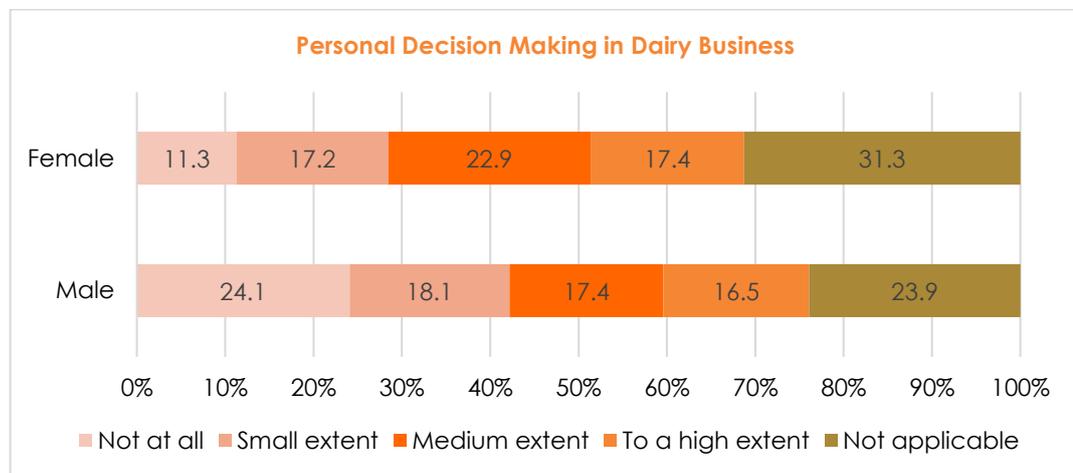


Figure 6: Personal Decision Making in Dairy Business

In integrated households, an additional layer in the dairy business is the transportation of the fresh milk to the Milk Collection Centers (MCC) within a 30-minute time limit for quality purposes. The distance to the MCC and the difficulty or ease of the terrain determines who in the family will transport the milk. In cases where the MCC is far from the homestead, men and boys take charge of the transportation. Alternatively, particularly in Oyo, the milk is handed to milk men to transport to the MCC at a cost incurred by the dairy processor.

With the introduction of milk companies into the once informal dairy supply chain, men have taken on greater roles in key areas, such as coordinating milking activities, in the transportation of milk to the collection centers and in the financial exchange between the processors and the women. These changing dynamics create a risk to women's control of the dairy business.

*Decision making on purchase of major household expenditures*

The study also notes that men have more control over the purchase of major household expenditures for the household than women as depicted in Figure 7. Major household expenditures include buying of bicycles, Okada (motorcycles), car, cattle and land. The high number of "no decision made" category is because many respondents did not own the items specified.

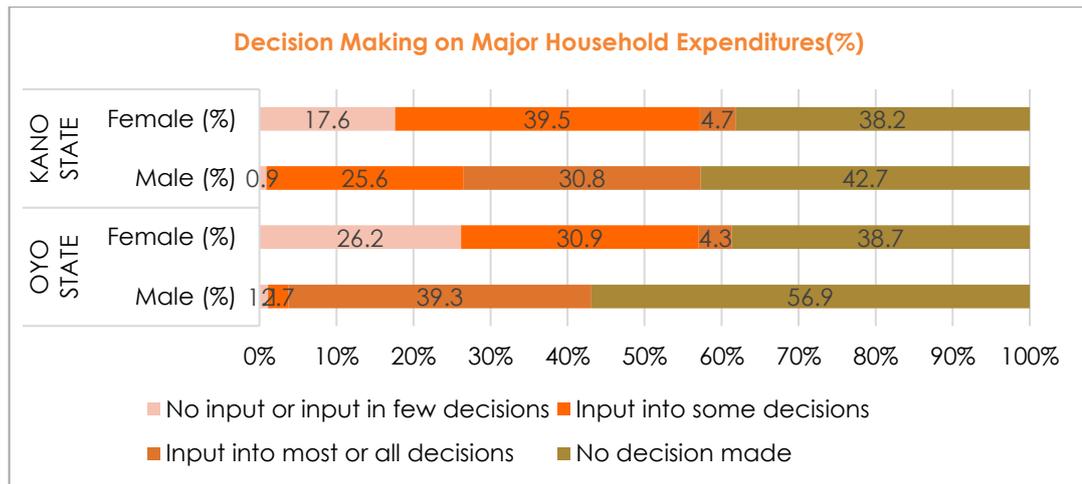


Figure 7: Decision-Making in Purchase of Major Household Expenditures

*Decision-making on purchase of minor household expenditures*

Women's role in decision making is more evident in the purchases of minor household items such as daily consumables. 22% of women reported making most or all these minor decisions. Meanwhile, 57% of them indicated having an input in some minor expenditures decisions in consultation with their husbands, as men, particularly in Kano, plays a critical role in food purchase and consumption decisions.

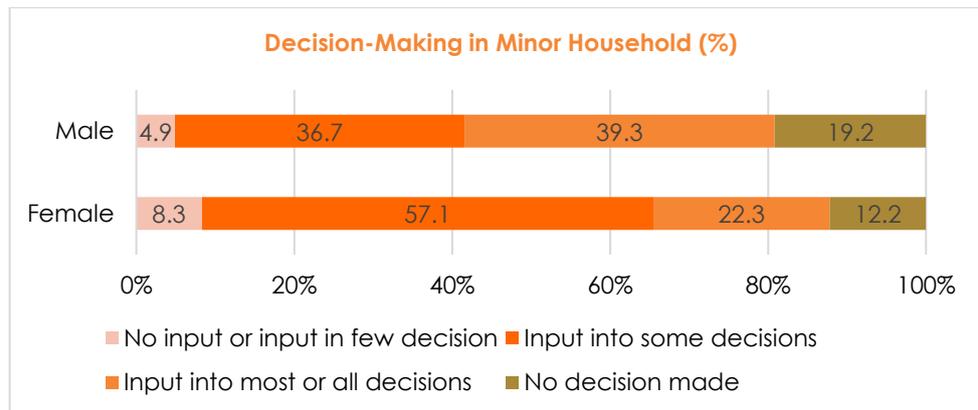


Figure 8: Gender Decision-Making in Minor Household Expenditures

*"I usually make decisions (on what food to purchase and eat) but sometimes I consult my co-wives" - Women's FGD, Kano*

*I do, as a husband I decide what we eat, but sometimes our women do. I am also responsible for deciding how the food is distributed within family members, depending "how many children each wife has and what her contribution is to the family" - MALE FGD OYO*

However, it is important to note that most decisions food purchases and consumption is also based on what is available and affordable.

**4.4.2 Access to Productive Resources**

This section measured women's access to productive resources. It assesses ownership of, access to, and decision-making power over productive resources such as land, livestock, agricultural equipment, consumer durables, and credit

based on quantitative output from the A-WEAI tool. Where applicable, findings from the qualitative research conducted are also included.

Generally, the discussions on economic opportunities open to women in dairy producing communities reveal that there are unequal patterns to ownership of important productive assets.

### *Agricultural Land*

Ownership and access to land is a challenge across both states, particularly for women. This is because, statutory and customary land tenure systems in Nigeria are often disadvantageous to women who are less likely to control land than men. Roughly 13% of households in Oyo and 38% of households in Kano own land and other structures.

Land is usually leased by the heads of the community for settlement and grazing. When owned, the land typically belongs to the man. Few households indicated joint ownership.

*“The indigenous people do own the land on which we live and where we graze our animals...we pay rent to the king of the land, mostly in kind, during harvest period... Our wives don't have any land. We don't have, not to even talk of our wives...We the Fulani's predominantly follow the teaching and doctrine of Islam, so whatever we do is drawn from the Holy Book. So what Islam doctrine gives the woman, we give them, but in Islam, women mostly don't inherit land except in a situation where there is no man in the entire family. But if there is a man, he automatically inherits” - Men's FGD, Oyo.*

*“Normally a woman does not own land. But if she does, the land is not identified as hers rather it is identified as her husband's” - Women's FGD, Kano*

With increasing use of surrounding land for farming, more herders are forced to take most of their cattle away for grazing. This means that men leave the community for months at a time to find food from other states for their cattle. This migration limits women's access to the cows during the dry season and thereby to the quantity and income they can get from the milk.

In addition, in Oyo, problems of forced eviction from farmlands for smallholder dairy farmers and the continuous tension between owners of farmlands and herdsmen remain a major cause for concern across several communities.

### *Large Livestock*

Men typically own majority of the livestock particularly for large livestock such as cattle. Women's livestock ownership is higher in Kano than it is in Oyo. Women can own cattle, usually received from dowry (given by father upon marriage), inheritance, bought with own resources and/or given by husband. Ownership of assets does not always translate to decision-making power and/or control over the assets, particularly for cattle. This is because women's cattle are often kept with the husband's cattle. The woman is often only informed if the cow is pregnant or has given birth or is old and needs to be sold.

*“Some women own cows but their husbands take care of them for her” – Women Leader KI, Oyo*

Overall, a limited number of women report owning large livestock solely on their own (21%). About 38% reported joint ownership. This is compared to 60% of men that reported owning livestock solely and 40% reporting that they owned livestock jointly. Women's ownership of large livestock is higher in Kano than in Oyo.

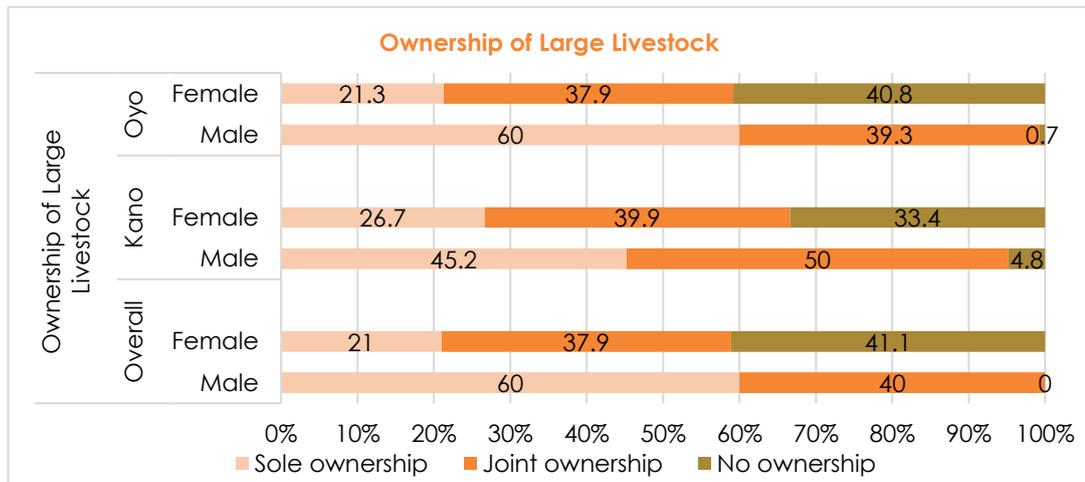


Figure 9: Ownership of Large Livestock

### Small livestock

Women across both states tend to own and have more control over small livestock such as rams, goats, rabbits, and chickens. However, similarly, as with large livestock, sole ownership is higher in Kano than in Oyo. Around 34% of women own small livestock solely in Oyo compared to 41% in Kano. 45% of women own small livestock jointly with their husbands in Oyo compared to 36% in Kano.

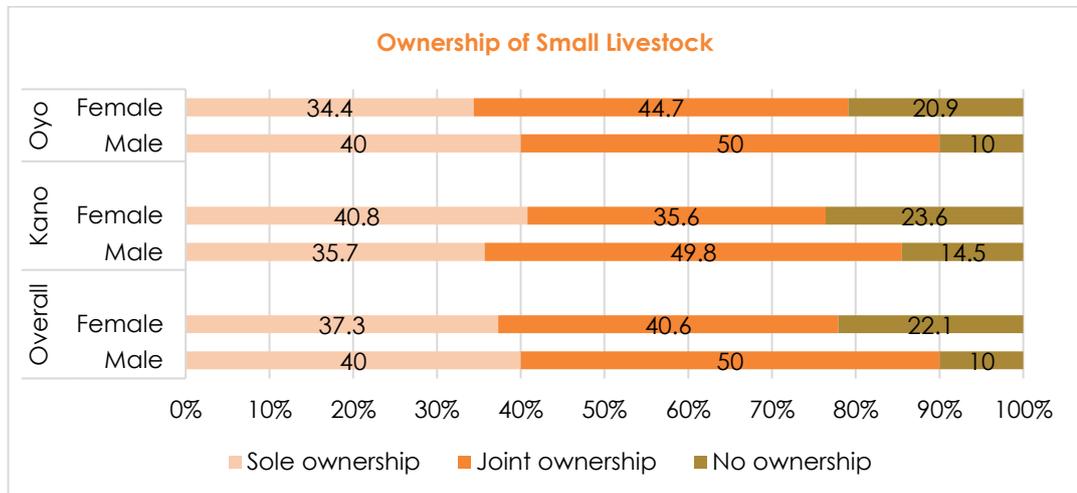


Figure 10: Ownership of Small Livestock

### Equipment for Dairy Production

In both states, women lack the necessary technology and equipment for efficient milk production. However, most integrated households have been trained by the milk companies on proper handling of milk. Milking is usually done manually. Milking equipment currently owned by women include aluminum milk containers (mostly provided by the processors), plastic bowls and filters. Over 70% of the female respondents in Oyo State solely owned their dairy production equipment while 65% of female respondents from Kano State solely owned equipment for dairy

production. Men's ownership percentages are also high due to reports of joint ownership.

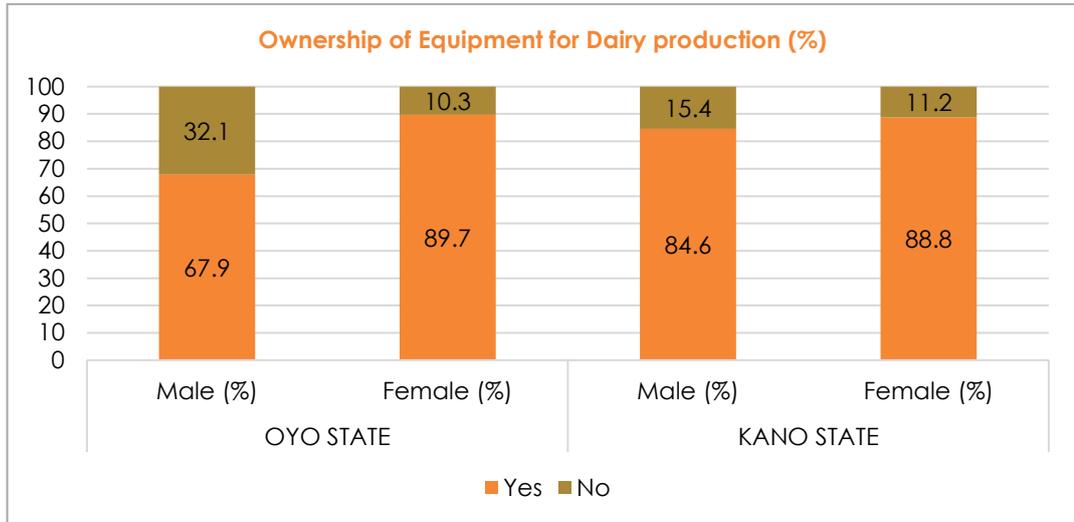


Figure 11: Ownership of Dairy Production Equipment

### Means of Transportation

Women's access to means of transportation is extremely limited. Most of the time, women travel on foot particularly to get water, go to the market or even access healthcare. In some cases, women have to wait for transportation from men within their communities.

Limited transportation access restricts women's ability to carry their milk to the MCC, when it not within walking distance from the homestead. In these cases, women rely on their husbands or milkmen from the community or other nearby localities to get their milk to the MCC. This in turn can affect their control over milk sales and quick access to payment. For instance, a female respondent in Lalante, Maya in Oyo complained about delays in payments, which had carried on for two weeks and led to her having to borrow money to buy some amenities. The delay in payment was further corroborated by the village head and other respondents. The milkman however denied the allegation and said payment was usually between 3 – 5 days.

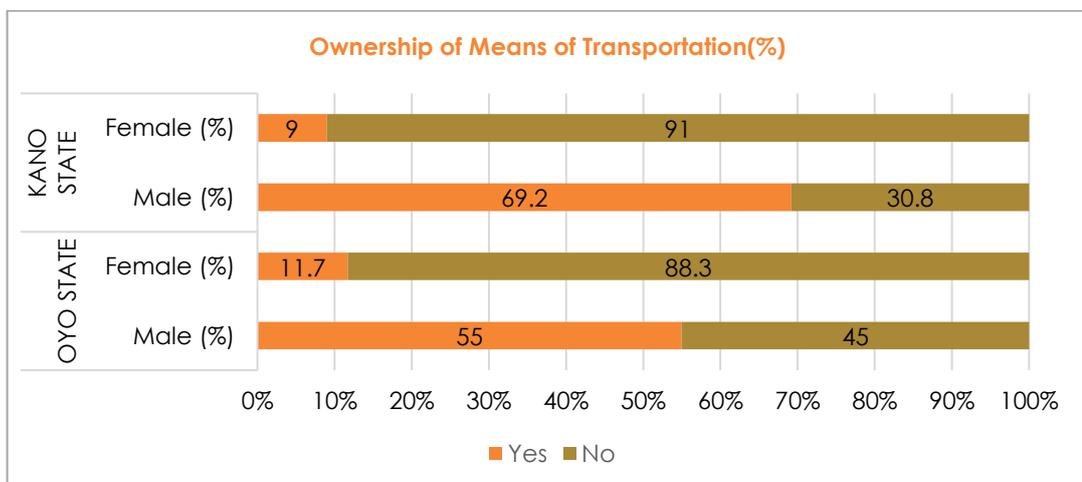


Figure 12: Ownership of Means of Transportation

*Access to Other Productive Capital*

**Cell Phone** - Most of the men and some women have access to mobile phones that they use mainly for making and receiving calls. Ownership numbers among women may be underreported, especially in Kano, as some respondents were reluctant to disclose the information.

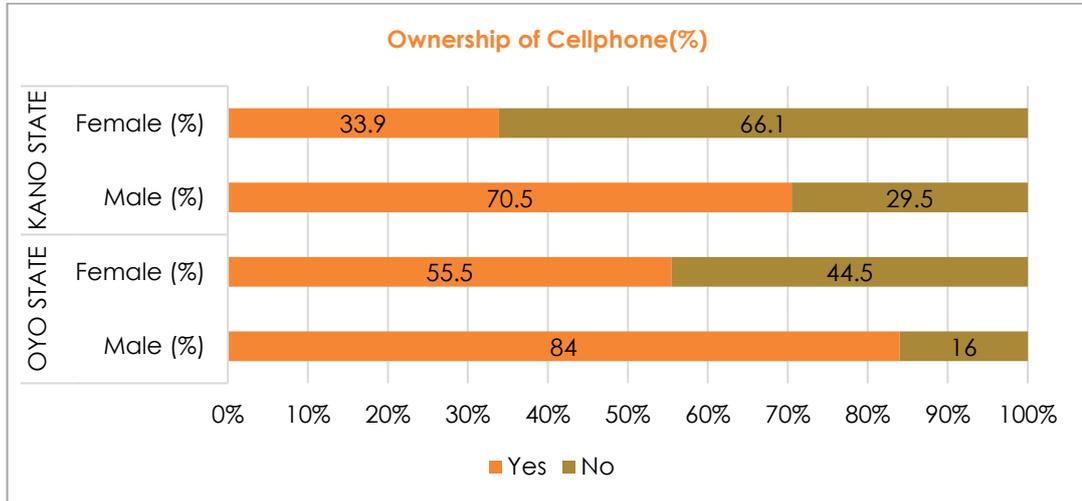


Figure 13: Ownership of Cell Phone

*Access to Credit*

Both men and women have limited access to financial services. Most men and women interviewed in this study do not have a bank account and none of them were engaged in mobile banking. Some men own bank accounts and use ATM cards but none of the women noted using formal banking.

When asked about savings, most women put money in a tin or local safe to ensure access to funds when necessary.

*“Myself and wives, we are the bank, we keep the money ourselves. You need money every day for one thing or the other. I ask questions and as the needs arise I give so I am the bank to my family and they are in turn my customers” – Men’s FGD, Oyo.*

Furthermore, both men and women have limited access to formal loans or credit facilities. The main form of borrowing for both genders across both states is through family and friends (over 70% of respondents). Informal lenders and credit groups are moderately active in both states. In addition, borrowing cash and/or in-kind from NGOs is fairly common in Kano.

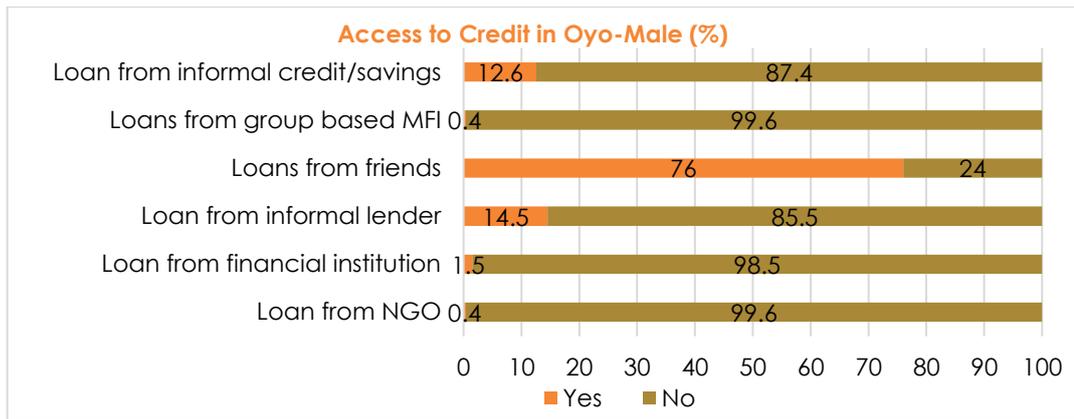


Figure 14. Sources of borrowing: Oyo Men

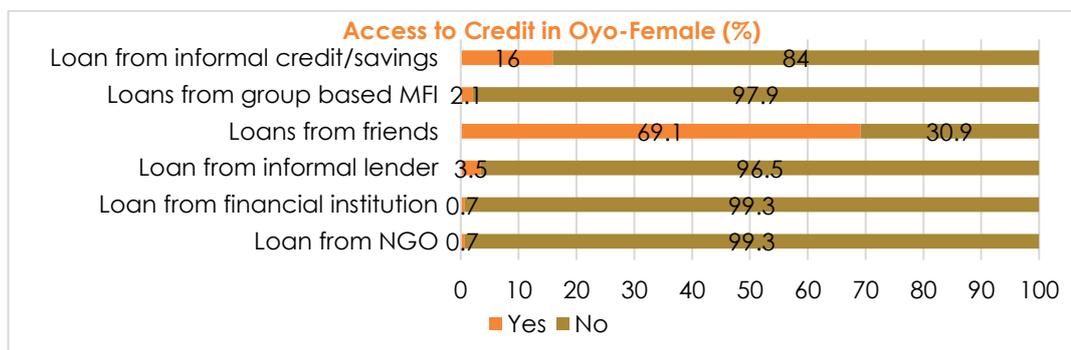


Figure 15. Sources of borrowing: Oyo Women

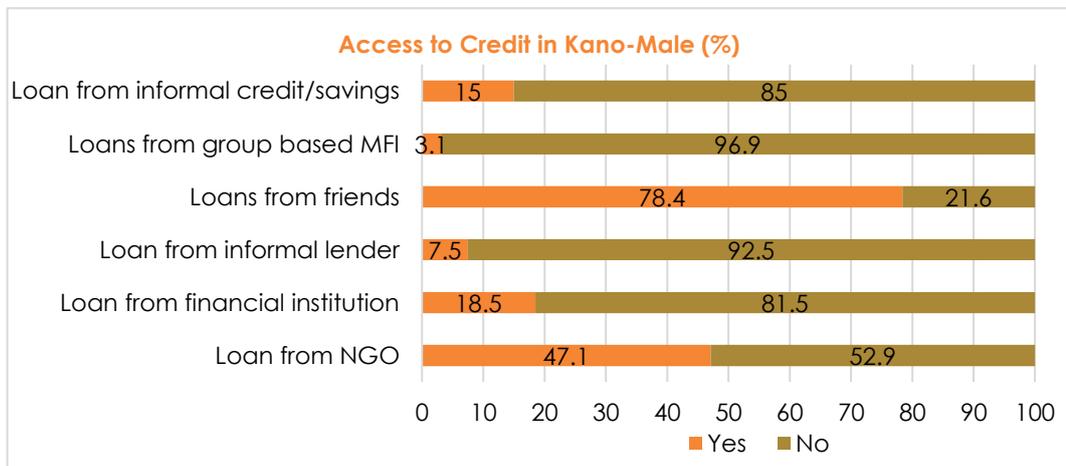


Figure 16. Sources of borrowing: Kano Men

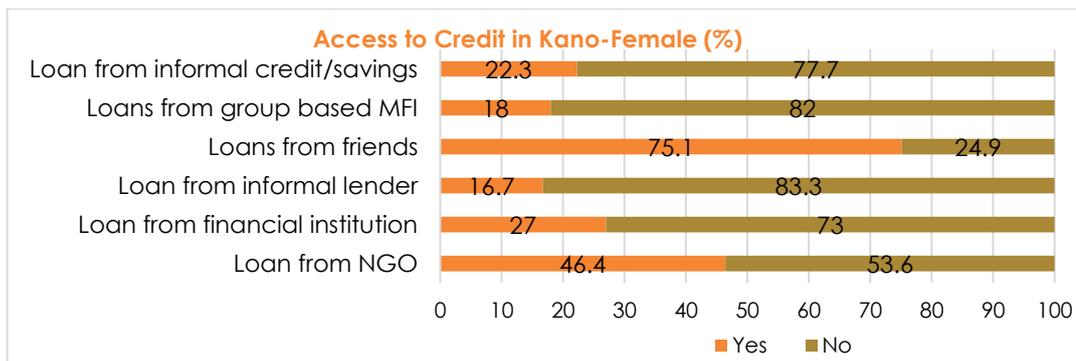


Figure 17. Sources of borrowing: Kano Women

The majority of respondents across both gender and states indicated making the decision of borrowing from friends and family on their own. The trends are similar in terms of sole ownership of the decision of what to do with the borrowed money/item.

#### 4.4.3 Control over Use of Income and Resources

This section considers the extent to which women have sole or joint control over use of income based on quantitative output from the A-WEAI tool. Where applicable, findings from the qualitative research conducted are also included.

Income in Fulani households is generally derived from sales of cattle, milk and milk products, and agricultural produce.

Men tend to control the income that comes into the household apart from the income derived from the sale of milk and milk products, which is mostly controlled by the women. In Oyo, women use income from milk to make some minor purchases for the household and for their personal needs. In Kano, the money is typically used for their personal needs as the men give their wives money for household expenses. Money for food purchases in both states is primarily provided by the men.

Most women noted they take most decisions on the sale of products and the use of the income as seen in figure 14 below. This is consistent with the qualitative study findings which indicated that men tend to control all the income that comes into the household apart from that which comes from the sale of milk and milk products, which is mostly controlled by the women. Women however seem to still consult their men on some decisions they make. Girls are expected to give any income received to their mothers for the family use while boys can decide what to do with their income.

*“We go out to hawk milk and give our parents the money” - Adolescent Girls FGD, Kano*  
*“The women handle the money from selling the milk product and it's used for daily cooking and buying some household materials like soap and other things” – Women & Men FGD, Oyo*  
*“We all make money. When we get money after harvest we buy fertilizer, buy cows and do other things” – Adolescent boys FGD, Kano*

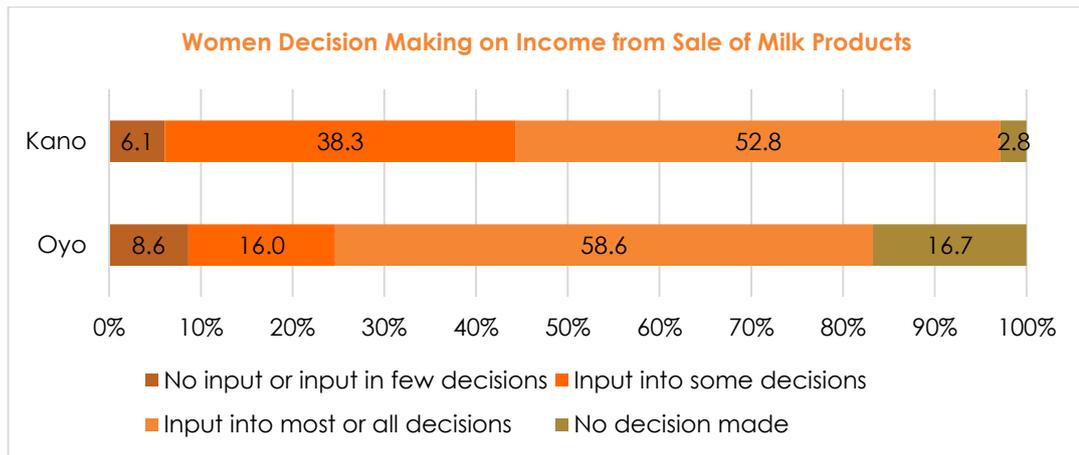


Figure 18: Women Decision-Making in Sale of Products

#### 4.4.4 Time Use

Overall women spent more time in unpaid work, which includes domestic work, cooking, care of children, adults and elderly, than on paid work (dairy business).

#### 4.4.5 Group Participation

This section considers men and women’s membership in economic or social groups and their level of comfort speaking in public.

While both women and men have support structures in the community, the structures for men are more formalized with limited inclusion of women. An equal proportion of men versus women claim to know about the existence of different co-operatives and associations such as agriculture and livestock associations, credit unions, association of milk producers and civic groups, however, more men than women were registered members of these associations. Nevertheless, support structures and organizations focused on women remain mostly informal and disconnected from opportunities that might further promote the empowerment of their members. In addition, women’s mobility is somewhat limited due to culture and could be a major factor that contributes to the inability of women to take advantage of opportunities.

*“We have a group, but the men & women are separated” - Women FGD, Dangwala, Kano*  
*“We belong to a cooperative society called “Miyetti Allah” and they assist us with cash and in kind” - Men’s FGD, Oyo*

#### Support Structures and Networks

**Women’s Groups and Women Leaders** - Women in the observed communities participate in mostly informal, women-led associations. These associations tend to be social rather than technical. These associations provide a support structure for women but are not linked to opportunities to gain skills, knowledge, and access to capital or resources. These groups are however, democratic in nature, with the potential for expansion and formalization as well as integration into mainstream services that could positively impact the lives of their members.

*“If I am to call a meeting and tell everyone to assemble in 20 minutes, then they will all come and when there’s decision-making, we give room for everyone to vote so that it will not appear as if we are biased. Where there is an issue with the voting, I give advice and they are free to take it or leave it” - Women Leader, KII, Kano*

**Associations** - Both states have the Miyetti Allah Cattle Breeders Association (MACBAN) which is the apex body for all cattle breeders in Nigeria. MACBAN advocates for Fulani cattle breeders at all levels of government. At the state level, they also provide support for cattle breeders especially with regards to finance. Women farmers living in male-headed households often feel excluded possibly because household membership in such associations is usually represented only by the head of a household. Men are expected to participate in meetings and training and pass on the information and knowledge gained to their wives, but in practice, there is often little information sharing. Benefits associated with joining the associations includes support in cases of farmer/herdsmen disputes as well as some financial benefits such as assistance with loans.

**Cooperatives** - From the research, there is one primary cooperative in Yadakwari community of Garun Mallam LGA in Kano, and one in Fasola cluster of Atiba LGA in Oyo. Few women are members and even fewer are aware of the functions of the cooperatives.

*"The benefit of this cooperative... has brought about combined efforts and we now know who is who. If a problem occurs, we will know how to go about it. It has helped to bring peace; this cooperative has brought progress" - KII, Oyo*

There are plans for establishing more cooperatives for men and women in both states and this was being discussed as at the time of this study. The women in Kano expressed interest in forming their own cooperative that would be separate from the men.

### *Movement*

The movement of women in agricultural communities has often been cited as a barrier to their economic empowerment. In Oyo and some parts of Kano, access to public places is often limited to the stream or river and to the mosque. However, women are able to attend market days and sell their milk products and other items. In that sense, production of milk products allows women a certain level of mobility and movement which may not be emphasized by the women and may not be recognized by men. Visits to friends and family is not restricted.

*"Girls are given tight security and observation against roaming about while boys are not" - Adolescent boys, FGD, Kano*

*"Our wives do not go out for no reason without the consent of their husbands" - Men's FGD, Kano*

*"Actually, I won't lie to you, women don't have equal access to the mosque and village square. The women don't sit with the men in the village square, when to see a woman in the square she has done something wrong that needs to be sorted, or she brings food to the men sitting there or she comes to pick used plates. They pray outside the mosques in the shade there, you can see some of them praying over there" - Men's FGD, Oyo*

*"Well, women are not allowed to go inside the bush alone, sometimes we don't allow them to go to the river alone without their fellow women, especially during the raining season when the river is full, and the grass is thick because of fear of kidnapping and other forms of insecurity around us...it's not culture or tradition, it wasn't like this before, but things have changed now, the level of insecurity has increased. We are only doing this to prevent unforeseen circumstances" - Men's FGD, Oyo.*

Figures 19 and 20 depicts movement of women to urban centers and to visit friends and family.

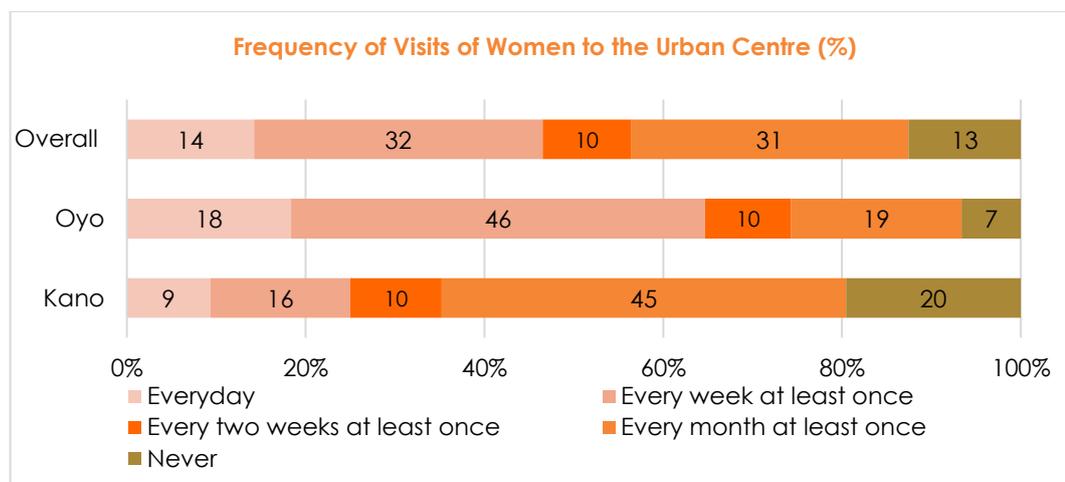


Figure 19: Percentage of Women Who Visit the Urban Center

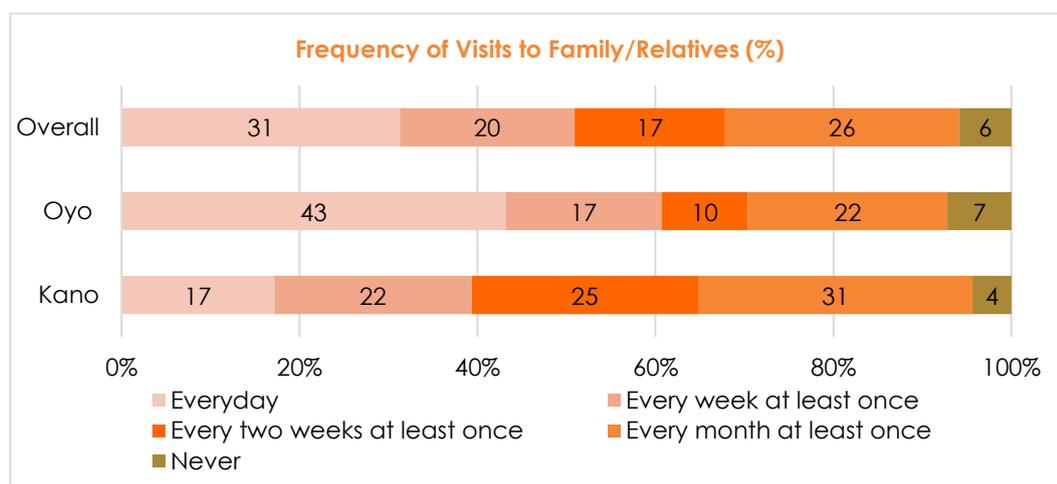


Figure 20: Percentage of Women Who Visit Friend's House

#### 4.5 Relevant Insights from the Nutrition Study

The gender study was conducted in parallel with a nutrition study that assessed the nutritional status of the same target population in Oyo and Kano states, characterized the food systems and factors that likely influence their food choices and determined potential entry points for improving their nutritional status, with a focus on food systems entry points.

Findings from the nutrition study show a high prevalence of malnutrition among smallholder dairy households in both states. The prevalence of underweight in women is 33.5% and 27% respectively in Oyo and Kano. This reflects a serious situation in both states according to WHO classifications. Overweight/obese prevalence is 2.5% and 13% respectively in Oyo and Kano, indicating a poor situation in Kano. Meanwhile, among children 6 to 59 months old, the prevalence of moderate acute malnutrition is 3% and 18% in Oyo and Kano respectively, reflecting a critical situation in Kano according to WHO classifications. Assessed immediate, underlying, and basic determinants of malnutrition including the Minimum Dietary Diversity for Women (MDD-W), Food expenditures as a share of total expenditures

(FES), access to care and health are inadequate in both states, but particularly in Oyo. The prevalence of food insecurity and hunger was significantly lower in Kano than in Oyo at the time of data collection; though key informants reported them to be higher in both states at other times in a year.

Nutrition knowledge is inadequate. Food consumption is heavily dependent on staple cereals and tubers and a comparatively high consumption of milk and vegetables (including okro, onion, tomatoes). Food choices are heavily influenced by culture and religion as well as availability, accessibility and affordability.

The nutrition study also confirmed that men play a critical role in food purchase and consumption decisions. In Kano, 95% of men (husbands) are the primary providers of food money; 58% are the primary influencer of the food prepared for the household on a daily basis. Their role, though still important, is not as significant in Oyo. 73% of men in Oyo are the primary providers of food money and 38% are the primary influencer of the food prepared for the household on a daily basis.

These findings were considered along with those derived from the gender study to develop nutrition-sensitive gender recommendations.

## 5 RECOMMENDATIONS

The following recommendations build on the findings from this gender study and insights from the nutrition study to foster greater inclusion and empowerment of women in smallholder dairy households and to influence nutrition outcomes.

### Recommendation 1: Promote Women’s Participation and Leadership in Dairy Cooperatives.

Women dairy farmers need to be better organized and included into formal structures that can be leveraged to build their capacity, maintain their control over their dairy businesses, and improve their access to productive resources.

#### Suggested Interventions:

- a. Formation of women-only cooperatives and strengthening the capacity of existing cooperatives and associations to enhance the inclusion and participation of women

The formation of women-only cooperatives and the inclusion of women into existing social associations may be the most effective way to organize the women while respecting cultural norms governing interactions between genders in Fulani communities. These organizations can be used as an entry point for interventions around capacity building, and to support joint ownership of cows and equipment for dairy production. Existing men-led livestock cooperatives that are open to the participation of women can also be supported with technical capacity building, training and participatory planning methodologies in order to increase women’s membership and their involvement in decisions affecting dairy activities.

- b. Recruitment and training of female extension agents by processors and government agencies

Given the cultural norms, it is critical to make deliberate efforts to build a cadre of female extension agents equipped with information and skills to train women. These may be female agents from inside or outside the community. The opportunity to identify, recruit and engage local young women and to train them as extension agents, will enable them to build their capacity, improve their livelihoods, and support their communities. These extension agents can be recruited by the processors, the government and/or development partners funding projects to support the dairy sector as done in NDDP.

**Proposed Implementers:** Dairy Processors, Development Partners, State Ministries of Agriculture, NGOs.

### Recommendation 2: Improve Women’s Decision-Making Skills and Control of the Dairy Business by Increasing their Direct Engagement with Processors

Women dairy farmers should have direct access to and manage their relationships with processors in order to retain control of the dairy business. It is particularly important for them to be at the decision table to negotiate prices and terms for milk sales and to be able to collect direct payment without using intermediaries.

### **Suggested Interventions:**

Methods for the dairy processors to improve their engagement with women dairy farmers include leveraging the cooperatives to foster effective communication and to pay into each woman's account, as well as conducting regular meetings with an elected body of representatives to discuss the partnership and address critical issues.

In addition, the processors can employ female staff that can interface directly with the women leaders due to cultural norms.

**Proposed Implementers:** Dairy Processors

## **Recommendation 3: Improve Women's Financial Inclusion, Income and Education Levels**

Financial inclusion, income support and better education levels are all critical levers to empower women dairy farmers, improve their livelihoods and the situation of their households.

### **Suggested Interventions:**

#### **a. Improve access to financial institutions and access to credit programs**

Dairy processors can play an important role in improving women dairy farmers' access to credit. They can link integrated households with financial institutions to receive services such as bank accounts and mobile banking as well as to assess their eligibility for government credit initiatives such as the Anchor Borrower Scheme.

#### **b. Provide income support**

The dairy cooperatives can be used to help women dairy farmers generate additional income for their household needs. Potential initiatives include:

- Vocational training to help women learn new trades for income diversification
- Communal ownership of improved dairy equipment and/or livestock to improve their yields and income
- Group savings and lending programmes to fund new businesses

#### **c. Provide adult literacy and numeracy training**

Adult education focused on numeracy and literacy, coupled with tailored training in culturally adapted languages can be provided by the government and NGOs by investing in teacher placement and training as well as by supporting nomadic and Islamiyah schools. Community-based classes can also be provided through the cooperatives. Topics covered should include nutrition awareness and should be targeted at both women and men, given the role of both genders in household's food purchases and consumption decisions.

#### **d. Strengthening digital technology use for financial inclusion, capacity building and access to market**

Technology should be leveraged to provide better access to finance and markets as well as for training and extension services for women dairy farmers. The technology used should however take into account the low literacy levels of the dairy farmers and the connectivity and data challenges in their communities. As such, farmers can be provided with simple smartphones and mobile e-solution platforms with limited data needs and with offline features, to allow financial institutions, extension agents,

teachers and other providers to engage with them remotely and provide them with relevant services

**Potential Implementers:** Dairy Processors, State Government, Development Partners, Financial Institutions, Mobile Money Providers, CSOs & NGOs

## **Recommendation 4: Engage Men and Boys as Influencers within the Community**

Women empowerment cannot be achieved among smallholder dairy communities without an active involvement and support from the men, given the influence of patriarchy, cultural norms and religion on household dynamics and decision making patterns in these communities.

### **Suggested Interventions:**

Key interventions should focus on:

- Sensitizing and educating community leaders on the benefits of women empowerment on their community.
- Engaging the men to identify potential reservations they may raise against women empowerment, in order to develop mitigation strategies to be incorporated in operationalizing women empowerment's interventions in their communities
- Identifying and engaging 'male advocates/champions' to support the establishment of the women cooperatives and other interventions targeted at women and adolescent girls.
- Providing men and adolescent boys with training on nutrition and business practices.
- Developing specific interventions targeted at male empowerment e.g., financial inclusion, alternative income generation activities to ensure that they are comfortable leaving the milk production and distribution to capable women.

**Potential Implementers:** Dairy Processors, Men-only cooperatives & associations, State Government, Traditional and Religious Leaders, Financial Institutions, NGOs

## 6 CONCLUSION

The NDDP Gender study highlights how religion, culture and tradition influence social norms and economic processes, reinforce patriarchy and limit the roles of women in smallholder dairy communities. Changes in economic activities, including increased integration of women into the formal dairy sector are yet to counter the gendered vulnerabilities, roles and dynamics in smallholder dairy households and communities. In fact, these roles seem to be reinforced and reproduced even within new contexts and changes to the dairy value chain. It is therefore critical that these norms are addressed to provide women with a wider platform for participation and empowerment.

In addition, women lack structured support systems and networks but utilize social systems, which should be formalized and strengthened. Direct access to economic inputs, most especially those that are related to dairy production and improved access to finance and credit are paramount. Women have some degree of control when it comes to minor household decision-making like food consumption. However, their low control over available resources is a limiting factor for improving nutritional status. As a result, nutrition education for women as well as men is critical, as without it, increasing household income and dairy production would by themselves not necessarily improve nutrition outcomes.

Furthermore, to ensure greater meaningful inclusion and empowerment of women in small dairy producing households, men, boys and community leaders must be integrated into any kind of intervention which supports behavioral change and modifications of social, cultural and religious norms.

Finally, processor-led dairy development programs, which integrate smallholder dairy farmers into the formal sector can provide several benefits to improve farmers' productivity and livelihoods, while helping to address challenges and constraints around capacity building, access to information, finance, and infrastructure. Deliberate efforts must however be made to ensure women maintain control over their dairy businesses. Government actors at the federal and state level, financial institutions, development partners and NGOs all have critical roles to play in supporting these programs and ensuring they achieve the intended benefits.

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