CDP Strengthening Cooperatives to Support Climate-Smart Livestock Systems

Gender and Youth Action Plan

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AOR/COR/Activity Manager Name & Office: Emily Varga, AOR

Submitted by: GENEX Cooperative

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ACRONYMS

AI	Artificial Insemination
BMGF	Bill and Melinda Gates Foundation
CCC	Climate-Smart Cattle Cooperatives
CD4	Cooperative Development 4
CDP	Cooperative Development Program
COVID-19	Coronavirus Disease 2019
EADD	East Africa Dairy Development
FAO	Food and Agriculture Organization
GBV	Gender-Based Violence
GENEX	GENEX Cooperative
GYAP	Gender and Youth Action Plan
ICT	Information and Communication Technology
IPI	Bureau for Inclusive, Growth, Partnerships, and Innovation
LFP	Labor Force Participation
LFT	Local, Faith, and Transformative Partnerships
MEL	Monitoring, Evaluation, and Learning
MGLSD	Ministry for Gender, Labor, and Social Development
MSD	Market Systems Development
RWANU	Resiliency through Wealth, Agriculture, and Nutrition
SACCO	Savings and Credit Cooperative Organization
UCA	Uganda Cooperative Alliance
USAID	United States Agency for International Development
V4D	Value for Dairy
VSLA	Village Savings and Loan Association
WEAI	Women's Empowerment in Agriculture Index
WELI	Women's Empowerment in Livestock Index
WIA	Women in Agriculture

INTRODUCTION

PROJECT OVERVIEW

The United States Agency for International Development (USAID) Bureau for Inclusive Growth, Partnerships, and Innovation (IPI) Local, Faith, and Transformative Partnerships (LFT) Hub entered into a five-year Cooperative Agreement with GENEX Cooperative (GENEX) to provide support to the USAID Cooperative Development Program (CDP). GENEX will implement the *Strengthening Cooperatives to Support Climate-Smart Livestock Systems* project (hereinafter referred to as "Climate-Smart Cattle Cooperatives [CCC]" or "the project") from October 1, 2023—September 30, 2028. CCC will work in Kenya, Nigeria, and Uganda to build the technical, organizational, and business capacities of cattle producer cooperatives; support improved access to climate-smart products and services by cooperative members to increase productivity and profitability; and contribute to the evidence base on the role of cooperatives as catalysts for systemic change, all resulting in stronger cooperatives, improved livestock systems, reduced methane emissions, and shared learning opportunities. CCC is aligned with CDP objectives (1) Capacity of cooperatives strengthened; (2) Cooperative enabling environments improved; and (3) Project learning applied in development community.

GENEX is a subsidiary of URUS, a global leader in providing dairy and beef cattle producers with technologies and technical assistance to improve their productivity and profitability. With existing presence in all three project countries, GENEX will leverage its networks, knowledge, and resources through current programs and partners—the Bill and Melinda Gates Foundation (BMGF)-funded *Africa Dairy Genetics Multiplication Program* in Kenya and Uganda and the FrieslandCampina-led Value for Dairy (V4D) consortium in Nigeria—to gain seamless access to dairy cooperatives interested in technical support to expand service provision to members and to increase overall governance and profitability. These programs are working to strengthen private sector service providers and dairy farmers that belong to a number of cooperatives from which we will select CCC cooperatives. CCC cooperatives will be located in several counties in central and western Kenya, Osun and Oyo states in southwestern Nigeria, and several districts in southwestern and central Uganda. Our staff will provide project cooperatives with direct technical assistance to expand and improve their cooperative business models, providing more diverse, higher quality, and more profitable services to benefit cooperative members.

RATIONALE FOR GENDER AND YOUTH ACTION PLAN

As a result of its decades-long work with dairy farmers worldwide, GENEX recognizes the social and economic value of ensuring that women and youth have access to information, resources, and opportunities for economic growth and social empowerment. To that end, the CCC project will reduce gender and age disparities in cooperative leadership and staff, membership, service uptake, and individual farmer technical support. Using gender-transformative approaches that include active male participation, we will foster increased female and youth agency and advance structural changes to inequitable social norms. GENEX will actively include women and youth in project design, learning, and adaptation activities; frame materials to regularly pivot content and discussions towards women and youth; ensure that events are timed to accommodate women's schedules; identify practices and technologies that women and youth prefer; and recruit women and youth for staff positions (35 percent female; 40 percent youth). We will coordinate with women and youth in each cooperative to determine their unique needs, preferences, and challenges, then align our technical assistance and trainings on leadership, planning, and empowerment accordingly. CCC will prioritize project participation with targets of 40 percent female and 30 percent youth.

METHODOLOGY AND STRUCTURE OF THE GENDER AND YOUTH ACTION PLAN

To guide these project objectives, GENEX has prepared this initial Gender and Youth Action Plan to provide a general overview of key challenges facing female and youth dairy cooperative members in Kenya, Nigeria, and Uganda—and a preliminary plan to address them. Since project cooperatives have not yet been selected, this plan was prepared through desk research from documents provided by USAID Missions in Kenya and Nigeria—including the "2023 USAID Gender Equality and Women's Empowerment Policy," the USAID/Kenya "Enhancing Gender Inclusivity in Youth Employment: Kenya Country Analysis," and the "USAID/Nigeria Cross-Sectoral Youth Assessment"—as well as those publicly available. Desk research was supplemented by URUS staff, experts, and partner insights and recommendations from the field. Once project cooperatives have been selected, this plan will be updated based on primary data that GENEX will collect directly from project beneficiaries.

The summary content in this Gender and Youth Action Plan is based primarily on a literature review of available studies and assessments relevant to the project scope and target geographies. It is neither exhaustive nor necessarily consistent in topical information across countries, as it is drawn from available secondary data sources rather than primary research. The plan is organized as follows: (1) Section 1 provides an overview of relevant challenges facing women in Kenya, Nigeria, and Uganda, including policies and programs that influence women in these countries; includes available information related to the role of women in both the dairy sector and in cooperatives in each project country; summarizes available findings on lessons learned and best practices related to women, women in dairy, and/or women in cooperatives in the three project counties; and outlines a preliminary plan that the project will use to respond to identified challenges within the scope of the project. (2) Section 2 provides an overview of relevant challenges facing youth in Kenya, Nigeria, and Uganda, including policies and programs that influence youth in these countries; includes available information related to the role of youth in both the dairy sector and in cooperatives in each project country; summarizes available findings on lessons learned and best practices related to youth, youth in dairy, and/or youth in cooperatives in the three project counties; and outlines a preliminary plan that the project will use to respond to identified challenges within the scope of the project. (3) Section 3 includes a proposed learning agenda with questions that we will use to guide project learning and adaptation on female and youth inclusion and empowerment. We will select questions from these learning questions for our mid-term performance evaluation, which will prioritize investigating whether and how the project has been able to increase participation and progress for women and youth.

WOMEN IN KENYA, NIGERIA, AND UGANDA

GENERAL CHALLENGES

Employment, Incomes, and Education

Cultural norms related to the economic value of women directly and indirectly affect their current and future incomes. In many developing countries, primary and secondary school attendance is often higher for male children than female children, either because females are needed for full-time household responsibilities during school hours or because families see less value in educating their girls than their boys. Once in the work force, these educational gaps are compounded by global hiring and wage trends that disfavor women, restricting women's ability to increase their incomes. Although higher incomes do not necessarily equate to increased authority or autonomy (and can actually cause additional challenges for women related to disruptions in household power dynamics), more money often leads to greater financial flexibility, more diverse coping strategies, and improved overall resilience.

Despite the fact that the labor force participation (LFP) rate is highest in Kenya among the three project countries at 72 percent for women and 77 percent for men (World Economic Forum 2021), only 30 percent of women are employed in the formal sector, compared to 50 percent of men (Hyun 2020); a 33 percent pay gap favors men (Euromonitor Kenya 2023). In Uganda, the LFP rate is 68 percent for women and 74 percent for men (World Economic Forum 2021), with women earning two times less than men on average (Among 2017). Only 16 percent of Ugandan men and 12 percent of women are employed in the formal sector (Euromonitor Uganda 2023). Comparatively, the LFP rate is lowest in Nigeria with a larger gap between rates for men and women at 64 percent and 49 percent, respectively (World Economic Forum 2021).

Primary school attendance is comparatively highest in Uganda and has the smallest gender gap, with 96 percent of boys and 94 percent of girls attending. Eighty-two percent of boys and 78 percent of girls in Kenya attend primary school, and primary school attendance drops further to 70 percent and 58 percent in Nigeria, respectively. Secondary school participation is substantially lower than primary school attendance and with a wider gender gap in Kenya and Uganda: 55 percent of boys vs. 45 percent of girls in Uganda, and 53 percent of boys vs. 47 percent of girls in both Kenya and Nigeria (World Economic Forum 2021). Men also have substantially higher literacy rates than women in all three countries: 85 percent vs. 78 percent in Kenya, 83 percent vs. 71 percent in Uganda, and 71 percent vs. 53 percent in Nigeria (World Economic Forum 2021).

Agricultural Involvement and Resources

In all three project countries, women who work in the agriculture sector—mostly informal in rural areas and often at subsistence or semi-subsistence levels—perform a majority of manual labor, in terms of both time required and variety of tasks. In the dairy sector, this includes daily work such as feeding and watering, removing manure, and milking. Despite the importance of their work, women's income; ownership of land, livestock, and other assets; and control over financial decisions are all disproportionately low, as is their access to extension agents, dairy service providers, and financial services. This lack of access to capital and technical assistance results in lower use of improved practices and technologies that would result in increased productivity (Hyun 2020; USAID Kenya, 2020b).

The disparity in women's land and asset ownership is due to a host of reasons: unequal inheritance rights, discriminatory customary tenure law, limited awareness of existing protective legislation, and restrictive opportunities to secure legal documentation to prove land ownership (Euromonitor Kenya 2023; Obianefo et al. 2021). In Kenya, 52 percent of women are engaged in agriculture, but only 7 percent report owning land solely in their name (compared to 30 percent of men), and only 1.6 percent of total land is owned by women (Hyun 2020, pg. 51; Euromonitor Kenya 2023, pg. 19). In Nigeria, women conduct 80 percent of agricultural production, 60 percent of agricultural processing, and 50

percent of animal husbandry, yet they own less than 20 percent of agricultural assets (Euromonitor Nigeria 2023, pg. 20) and only 12 percent of land, even including joint ownership (Euromonitor Nigeria 2023, pg. 20). In Uganda, women also tend to perform a higher share of the agricultural labor than men, particularly for food crops: 55 percent of land preparation, 65 percent of planting, and 90 percent of weeding and food processing (World Bank 2021), while they only own 28 percent of land (Among 2017, Euromonitor 2023), of which only 7 percent is sole ownership (Bain et al. 2017).

In all three countries, women earn less than men in agriculture, partly because they tend to be excluded from producing high-value crops, participating in more profitable activities in the value chain, and accessing new markets because their movement or time is restricted culturally or due to other responsibilities (Euromonitor Uganda 2023, pg. 55, 58, & 62; Euromonitor Nigeria 2023, pg. 80). Women's production and profits are also lower because their access to improved inputs and extension services is much lower than men's. Only 11 percent of extension workers in Uganda are female, and extension services target men far more often than women (Euromonitor Uganda 2023, pg. 55; Obianefo et al. 2021; Euromonitor Kenya 2023, pg. 86). One agricultural sector assessment in Nigeria outlined the weaknesses of the country's extension system, with the main criticism that it was mostly publically run and did not effectively reach many farmers, particularly women (Ikpi 2001).

Access to Credit and Asset Ownership

Despite the fact that advancements have been made in making financing more accessible for women, it remains a major limitation for females in all three countries. Without access to credit and little control over household spending decisions, women are far less likely to adopt improved practices that require a cash pay-out (versus those, for instance, that may only include more labor). Relatively fewer women than men have access to opportunities to make more money (mentioned above), borrow money, or keep savings in a secure location—all limiting their ability to invest in their dairy farming.

In Kenya, only 1 percent of female farmers take loans from formal sources for agriculture (USAID Kenya, 2020b). In Uganda, 23 percent of women lack access to financial services all together (Euromonitor Uganda 2023, pg. 16); only 9 percent of available credit nationally is accessed by women, and only 1 percent in rural areas (Among 2017; Bain et al. 2020). In Nigeria, women received less than 10 percent of the total financial resources offered to smallholder farmers (Obianefo et al. 2021). One key reason for low access to financial services by women is relatively low land ownership, as mentioned above, as well as other assets to serve as collateral to hedge financial institution risk. For instance, only 23 percent of Ugandan women have a formal bank account compared to 33 percent of men with18 percent lower savings then men (Euromonitor Uganda 2023, pg. 64-65). In Nigeria, just 11 percent of women owned a house in 2018, compared to 37 percent of men (Euromonitor Nigeria 2023, pg. 20).

Village Savings and Loan Associations (VSLAs) can be a popular solution for female financial access, but they do have a number of limitations, including that investments funded by VSLAs have a high chance of failure because VSLA members, especially women, usually lack the business skills needed to support the financial investment (Hyun 2020, pg. 52). In-kind loans—by lead firms, major buyers, cooperatives, or organizations—to female farmers are another alternative to formal sector credit women, such as those provided by One Acre Fund, which works in all three countries and has a high proportion of female beneficiaries (60 percent in Kenya) and a consistently high repayment rate (Hyun 2020, pg. 52).

Although information and communication technology (ICT), in particular mobile money systems, can present new opportunities for women, there are still major gender gaps in ICT that need to be addressed. In addition to access to technology, challenges related to digital literacy further limit female use of online information and services (Euromonitor Nigeria 2023, pg. 19). In Kenya, 31 percent of women (vs. 20 percent of men) rely exclusively on mobile money accounts (Hyun 2020), and use of mobile money has increased per capita consumption and lifted 2 percent of households out of poverty, especially impacting female-headed households, who experienced a 22 percent increase in savings (Hyun

2020, pg. 51). Mobile money has also boosted women's opportunities in Uganda—specifically when mobile money accounts are included together with formal bank accounts—where 65 percent of women versus 67 percent of men have access. However, there is a high general ICT gender gap, in which only 69 percent of Ugandan women own mobile phones compared to 84 percent of men, and only 19 percent of women have basic internet access compared to 27 percent of men (Euromonitor Uganda 2023, pg. 62). In Nigeria, mobile phone ownership rates are high (89 percent of men and 83 percent of women own a mobile phone), although—of the 77 percent of small holder farmers with phones, only 8 percent have smart phones (Mercy Corps et al. 2023). However, bank account ownership and mobile money use are much lower in Nigeria than in Kenya or Uganda, with only 35 percent of women and 55.5 percent of men with any type of financial account (World Economic Forum 2021). Only 3 percent of rural households are familiar with mobile money, and only 1 percent use it (Mercy Corps et al. 2023)—largely because, until 2018, the Nigerian government had not granted any companies the right to operate mobile money (by 2020, three companies had received licenses) (Mercy Corps et al. 2023).

Decision-Making, Unpaid Labor Burden, and Gender-Based Violence

Women's decision-making and agency is constrained at different levels in the three project countries. In one study based in Kenya, the proportion of women making their own financial decisions was 52 percent for ages 16-34 years, 66 percent for ages 35-64, and 80 percent for ages 65 years and older (Hyun 2020, pg. 51). In Nigeria, women are generally excluded from decision-making: in a study from Kaduna state, less than 20 percent of women were consulted for any farm operational decisions, and only 1-2.5 percent made the final decision for all farm operations (Ogunlela & Mukhtar 2009). However, this authority varies by education level—only 14 percent of uneducated women participating in decision-making compared to 60 percent of those with secondary education and higher (Euromonitor Nigeria 2023, pg. 69; Ogunlela & Mukhtar 2009). Similarly in Uganda, research found that women need permission from men to spend money they have earned; even when their joint discussion occurs related to agricultural operations or consumption expenses, male heads of household usually make final decisions (Euromonitor Uganda 2023, pg. 57).

Women also endure high burdens of unpaid domestic labor in all three countries, which creates time poverty that makes it harder for them to engage in economic opportunities outside the home to earn money. In Kenya, women perform 2.2-3.8 times more unpaid work per day than men (Euromonitor Kenya 2023; World Economic Forum 2021), 3.9 times more in Uganda, and 1.51 times more in Nigeria, the lowest ratio (World Economic Forum 2021). Time poverty for women is especially high in rural households, where women spend long hours walking to collect water and fuel for preparing food. In Kenya, an estimated 80 percent of women spend 1-5 hours daily looking for firewood, and in arid and semi-arid areas, women spend 3-5 hours daily seeking water (Hyun 2020, pg. 34).

Gender-based violence (GBV) is relatively high in both Uganda and Kenya, with approximately 50 percent and 41 percent of women, respectively, experiencing intimate partner violence at some point (Euromonitor Uganda 2023, pg. 38; Euromonitor Kenya 2023, pg. 41). GBV is relatively lower in Nigeria at only 24 percent, with particularly low levels in southwest Nigeria, where we will work (Euromonitor Nigeria 2023, pg. 18; World Bank Gender Data Portal 2022). A 2015 study in Nigeria found that economic participation by women is shifting household norms, with younger and more educated men more likely to participate in unpaid domestic work than their fathers; however, in cases in which men are not the primary breadwinner, this can fuel domestic violence (Euromonitor Nigeria 2023, pg. 68).

The effects of climate change have exacerbated women's unpaid care burden, time poverty, and GBV, especially in pastoralist communities, because of increased socioeconomic and livelihood pressures. For instance, in Kenya there has been an increase in "child drought brides," young girls traded into marriage for money or cows when families face increased financial pressures due to unexpected shocks that decimate agricultural production and wipe out a family's primary income for the year. In arid and semi-arid areas in particular, climate change decreases milk production or causes cattle death from extreme

heat and insufficient food and water; some men blame their wives (who are in charge of feeding and watering the cows), leading to increased GBV (Euromonitor Kenya 2023).

POLICIES AND PROGRAMS FOR WOMEN IN KENYA, NIGERIA, AND UGANDA

The National Policy on Gender and Development is Kenya's main policy for women's economic empowerment. Other relevant legislation includes the Matrimonial Property Act (2013), which safeguards women's property rights in divorce; the Marriage Act (2014), which asserts equality between parties in marriage; the Protection Against Domestic Violence Act (2015); the Land Act and Land Registration Act, which secures women's rights to land; and the Kenyan Employment Act (2007), which advocates for equal opportunities, pay, and benefits regardless of gender (Euromonitor Kenya 2023). Though they exist, not all of these policies are universally enforced, partly because the large informal sector—in which most dairy farmers work—cannot be regulated by the Employment Act and partly because Kenya has been undergoing a devolution program since 2013 that gives individual counties autonomy to oversee public services and set local policies, and much customary law discriminates against women. Both vertical (national to sub-national) and horizontal (across line ministries) linkages are weak, as is gendered data collection, reducing effectiveness of policy implementation (Hyun 2020). As a result, women's equality and empowerment is lower in some areas than others, especially in pastoralist areas of northern Kenya (Euromonitor Kenya 2023). Several national initiatives on women's empowerment— including the National Government Affirmative Action Fund, the Uwezo Fund, and the Women Affirmative Access Window— operate in silos and funds are dispersed locally in an ad hoc manner, which undermines both their efficiency and sustainability (Euromonitor Kenya 2023).

In Nigeria, the Federal Ministry of Women's Affairs and Social Development is the primary ministry for women's issues, created in 1995. The National Gender Policy, first released in 2006 and revised in 2013, aims to ensure women's empowerment through planning, policy, and transformational activities. The National Employment Policy of 2017 sets out plans to ensure gender equality in employment and, in 2019, a new Gender Policy for Agriculture was adopted that includes improved gender-responsive budgeting, collection of gender data, initiatives focused on women's skills-building and empowerment, and plans for training the Federal Ministry of Agriculture and Rural Development to ensure that gender issues are better integrated into planning (Euromonitor Nigeria 2023). The government also established a Family Support Program in 1994 with the goal of providing affordable credit to small-scale producers in the rural areas without gender bias (Ikpi 2001). However, only 30 percent of legal frameworks related to women's economic equality are fully in place (Euromonitor Nigeria 2023). For example, a Gender and Equal Opportunities Bill—that seeks to ensure inheritance rights for both male and female children, equal rights for women in marriage and divorce, and equal access to education, property and land ownership, and inheritance— has been rejected five times due to objections by some senators on religious grounds (Euromonitor Nigeria 2023). In a few cases, some federated states have agreed to implement national gender policies, while others have not; for example, the Violence Against Persons Prohibition Act of 2015, which seeks to reduce domestic violence, has not been adopted in 18 out of 36 states, those following Sharia law (Euromonitor Nigeria 2023).

The Ugandan national government has tried to promote gender equality through a number of policies and bills: the Domestic Violence Act (2020), The Prohibition of Female Genital Mutilation (2010) Marriage Bill (2007), the Succession Amendment Act (2018, revised 2021), the Sexual Offences Bill (2019), and the Equal Opportunities Commission Act, the National Policy and Action Plan on Elimination of GBV (2016), and the National Gender Policy (2007). Uganda's national policies are generally supportive of women's equality, though enforcement is weak. The Ministry for Gender, Labor, and Social Development (MGLSD) mainstreams gender policy and practices within other ministries, but studies have shown challenges in important ministries, including the Ministry of Agriculture, because of limited budgets and a perception that gender is MGLSD's mandate (Euromonitor Uganda 2023). Uganda's National Development Plan III for 2020-2024 includes several measures to promote women's

economic empowerment—support for entrepreneurship programs, expanded social protection, scaled-up GBV prevention and responses, and gender-sensitive budgeting at local government levels (Euromonitor Uganda 2023, pg. 46). The National Co-Operative Policy of 2010 includes gender responsiveness in its vision, but there have reportedly been gaps in budgetary allocations, actions, and monitoring that prevent gender mainstreaming in practice (Euromonitor Uganda 2023). Enforcement of national policies in Uganda related to land ownership is especially limited, as customary law continues to govern ownership and inheritance rights in most of the country, and only around 20 percent of land is formally registered. As another example, the Succession Amendment Act provides equal provisions for female and male heirs and dependents' right to inherit land and other assets, but Muslim communities are exempt from this on religious grounds (Euromonitor Uganda 2023).

WOMEN IN DAIRY

Kenya

Several studies on gender in the Kenyan dairy sector (Ambra 2016, Tavenner et al. 2018) report that gender roles and dynamics greatly influence the distribution of control and benefits. High-value and larger animals, such as cows, goats, and donkeys are generally owned by men (sometimes dictated by local law), while women are more likely to own smaller ruminants like chickens. Kenyan men own 10 times more cattle than women and four times as many goats. Despite disproportionate participation in cattle caretaking, women often only have rights to primary products (e.g., milk) and not live animals themselves (Euromonitor Kenya 2023). Even for chickens, less than half of women reported that they were able to sell animals without permission from their husbands (Euromonitor Kenya 2023, pg. 89).

In central and western Kenya (geographic focus areas for this project), women tend to be responsible for most daily management tasks, including providing fodder and water, removing manure, milking, cleaning milk equipment, and delivering milk. Men are in charge of more occasional activities, such as building cow sheds, arranging veterinary or artificial insemination services, or collecting milk payments from buyers. Despite women's substantial contributions to dairy labor, their direct benefits are relatively low because men own the cows, make decisions on buying and selling, and earn more of the money on milk sales. Understanding this dynamic is crucial to increase adoption of new dairy practices and yields, particularly because studies have shown that dairy intensification tends to further increase the disproportionate labor burden for women (Ambra 2016); women may not be motivated to work harder when they receive so few economic benefits, especially since intensification can be prohibitively expensive (Euromonitor Kenya 2023).

Traditionally, income from "morning" milk production is controlled by men, while women have more control over the allocation of "evening" milk, either retaining it for household consumption or selling a portion for their own income (Tavenner et al. 2018). This is an especially important dynamic to note, as evidenced by lessons from the USAID Kenya Dairy Sector Competitiveness Program that invested in cold chain technology in several communities only to discover that this motivated men to take over selling both morning and evening milk, undermining the little control that women had. To address this unintended consequence, the project organized trainings with male and female couples to learn dairy intensification methods and consider together how increased production might affect gender roles and how additional work and profits should be shared. Among other effects, this led many households to allow women to retain decision-making and money earned from evening milk (Ambra 2016).

When they do have autonomy to sell animals or products and keep the money, women earn far less than men for a few reasons. They are more likely to sell to informal markets close to their homes—because of gender norms that limit their mobility and/or require a high household work burden—which are less lucrative than market centers. Women also have less social capital to negotiate better prices (Euromonitor Kenya 2023).

Female dairy farmers also have lower adoption of improved practices and technologies due to several factors: lack of hired labor to support time- or energy-intensive activities, limited access to technical information on quality fodder and planting materials, lack of capital for investment, lack of land, and insecure land rights (Ambra 2016). Women also have weak access to animal health and reproduction services, such as vaccines or pregnancy detection, because of limited awareness, high costs, inaccessibility, and unequal gender relations. These barriers lead to higher disease prevalence and livestock death rates among women's cattle herds, which regress them even further economically (Euromonitor Kenya 2023). One major cause is the disinterest by extension agents and service providers in targeting women or adjusting technical assistance to accommodate the unique needs of women, such as scheduling trainings around milking times (Ambra 2016; Tavenner et al. 2018). In fact, a study of dairy entrepreneurs showed that only 18.6 percent of women received any type of formal training on milk processing before they started their business (Ambra 2016).

Specific to this project's geographic focus and per our partner field staff, dairy farmers in the central/Mt. Kenya region are more business-minded and tend to produce larger *volumes* of milk per cow. Women in this region play more central roles across dairy activities and have greater control over assets and income, especially compared to those in the Rift Valley region, another project geographic priority area. Dairy farmers in the Rift Valley focus more heavily on *quality* of milk production and, though more progressive than farmers in other ethnic groups, such as the Maasai, are more patriarchal than farmers in the central region. Men own cattle and make operational and financial decisions. These nuances are very important in guiding how we interact with cooperatives in these regions to influence female inclusion and empowerment.

Nigeria

With the fourth largest cattle population in Africa, Nigeria has around 20 million cows, 2.35 million of which are dairy cows (Ayandiji & Nwachukwu 2023). Despite its size, the Nigerian dairy sector is divided, ineffective, and wasteful compared to other African nations, resulting in an annual 1.2 million metric ton shortfall in domestic milk supply versus demand (Ayandiji & Nwachukwu 2023). Key problems include that most dairy production is combined with meat production in an unstructured way; dairy farmers (many of whom are Fulani pastoralists) operate only on a small scale; and adoption of improved practices, breeds, and modern technologies is low. A survey of dairy farmers in southwestern Nigeria found that the majority of dairy farmers are male (74 percent), while women tend to only be involved in the processing of traditional products and marketing. Extension services are weak; 40 percent of farmers having never been visited by an extension agent (Ayandiji & Nwachukwu 2023).

Adoption of improved livestock practices is relatively low in Nigeria, though this varies by practice. For example, the average per capita animal protein intake is below 7.0 g per day compared with 35.0 g of animal protein per capita per day recommended by the Food and Agriculture Organization (FAO). A study of farmers in southwest Nigeria found a 75 percent adoption rate for improved breeding practices, 70 percent for modern husbandry methods, and 66 percent for feeding balanced rations—but only 13 percent for deworming, 13 percent for use of feed additives, and 20 percent for use of vaccinations (Mafimisebi et al. 2006). Another study showed that 62 percent of farmers were aware of artificial insemination (AI) and were amenable to using it, but adoption was much lower due to lack of access to AI services (Ayandiji & Nwachukwu 2023). There is no designated government actor focused on disseminating improved cattle breeds; an agricultural sector assessment recommended that more private sector actors should be involved in this process (Ikpi 2001). While no study was found that assessed gender in relation to adoption of improved practices, the factors that positively correlate with adoption included income, farm size, number of cattle owned, level of education, years of farming experience, membership in a cooperative, and access to credit—all variables known to be higher for men than for women (Mafimisebi et al. 2006).

A study looking at differences in the effects of climate change and adaptation strategies between male and female livestock entrepreneurs in Enugu State (Chah et al. 2018) found that women were more vulnerable to climate change but had less information and lower adoption of adaptation measures than men, partly because of less access to extension services. Some of the biggest knowledge gaps between men and women related to livestock vaccinations; the costs, benefits, and proper methods of raising animals for multiple purposes (e.g., milk, eggs, or meat; draft labor; breeding); and access to credit. For adaptation measures, men were more likely than women to raise disease-resistant livestock breeds, build pens near water sources, and use high nutrient feeds (Chah et al. 2018). A study related to livestock insurance in Nigeria found that drought and floods, exacerbated by climate change, are among the biggest risks facing livestock farmers in Nigeria, and that there is a viable business case for companies to offer livestock insurance in the country (Eigner & Vinayak 2023).

Although the primary ethnic group in Osun and Oyo states—where we will work—is Yoruba, there are also communities of sedentary Fulani, a pastoralist group which has traditionally dominated the livestock and dairy industry in Nigeria. In 1990, Fulani pastoralists owned 96 percent of the cattle in the country (Yahuza 2001); as recent as 2020, more than 80 percent of Nigerians depended on pastoral Fulani for livestock for consumption (Agboola et al. 2020). In fact, about half of the farmers with whom our partner program, the *Value for Dairy (V4D)* consortium, is working are Fulani. Gender roles among the Fulani are different from other ethnic groups: men are far more dominant in daily responsibilities, while women are responsible for milk processing and marketing. Studies of gender dynamics among sedentary Fulani in Osun state (Agboola et al. 2020), Oyo state (Oladunjoye et al. 2001; Luqman et al. 2020), and Kwara state (Komolafe et al. 2019) found that fencing, grazing, and milking were male roles, and cleaning pens, processing milk, and selling milk products are female jobs. This is in direct contrast to the gendered labor division typical in other countries (including Kenya and Uganda) and among other ethnic groups in Nigeria, where women perform the majority of daily labor (e.g., feeding and milking), while men dominate dairy product marketing. It is also common for Fulani women to own cattle themselves (Eigner & Vinayak 2023). Fulani farmers tend to be younger (average age is 34) and have larger herd sizes (20 cattle for men; 5 cattle for women) than dairy farmers from other ethnic groups, and they are Muslim, which generally entails more restrictive norms for women (Agboola et al. 2020).

Our V4D partners note that the Fulani farmers with whom they work produce a disproportionately lower share of milk than farmers from other ethnic groups. This lower production is typical of Fulani cattle systems, which achieve 2 liters per day per cow on average compared to the 15-liter yield potential with improved breeds and practices. Key constraints to dairy production and marketing among the Fulani included lack of access to modern equipment, capital, storage facilities, knowledge of value addition, quality roads, transport facilities, and supply of raw milk from cattle in the dry season (Oladunjoye et al. 2001; Komolafe et al. 2019). Fulani also have a strong preference for the White Fulani cow breed, which is not as productive as other breeds. Although Fulani working with V4D are sedentary, many Fulani also use migration to deal with fodder shortages, which can lead to higher nutritional deficiencies or inconsistencies (Eigener & Vinayak 2023).

Uganda

A study of dairy sector gender dynamics in Mbale district of Uganda (Waiswa & Jolly 2021) found that women perform an estimated 75 percent of livestock-related labor, and 49 percent of women versus 18 percent of men are involved in all aspects of dairy production. However, men maintain complete autonomy over livestock purchase, sale, and use of profits, even when animals nominally belong to women (Mbevi et al. 2015). In one study, 71 percent of cattle was owned by men, and dairy production decisions were made mostly by men alone to the detriment of productivity: the minority 27 percent of households with joint ownership of livestock production had the highest production and food security (Waiswa & Jolly 2021). Men tend to control profits from selling milk, although women sometimes manage sales of "evening milk" (39 percent of women receive "evening milk" income vs. 24 percent for

"morning milk"). Women are often allowed to manage "evening milk" sales because there is a lower quantity of milk in the evening and usually no way to store it over night for sale to milk collection centers the next day (Bain et al. 2020).

Due to limited access to knowledge and assets, female Ugandan dairy farmers often have lower adoption rates for improved practices and technologies. However, a study of factors affecting AI adoption (which is generally low in Uganda, ranging from 2-15 percent) did not find a direct relationship with gender. Instead, factors with a significant correlation to use of AI included availability of extension services, record-keeping, availability of milk markets, and preference for AI over other breeding methods. There was also a negative correlation with size of grazing land, perhaps because those with less land feel more pressure to intensify with improved breeds (Mugisha et al. 2014).

Several projects in Uganda have had some success in increasing women's empowerment in the dairy sector. For instance, USAID Resiliency through Wealth, Agriculture, and Nutrition (RWANU) placed heavy emphasis on women's empowerment by including annual gender awareness trainings; targeted scheduling and provision of childcare services to facilitate female participation in trainings; and promotion of labor-saving technologies and practices. The project's mid-term evaluation found that women had significantly increased ownership of goats, which, in turn, increased community respect and male support for women's asset ownership. Women's savings levels, access to credit, and participation in household decision-making on income also increased, and agriculture labor sharing increased, leading to slightly lower time poverty for women (Mbevi et al. 2015).

The BMGF-funded East Africa Dairy Development (EADD) program in Uganda focuses on increasing dairy cow ownership by women as a means to improve women's empowerment and gender equity and to disrupt social norms around gender. However, this improvement also increased the time poverty of some women due to additional labor required to care for the cows. The Women's Empowerment in Agriculture Index (WEAI) scores from this project were 4.67 times higher for female sole owners of dairy cows and 3.18 times higher for those who were joint owners, compared to those whose husbands had sole ownership. Importantly, the number of cattle owned did not have a significant effect on empowerment (Bain et al. 2020). Women also reported that cattle ownership increases their access to credit, as cows can be used as collateral. Lingering sources of women's disempowerment among EADD beneficiaries included income constraints (32 percent of women), time constraints (21 percent), and lack of resources to care for cows (18 percent) (Bain et al. 2020). Female ownership of cows also had the initial negative effect of increasing domestic violence, as men worried that women would take away their assets. To address this, Phase II of the project included men and women from each family in all trainings to understand how EADD's work could be mutually beneficial. EADD also encouraged a sharing scheme, in which men sold morning milk from EADD-provided cows, and women controlled evening milk, changes that helped prevent GBV that plagued the first phase of the program (Bain et al. 2020).

Some climate change adaptation practices, such as zero grazing, can have negative side effects for Ugandan women, specifically time and energy burdens. For example, forage materials in a cut-and-carry system must be gathered and chopped to make them easier and more palatable for cows to eat, labor-intensive activities that are usually performed by females. While some technologies, like mechanized choppers developed by the National Agricultural Research Organization, can reduce associated work, they must be easily accessible and affordable in order to be effective (Lubwama 2011). Most of the private sector players that sell choppers charge fees outside the financial reach of smallholder dairy farmers, who constitute a majority of Ugandan dairy farmers.

WOMEN IN COOPERATIVES

Kenya

Generally, women's participation in cooperatives is low, though it tends to be higher for more educated and wealthier women (Euromonitor Kenya 2023). One study in Kenya found that cooperatives tended to have a lower proportion of women than the general dairy farmer population (37 percent versus 45 percent), likely related to higher transaction costs for women to reach the cooperative's fixed sales point (Njiru 2015). Similarly, in cooperatives from which our project cooperatives will be drawn, the proportion of active female members is currently at 33.5 percent. The Cooperative Act of Kenya makes reference to the principle of open and voluntary membership, but individual cooperative by-laws often specify conditions (e.g., land ownership, patronage requirements, limiting membership to one farmer per household), each of which can restrict women's ability to join (Euromonitor Kenya 2023). Even where female membership levels are high, women tend to be excluded from participation in decision-making, particularly in processing cooperatives (Mwambi et al. 2021, Euromonitor Kenya 2023). Additionally, women occupy only 0.9 percent of managerial or leadership positions in formal organizations and producer groups (Euromonitor Kenya 2023).

However, several studies have shown that women-only organizations can have significant positive impacts on women's access to technical knowledge, adoption, and general capacities. As an example, the Kenya Women's Veterinary Association forms women's groups and helps them improve their animal husbandry practices (Ambra 2016). Also, he Maasai Women Dairy, which TechnoServe helped to register as a formal cooperative in 2011, had membership of 3,200 female members in just four years and produced 7,100 gallons of milk per day by members who adopted improved practices like rotational grazing and fodder conservation (Ambra 2016).

Some donor-funded projects have also had success in improving the participation of women within cooperatives. The USAID Kenya Dairy Sector Competitiveness Program formed cooperatives and required that women had to comprise at least 30 percent of membership. The project also suggested changes to by-laws to make membership more affordable to women, like installment payment options to purchase shares. To prevent male income capture, the program encouraged creation of a cooperative store to enable partial in-kind payments for milk with goods of particular interest to women, such as schoolbooks or staple food items. Men were also encouraged to allow women to apply for female-friendly loans at lower interest rates (Ambra 2016).

Another study on women's empowerment through cooperatives that used the Women's Empowerment in Livestock Index (WELI) found that, when a household joins a producer organization—regardless of the gender of the registered member—women in that household gain higher control over production and financing decisions, though the effect is largest when women are the registered member (Mwambi et al. 2021). Traditionally, households have registered cooperative membership under the name of the household head (who is most often male), which has channeled benefits to him, but more women have started registering themselves instead of, or in addition to, their husband (Mwambi et al. 2021). Mugo & Masila (2021) also recommend increasing the number of women-led cooperatives by supporting women to acquire necessary documents, gain business and financial skills, and increase value-added processing, marketing, and member services.

Nigeria

More than one-third of Nigeria's women belong to cooperatives and other local associations (Ogunlela & Mukhtar 2009), and 48 percent of cooperative members from the V4D program are women. This high participation may be due, in part, to the Women in Agriculture Program (WIA), implemented nationwide from 1988 to strengthen women's access to agricultural extension services and included promotion of women's groups as one component. According to WIA evaluations, the project was very impactful, significantly increasing women's access to agricultural information, inputs, and credit; boosting

agricultural yields and incomes; increasing household food security; and improving women's economic contributions to and decision-making within their households (Ogunlela & Mukhtar 2009; Ajah 2010).

Wealthier and older cooperative members in southeast Nigeria report facing fewer challenges to things like asset and resource access, workload, services, and conflict with others than younger women. Surprisingly, more educated women face more challenges, likely because male members perceive them as a threat and intentionally create conflict or limit access to resources (Obianefo et al. 2021).

A pilot Dairy Cooperative Development Program in Kaduna state in the late 1990s led to the formation of 36 farmer associations that collectively marketed milk to urban centers through an apex body known as MILCOPAL. This ready-market approach had a profound positive impact on participating pastoralists, providing them with a regular income. The impact was especially high for women, since the new cooperatives collected milk from their farms and removed the time and resource burden of transporting milk to buyers, finding markets, or negotiating prices (Yahuza 2001).

Uganda

Cooperatives working with our BMGF partners in Uganda currently have an average 39.2 percent active female membership rate. Women's participation in cooperatives has generally been increasing in recent years (in part, due to the rise of Savings and Credit Cooperative Organizations [SACCOs]), with a national average of 42 percent female participation. However, women are still under-represented as members, leaders, and staff of mixed-sex cooperatives, including one study that found higher-level cooperative positions were only 26 percent female (Euromonitor Uganda 2023).

The Uganda Cooperative Alliance (UCA), an umbrella organization responsible for lobbying, advocacy, and resource mobilization for the cooperative movement, set a gender policy in 2005 that requires at least one-third of board members and one-third of training participants to be women. UCA also organized gender-related trainings, and cooperatives are encouraged to include a woman and youth on all election committees. SACCOS are also working to improve access to credit, land, equipment, extension services, and education for women and youth, which led to an increase of 18.6 percent in the number of women involved in cooperatives from 2005 through 2012 (Nannyonjo 2013).

There is evidence that *women-led* cooperatives increase women's vertical social capital, leadership and business skills, and access to financial resources and information. Examples of women-led cooperatives include VSLAs, the Bokonzo Joint Co-operative Union, the Manyakabi Area Cooperative Enterprise, and P'KWI Farmer-to-Farmer Cooperative Society, all of which had majority female members and women as top leaders. VSLA membership has increased financial services access, asset ownership, and control over income (Euromonitor Uganda 2023) in Uganda. Membership in the P'WKI Cooperative significantly increased women's knowledge of agronomic best practices, economic well-being, and decision-making power at household, group, and community levels (Lecoutere 2017). P'KWI accomplished this by forming community mobilization groups with 60 percent female member and leader targets to mirror the overall proportion of female cooperative members. Despite their success, women-led cooperatives are not prevalent, and, in the case of VSLAs, generated savings are often too low for individuals or communities to meaningfully acquire new assets (Among 2017). Since cultural norms— including women's restricted mobility, lack of trust by men, limited freedom in communication, and a high burden of agricultural and household work— impede women from developing business relationships, higher participation by women also provides them more opportunities to work with male and female members and more easily gain access to financial resources (Theeuwen et al. 2021). Some policies have also helped increase women's participation in farmer organizations. The Uganda National Farmers' Federation has a quota system that requires a third of leaders to be women; this policy has not only increased the number of women in leadership roles but provided role models for female members and improved women's self-confidence, negotiating skills, information, and active participation in meetings and trainings (Euromonitor Uganda 2023).

LEARNINGS AND BEST PRACTICES FOR WOMEN IN DAIRY COOPERATIVES

Demonstrate the economic value of supporting women: In addition to multiple studies and projects mentioned above, there are others with especially relevant lessons related to the *Strengthening Cooperatives to Support Climate-Smart Livestock Systems* project. For instance, a USAID review of youth and women in agricultural market systems development (MSD) projects (Cassinath & Mercer 2020) across multiple countries noted that it is important (and difficult) for projects to make the business case that the benefits of including and empowering women outweigh the costs to private sector partners, coming up with win-win interventions that help women while also profiting the partners.

Collect high-quality data related to the attitudes and practices of women: The USAID MSD project review also pointed out that collecting reliable data and sharing results with partners are crucial to building continued support for inclusion (as well as the project). Hard data on female participation and habits makes it much easier to show how cooperatives can better support their female members.

Rally respected male leaders and existing organizations as change agents: A USAID/Nigeria 2014 gender assessment (Morel-Seytoux 2014) recommended targeting male religious and traditional leaders via training and awareness-building campaigns to change their attitudes towards women's empowerment issues and get their buy-in on target policies or norms. When this was done, support from male leaders catalyzed broader community acceptance. The assessment also suggested strengthening capacity of existing structures—such as the network of 700 Women's Centers in Nigeria operated by the National Centre for Women's Development, which provide vocational skills development to rural women—more often, instead of setting up new initiatives (Morel-Seytoux 2014).

Recruit women for staff and leadership positions: Since women are more likely to actively engage with leaders and teachers who are female, female staff and cooperative leaders should be overwhelmingly encouraged and supported. A study in Nigeria showed the importance of increasing female extension agents, as it found that women farmers who are supervised by female agents (as opposed to those supervised by male agents) had higher awareness of and participation in extension services, higher adoption and technical knowledge of recommended technologies and practices, and higher satisfaction with the quality of agent services (Lahai et al. 1999). The USAID market systems development project review mentioned above also mentioned that capacity development and ownership by project staff are critical to operationalize successful gender strategies and approaches.

Tailor support to the unique needs and preferences of women: The Cooperative Development 4 (CD4) implemented by Land O'Lakes Venture37 included intensive entrepreneurship training in Rwanda for female cooperative members, which showed high uptake by women and led to a significant increase in confidence to participate in the cooperative and their broader communities (Picture Impact 2023). CD4 also provided broader gender-transformative trainings to male and female cooperative members in earlier years, which also had a noticeable impact on household gender norms, women's confidence, and cooperative participation (Smoot 2023). The final CD4 evaluation concluded that the best CDP interventions for gender empowerment involve initial gender-transformative discussions and trainings to build motivation among both genders to challenge inequitable social norms, followed by a gender-sensitive entrepreneurship training program for select women and potentially men (Smoot 2023). Even in Malawi, where no dedicated gender activities were implemented, some cooperatives formed women's committees to promote female empowerment or prioritized women to receive cows with external donor funding, both measures found to be very impactful in attracting more women to the cooperatives and increasing their incomes (Smoot 2023). The USAID Cooperative Development 4 project also conducted a women's entrepreneurship training program that resulted in young women having higher levels of understanding and uptake of the trainings than older women, often correlated with higher levels of education (Picture Impact 2023). That program paired up women to complete assignments together, encouraging cross-generational pairs to help older, less educated members (Smoot 2023).

PRELIMINARY PLAN TO ADDRESS FEMALE INCLUSION AND EMPOWERMENT

Priority Interventions

The following interventions to address female inclusion and empowerment will be highly prioritized by CCC in each project country:

- Ensure that project staff candidates include females. As women are hired, provide on-the-job training that helps build their technical and general skills for future economic opportunities (e.g., digital skills, communication, leadership, management, organization, financial literacy). Conduct regular staff trainings and discussions on socio-cultural norms and the importance of diversity and inclusion across the project. Include behaviors and attitudes related to female inclusion and empowerment as a staff performance metric.
- Include cooperative and cooperative leadership practices and attitudes related to female membership as a consideration during project cooperative selection, including current proportion of females, female-specific accommodations for trainings or services, and recruitment mechanisms to attract additional females. CCC is targeting a 40 percent rate of active cooperative membership from females by the end of the project.
- Review cooperative by-laws and advocate for modification if they contain any conditions that restrict female membership (e.g., land or cattle ownership requirements; high membership fees; limitations on membership by multiple household members).
- Advocate for project cooperatives to modify by-laws to require female representation in elected leadership (e.g., at least 30 percent of all committee leaders should be female), and work with all elected leaders to foster democratic principles during leadership sessions and value diversity in leadership. Provide tailored leadership training and support to elected female leaders.
- Ensure that women are proportionately represented in cooperative meetings, votes, technical trainings, and events through means that they choose, potentially to include accommodating their schedules, grouping them together to share communication and information, and providing childcare. All events should consider the needs and preferences of women both logistically and technically.
- Support women to adopt new practices and techniques by recognizing those perceived as unattractive by women—for example, new practices that may be attractive and more profitable for men but will require higher labor and time burdens from women than they can afford—and determining whether there may be a practical solution.
- Collect quality data disaggregated by gender and locality on all elements of the program throughout implementation and in all monitoring, evaluation, and learning (MEL) activities, and analyze the data properly to identify trends, anomalies, correlations, and patterns of change. Embed cooperative-level youth assessments into annual cooperative surveys to inform cooperative-specific performance. Share project data on gender with cooperatives and relevant local authorities to help inform their understanding, policies, and practices.
- Provide direct support to cooperatives to collect, organize, share, and use their own quality data to inform strategies, decisions, and activities.

Potential Interventions

The following interventions to address female inclusion and empowerment will be considered by CCC in each project country and potentially implemented depending on context, capacities, and resources:

- Encourage recruitment campaigns to formally register more women as members, even if their husbands are already members. In tandem, encourage higher rates of active participation by female members, targeting a preliminary 40 percent active membership by women (life-of-project target to be determined during baseline data collection).

- Sensitize all project partners on key women's empowerment issues. Encourage cooperative leadership to request that all trainers or speakers include women-focused content, data, or considerations into their messaging—and to ensure that any promoted practices and technologies are vetted by women in advance to identify potential challenges or limitations.
- Encourage cooperative leadership and event facilitators to include females equally in presentations and discussions.
- Consider piloting bundled service models with local service providers and cooperatives as partners, whereby women are providing a set of inputs, services, and training for a single price on up-front credit from the cooperative and repaid by women later through milk sales.
- Train cooperative leadership how to foster gender-transformative dialogue facilitation between husbands and wives to highlight gender dynamics and discuss more equitable division of dairy and household responsibilities, as well as income.
- Support existing women-led cooperatives to expand membership, service provision, and business operations, including through increased production, processing, marketing, and/or market access. Support their efforts to increase investment through document preparation, formalization, improved contracts with buyers, and/or applications for formal credit, funds, or grants.
- Encourage mixed-gender cooperatives to establish women's committees that advocate for women's issues within the cooperative and allow female members to engage in tailored trainings, peer support, savings systems, and/or specialized income-generating activities.
- Require improved inclusion as a requirement for some types of project support, such as grants. The definition of "improved inclusion" should be specific to each cooperative and based on progress from baseline. The parameters of the support—and "improved inclusion" measurement—should be discussed with all cooperative members for broad input, understanding, and buy-in.
- Support cooperatives to improve access to financing for dairy inputs and services, either directly by providing in-kind loans to members that are repaid through milk sales or by working with financial institutions to provide new products tailored to their female members (e.g., alternative collateral instead of land; group borrowing; mobile money platforms).
- Consider using a modified Women's Empowerment in Livestock Index (WELI) tool to measure the empowerment of females in each project community, including registered female cooperative members, wives of registered male members, women who are employed by cooperatives or the project, and a comparison group receiving no program interventions. Tailor gender trainings and other interventions in response to initial WELI scores, then measure again at final evaluation. (Note that CCC prefers the WELI to the more general WEAI because it is more tailored to dairy and livestock issues and will more reasonably measure specific project impacts. We will abbreviate the most current WELI to align more precisely with project scope and to reduce survey burden.)

YOUTH: OVERVIEW AND PRELIMARY PLAN

GENERAL CHALLENGES

Demographics, Employment, and Incomes

While economies rely on youth as a gateway to the future, populations that are too young (or conversely, too old) can create social and economic strains that stymie growth and deplete valuable resources. The need to accommodate a rapidly growing population of youth is prevalent in all three project countries is significant, but it is most urgent in Nigeria. All three intervention countries have youthful populations, though Uganda's population skews youngest and Kenya's oldest. Uganda actually has the youngest population in the world: a median age of 16.8 years, 82 percent of the population below the age of 35, and 56 percent under 18 (Euromonitor Uganda 2023; World Economic Forum 2021). In Kenya, the median age is 20 years, with 74 percent below 35 years and 49 percent below 18 years (USAID/Kenya 2020c; World Economic Forum). Nigeria's median age is 18.1 years with 76 percent of the population below 35 years and 53.5 percent below 18 (World Economic Forum 2021) with a high 2.5 percent annual population growth rate (Euromonitor Nigeria 2023) in Africa's most populated country. A USAID/Nigeria cross-sectoral youth assessment (FHI 360 2020) found that Nigeria's demographic wave could be harnessed into a "demographic dividend" to triple per capita incomes in a generation—if the right policies and investments are made to support youth development. Handled improperly, the explosion of young Nigerians could lead to social and economic disaster.

Due to large youth populations and lack of economic opportunities in general—but especially for young people—youth unemployment and underemployment (in terms of both time and qualifications) is relatively high in all three countries. According to the World Bank, the unemployment rate for youth aged 15-24 in Kenya is 13.4 percent compared to 5.5 percent in the total population; in Uganda, the split is 6.6 percent for youth vs. 4.3 percent total and 13.4 percent for youth vs. 5.8 percent in Nigeria (World Bank Gender Data Portal 2022). Other sources suggest youth employment may be even higher: 55 percent in Nigeria (FHI 360 2020) and 18 percent in Uganda (Among 2017). In Kenya, 75 percent of unemployed people are youth, and 60 percent are underemployed (USAID/Kenya 2020b). In Uganda, the labor market is able to absorb only 80,000 new employees each year, compared to 400,000 youth entering the labor market (Butler & Kebba 2014). In all three countries, a majority of youth with jobs are employed in the informal sector (particularly in subsistence agriculture), which is unregulated, leaving them vulnerable to poor working conditions, exploitation, unfair and/or irregular wages, harassment, sexual abuse, and job insecurity (Mugo & Masila 2021). The situation is exacerbated for female youth, who are twice as likely as male youth to be unemployed in both Kenya and Uganda, despite similar labor force participation rates (Okelai et al. 2015; USAID/Kenya 2020b)—often because they are forced to drop out of school early to work in households, but also because of cultural norms that prioritize hiring males (Mugo & Masila 2021).

Gaps in employment equate to, among other things, higher levels of poverty for youth. In Uganda, only 59 percent of youth report any cash income whatsoever, with only 12 percent having stable and regular income (Butler & Kebba 2014). In Kenya, 61 percent of youth are unable to cover basic needs (Ellis-Jones & Mirzoyants 2022). In all three countries, savings rates, financial resources, and access to credit for youth are all low; when credit is available, interest rates for youth are higher since they are considered "high risk" and lack basic financial education and skills (Zou et al. 2015; Butler & Kebba 2014; FHI 360 2020). In Uganda, 60 percent of youth that save money tend to do so informally at home, and 73 percent of rural youth have no bank account. Only 2.8 percent of Ugandan youth farmers have ever received a loan (Butler & Kebba 2014). In Kenya, 51 percent of youth reported zero access to any type of banking service, and 84 percent reported zero use of banking services in the past year (Zou et al. 2015). Projects that have aimed to increase youth savings and credit, such as the BRAC-funded Empowerment and Livelihood for Adolescent Girls Project in Uganda, have provided bank accounts,

savings through SACCOs, and financial training to girls with impressive results. Not only did participant savings levels and interest in higher education improve, but the number of family members who opened bank accounts increased, while girls' risks for GBV decreased (Butler & Kebba 2014).

Education, Skills, and Resources

A primary contributing factor to low employment for youth relates to gaps between labor force needs and expectations and the hard and soft skills that youth acquire during their educational experiences. As discussed earlier, primary school attendance is comparatively highest in Uganda with 96 percent of boys and 94 percent of girls attending. It drops to 83 percent and 78 percent for Kenyan boys and girls and 70 percent and 58 percent for Nigerian boys and girls, respectively. Secondary school participation is substantially lower and with a wider gender gap in Kenya and Uganda: 55 percent of boys vs. 45 percent of girls in Uganda, and 53 percent of boys vs. 47 percent of girls in both Kenya and Nigeria (World Economic Forum 2021; USAID/Kenya 2020c). In Nigeria, top reasons for having never attended school include distance from home (23 percent), labor requirements at home (21 percent), and monetary cost (18 percent), followed by poor school quality (14 percent), and no interest (10 percent) (FHI 360 2020). Norms around the social value of marriage and parenting also constrain the prospects of education for young women. Child marriage is relatively common in Uganda and Nigeria, with 33 percent of females aged 20-49 in Uganda and 48 percent in Nigeria married before they were age 18 (Euromonitor Uganda 2023; Euromonitor Nigeria 2023). Once married, women are expected to begin families and care for their children and homes, which usually keeps them out of school.

Educational quality and curricula are also major problems, as they generally do not capacitate students with marketable skills—such as time management, communication, or basic technical, practical, or organizational skills—that they need to be attractive labor force candidates, even for entry-level positions. In Nigeria (and many other countries), schools follow theoretical, rather than practical, curricula. Not only does this prevent graduates from gaining the general experience that employers want, it also does not prepare youth to create their own jobs through entrepreneurism (FHI 360 2020). On the other hand, well-educated and experienced youth also have trouble finding work, since a majority of jobs are of a manual or vocational nature. As a result, unemployment in Ugandan youth actually increases with level of education attained (Okelai et al. 2015). In focus group discussions conducted for a Nigeria study, many youths expressed the attitude that attending school, especially past junior secondary, is pointless and will not help them get a good job (FHI 360 2020).

While the ICT industry offers potential opportunities to increase youth employment in all three countries, there are still major gaps in technology use in rural areas. One study in Nigeria did find that youth participation in livestock enterprises through social media is increasing and that there was a positive correlation between social media use and livestock production among sampled youth (Tilanji 2023). Mobile phone ownership rates in Nigeria are high at 89 percent for men and 83 percent for women (Euromonitor Nigeria 2023). However, only 32 percent of rural residents own a smartphone (Jaiyeola 2023), 61 percent of rural areas lack internet access, and only 55.5 percent of men and 35 percent of women have a bank account or mobile money account (World Economic Forum 2021). In Kenya, while average mobile phone ownership is 40 percent in rural areas, and 11-16 percent of people are connected to the internet, this is much higher among youth, 76 percent of whom use mobile phones and 80 percent of whom are connected to the internet (Mugo & Masila).

Agricultural Involvement and Attitudes

Despite the agricultural sector being the predominant employment industry in most developing counties, it is generally one of the least attractive to youth. Not only is farm work commonly viewed by youth as "old person's work," familial customs often impede any attempts by young people to introduce change or innovation—or even to earn their own money, rather than feeling obligated to work for the family farm without direct pay. Other challenges to more robust youth participation in agriculture across all

three project countries include low access to land, lack of credit, limited access to agricultural inputs, technologies, and markets, and lack of prioritization by extension agents and service providers as valuable clients, which further prevents awareness of improved practices and access to improved inputs by youth (FHI 360 2020; Ellis-Jones & Mirzoyants 2022). Qualitative research in Kenya showed that lack of land is a key problem for engaging youth in agriculture, since parents control agricultural decisions without input from their adult children, whether they have invested in the production or not. Land inheritance also results in continual division of family parcels, reducing both the area of land an individual can autonomously control, as well as their options for how that land can be used (Rutherford & Mirzoyants 2020). In Uganda, 41-79 percent of youth work on smallholder farms, though only 0.5–5 percent reported being able to make decisions regarding agricultural operations (Butler & Kebba 2014). Ugandan youth who work on family farms are unpaid; while some are given a small portion of their parents' land to cultivate as their own, this is not common, and most do not receive land while their parents are still living (Butler & Kebba 2014). Only 19 percent of youth-headed households have exclusive ownership of the land they farm, and farm sizes are smaller than for middle-aged farmers (Ahaibwe et al. 2013).

In all three project countries, there is a common perception that youth do not want to engage in agriculture and are further discouraged by the negative effects of climate change on agriculture. In Uganda, youth with at least a secondary education, males, and those youth residing in households with a large share of adults are less likely to engage in agriculture (Ahaibwe et al. 2013). In Nigeria, only 37 percent of youth were engaged in agriculture in 2012, of which 48 percent were male and 52 percent female (FHI 360 2020). However, in surveys in all three countries, many youth do express an interest in engaging in limited agricultural activities for supplemental income, particularly if they can get support to acquire land and equipment (Butler & Kebba 2014; Okelai et al. 2015; FHI 360 2020). In Uganda, this shift seems to be caused by low employment opportunities in other sectors and the emergence of peer role models (Okelai et al. 2015). Whatever the reasons, there is also space to create more diverse off-farm opportunities in technical and business support, technology research and design, data collection and analysis, and value addition—all jobs that would integrate youth into an important sector, while appealing more definitively to generational interests and preferences.

POLICIES AND PROGRAMS FOR YOUTH IN KENYA, NIGERIA, AND UGANDA

In Kenya, the Ministry of ICT, Innovation, and Youth oversees implementation of the Youth Development Policy designed to promote the creation of sustainable jobs and income-generating opportunities for youth, build digital skills, and leverage youth interest in technology to strengthen the country's economy. (Republic of Kenya 2019). However, the 2019 policy is still not fully enacted; as of 2022, the national government was still developing laws to ensure its implementation. Prior to this policy, other government institutions or policies supporting youth were created, including the Youth Enterprise and Development Fund in 2007, the Marshall Plan for Youth Employment and Development in 2008, the National Youth Council in 2009, the National Youth Service Act in 2018, and establishment of Affirmative Action Funds (Republic of Kenya 2019).

In Nigeria, the National Youth Policy (first passed in 2009, then revised in 2019) is implemented under the Federal Ministry of Youth and Sports, defines youth as 15-29 years of age, and includes provisions related to economic engagement, equitable opportunities, and protecting the environment for youth (Euromonitor Nigeria 2023).

In Uganda, the National Youth Policy established several different initiatives to provide financing for youth businesses. The Youth Venture Capital Fund, set up in 2011, funded around 4,450 youth projects by 2022—but only 10 percent were agriculture-related. Although the Youth Livelihood Fund had very limited results because youth did not receive sufficient training, proper mentoring, or monitoring on the use of funds (Okelai et al. 2015), the Youth Opportunities Program produced positive impacts through

small grants ($400 per person) that increased job skills, resulting in 38 percent higher incomes (on average, 1.8 times the size of the grant) 4 years after program implementation (Blattman et al. 2020). A National Youth Council was also established in Uganda in 1993 to provide youth with a voice in national development policy through local youth councils that elected national representatives. However, participation by youth has been low (Butler & Kebba 2014).

YOUTH IN DAIRY

Kenya

A recent study in Kenya found that most youth involved in raising livestock with their families do not get paid for their labor, own livestock themselves, or receive any share of the profits when the household sells animals or animal by-products (Ellis-Jones & Mirzoyants 2022). In part due to these experiences, some youth are not as interested in raising livestock as older farmers, and many look for jobs in other industries or more urban areas. However, there are substantial numbers that want to continue raising livestock as one of multiple income sources, recognizing the value of diversification as an income-smoothing strategy to combat the seasonality and unreliability of individual income sources (Ellis-Jones & Mirzoyants 2022). In fact, youth interest in raising livestock increased during the COVID-19 pandemic when many youth in urban areas returned to rural family homes and livestock work, then saw that demand for food remained constant despite economic challenges during the pandemic (FHI 360 2020).

A major barrier to youth participation in dairy production is access to land, especially for young Kenyan women (Bullock and Crane 2021). In some cases, youth groups rent land and allow members to collectively produce fodder for their own cows and for sale. While parents are sometimes willing to provide land or capital to their children pre-inheritance, intermarriage between ethnic groups is also increasing, which gives women from ethnic groups with more restrictive norms (e.g., Kalenjin, Masai) the ability to own land.

Demand for skilled services in dairy is increasing, including for veterinarians and specialists in artificial insemination, silage production, and technical training on fodder conservation. These positions are often attractive to youth because they are more professional and less labor intensive than farm production (Bullock and Crane 2021). The USAID Kenya Dairy Sector Competitiveness Program successfully integrated youth as managers and mid-level staff into small business organizations as 25 percent of the workforce (Easterling & M'mboyi 2013). The project also worked through cooperatives to provide youth grants to cover the purchase of a cow and provide hands-on training, which helped to significantly increase production and incomes for many youth (Land O'Lakes International Development 2013). The SNV Kenya Market-led Dairy Program supported youth groups to become registered companies that provide commercial support services for farmers, which created lasting impact; 65 percent of youths trained to start silage-making businesses were still active a year later and had growing demand for their services (Rademaker et al. 2016). The USAID Kenya Livestock Market Systems Activity trained youth on work-ready skills in livestock, digital literacy, and entrepreneurship; provided job matching; and dispersed grants to increase youth access to markets by reducing their risk—together resulting in improved incomes for 50 percent of youth participants (ACDI/VOCA 2020; Rutherford & Mirzoyants). A key lesson from all three of these projects is that a bundled approach to address multiple youth constraints may be most effective and sustainable.

Nigeria

A recent broad survey of dairy farmers in Nigeria found that a majority of dairy farmers were aged 41-50 years with an average of 21-30 years of experience in dairy farming (Ayandiji & Nwachukwu 2023), similar to dairy demographics in other developing countries. Though the minority, a separate study of youth involved in raising cattle in Oyo state found that 68 percent of the respondents were male and that 16 percent of male and female youth respondents held post-secondary education (Arowolo 2013). Another survey of youths in Oyo and Ogun states (Adebayo et al. 2022) found a similar breakdown of

young farmers by gender (68 percent male; 32 percent female) but an even higher proportion (48 percent) with post-secondary education. It also found that these youths had high levels of experience with livestock production (9.7 years on average), which could be leveraged to improve productivity and stimulate innovation if properly supported.

Youths in Ogun and Oyo states agreed that livestock businesses (e.g., dairy, poultry, aquaculture) are profitable and provide a regular income due to high demand for livestock and by-products. They also believe that investing in livestock makes them financially independent, is prestigious, and gives them good prospects for the future. Although they feel that livestock production involves high risk, it pays them more than alternative jobs (Adebayo et al. 2022). Youth mentioned insufficient access to finance, high costs of animal feeds and veterinary services, high animal disease prevalence, lack of skills, lack of basic infrastructure, and transportation costs as key constraints, while milder constraints included inadequate extension services and difficulties in acquiring land.

A recent assessment of the business case for livestock insurance in Nigeria found that it could be a viable, profitable business proposition, especially if it leveraged youth in rural areas. Specifically, the insurance company Pula has hired and trained 400 livestock-specific digitized field agents to register and administer insurance claims in Nigeria, many of whom are rural youth, partly chosen because of their higher literacy levels and smartphone ownership (Eigner & Vinayak 2023).

Uganda

In Uganda, children are often involved in dairy activities from a young age, which affects their experiences as young adults: girls are more involved in feeding and watering cows, while boys tend to manage grazing (Waiswa & Jolly 2021). Young farmers generally own fewer livestock, including cattle, than middle-aged farmers. Data from the 2008 Uganda Census of Agriculture showed that youth own an average of 4.5 indigenous cows and 3.4 exotic or hybrid cows, versus 6.1 indigenous and 4.6 exotic cows for middle-aged farmers (Ahaibwe et al. 2013). Youth-headed households have lower adoption of improved technologies and practices for livestock; for example, only 30 percent of youth-headed households and 13 percent of youth-only households used veterinary drugs compared to 37 percent of households headed by a middle-aged person (Ahaibwe et al. 2013). Youth in Uganda participate less in dairy marketing than older farmers, even when controlling for factors like distance from markets, access to credit, education, transport access, geographic location, and gender (Balirwa et al. 2016). This same study found that market access increases with education and access to transport, so youth-focused trainings and support to access transport could help youth increase their dairy market participation.

Although many Ugandan youths do not own cows, a number of programs have worked to promote their involvement in other parts of the dairy value chain besides production. The SNV Inclusive Dairy Enterprise Project in western Uganda helped dairy cooperatives organize youth associations, then helped them to identify which of five business opportunities the youth could participate in: extension, making silage, making yogurt, transporting milk, and fattening bulls. The project also launched an aggressive extension agent recruitment campaign, after which 80 percent of agents serving the cooperatives were youth (Franzel et al. 2020) and offered training to youth to boost participation in the other four business areas, including business case development, marketing, and proposal writing. The project provided groups with equipment at subsidized prices and on credit, including chaff cutters for processing silage and motorcycles for milk transport. The Youth Inclusive Dairy Market System project, run by Ibanda University and Ripple Effect, aims to empower 50,000 youth across 11 districts through entrepreneurship, business technical training, and financial support to start businesses to support the dairy value chain, including as traders, farmers, pasture growers, input dealers, and private veterinarians (Nuwagira 2023). The project emphasizes that youth tend to be excluded from the dairy value chain in Uganda, but this exclusion actually presents major opportunities for involvement.

YOUTH IN COOPERATIVES

Kenya

A study of youth participation in Kenyan dairy cooperatives (Andhani 2017) found that it is crucial as an approach to long-term sustainability, but it tends to be low and mostly nominal with little to no participation in decision-making. In some cases, youth members do not even own cows or deliver milk to the cooperative. In Kenya, 87 percent of youth in one survey were aware of cooperatives, but only 27 percent of those same youth were members themselves (Mwangi et al. 2017). Despite the relatively low overall proportion of youth in cooperatives, one study found that cooperative demographics tend to trend slightly younger (46.9 years on average) than randomly selected farmers that were not members of cooperatives (50.5 years on average) (Njiru 2015). Youth cited lack of awareness (31 percent), lack of funds to pay membership fees (22 percent), no cooperative nearby (18 percent), and lack of interest (17 percent) as main reasons they did not join cooperatives (Mwangi et al. 2017).

A review of youth opportunities in dairy intensification (Bullock and Crane 2021) found that, while cooperatives have provided helpful opportunities for two-way inter-generational knowledge exchange—older farmers share experiences, and younger farmers support technology and innovation adoption—they generally do not foster an environment of inclusivity for younger (or female) members. Youth are seldom elected into leadership roles, listened to or trusted by older members, or given respect. Some Kalenjin ethnic communities prevent intergenerational contact of any kind, so youth are not even allowed to join cooperatives. About 26 percent of youth say cooperatives are for old people; 65 percent say that youth are not involved in the management of cooperatives (Mwangi et al. 2017). Many young people also prefer to receive cash for milk immediately upon sale and are discouraged by cooperative policies that generally provide payment several weeks after sale (Andhani 2017).

However, a case study of the most successful dairy cooperative in Kenya, the Githunguri Dairy Farmers Co-operative Society, showed that cooperatives can positively affect youth participation and employment (Githinji 2012). Githunguri is a multi-million-dollar business with 260 direct employees (plus casual laborers) and production of 123,000 liters per day as of 2018. It provides services to members such as high-quality AI, animal health laboratories, dairy extension services, and animal husbandry training. Githunguri established several sub-organizations to organize youth and women at a local level and provide them targeted support, which has increased both youth participation and youth employment opportunities at milk collection centers and processing facilities (Githinji 2012).

Nigeria

Youth are generally under-represented in Nigerian agricultural cooperatives. A 2011 study of cooperatives in southern Nigeria found that 15 percent of active members and 27 percent of inactive members were below age 25 (Ndifon et al. 2012). A study of youth and agriculture in Nigeria found that 16 percent were cooperative members and that more highly educated youth were more likely to join a cooperative (ElDidi et al. 2020). In that same study, youth cited access to information, inputs at good prices, and low-interest loans and grants as key reasons for joining cooperatives. A study of youth involvement in 10 cooperatives in Anambara state in southern Nigeria (Okafor et al. 2023) found that constraints to youth participation in cooperatives included challenges in paying for cooperative shares and inability to invest in assets needed to justify cooperative participation. A minority of cooperatives provide low-interest loans to youth to help overcome those barriers, though many surveyed youth said the loan sizes were insufficient to launch their own businesses (Okafor et al. 2023).

However, for youth that are cooperative members, cooperative activities have helped them increase production and incomes (Okafor et al. 2023). The most significant benefits include loan services to help youth start their own businesses or acquire more land and equipment; affordable and more accessible inputs; and lower-cost transportation, storage, and marketing, enabling youth to earn higher profits (Okafor et al. 2023). Another study of the impact of cooperatives in Nigeria found that, in addition to

direct benefits for producer members, cooperatives offer a good source of both short- and long-term employment for youth, including opportunities to employ them on a casual basis during long vacations (Yunusa 2018). Youth-only or youth-run cooperatives may also have a particularly positive effect on youth empowerment. The Integrated Youth Training Farm is a youth-empowerment program run by the Kwara state government that provided intensive training to 418 youth from 2006-2013 and stipulated that each cohort form a cooperative society. An assessment found that the program had significant long-term, positive effects on youth interest in agriculture, knowledge and capacities, rates of entrepreneurship, employment, and networks and social capital (Latopa and Abd Rashid 2015).

Uganda

Similar to the demographics in other developing countries, youth membership in Ugandan cooperatives is generally low. Average active youth membership in cooperatives working with our project partner, BMGF-funded *Africa Dairy Genetics Multiplication Program,* in western and southern Uganda is 26 percent. Not surprisingly, youth awareness of cooperatives is also low, with only 14 percent of youth not already in a cooperative aware of the cooperative movement and principles (Young 2021). Efforts to increase youth interest and participation in cooperatives have been made through initiatives like the Uganda Cooperative Alliance that form youth clubs in secondary schools and are linked to SACCOs to increase understanding of the benefits of cooperatives (Nannyonjo 2013). A survey of young cooperative members across sectors found that only 44 percent of youth in Uganda believe that cooperatives are effective for youth engagement, particularly because of low potential for them to hold leadership positions; many youth also think that production cooperatives are failing to create products that resonate with new generations that are more technologically skilled (Young 2021). However, a 2015 study found that youth membership in cooperatives and other producer organizations is steadily increasing, as youth can see the benefits of market and resource access, as well as the social capital safety net (Okelai et al. 2015).

There is evidence that youth-only cooperatives may be a more impactful way to engage youth than mixed-age cooperatives. One study reported that youth tend not to be members of existing farmer/producer organizations but do value working with groups, which suggests that there may be a need to create "safe spaces" for young farmers to engage with one another (Butler & Kebba 2014).The Youth Empowerment Through Agriculture project in mid-western and northern Uganda worked to address challenges faced by youth in agriculture—including low productivity, limited access to resources, and lack of skills—by facilitating the creation and strengthening of youth associations, many of which ultimately became formal cooperatives (Löwe et al. 2019). The project engaged over 27,000 youth in 813 associations, providing technical training and coaching to set up business activities and VSLAs. An evaluation of the project showed that it helped youth increase their income by 75 percent on average, with females experiencing a larger increase of 102 percent (Löwe et al. 2019). The VSLA component of the project associations also had positive impacts: the total number of participants who were able to save increased by 31 percent, and those who saved weekly saw that amount increase from approximately 58,000 to 90,000 Ugandan shillings.

A case study of BIACE dairy cooperative in Uganda (Flink et al. 2018) found that the biggest barriers to youth participation included joining and annual fees and minimum milk production requirements, which were difficult for youth to meet because they had so few cows and land on which to grow fodder. Youth indicated that they joined BIACE mostly for the trainings provided, though access to markets and credit were also important considerations. BIACE actually has a high proportion of youth members, which allows them to tailor some trainings specifically to youth interests, including proper milk collection, handling, and transport. BIACE has also involved youth in leadership, including having two youth representatives on the board, which has helped address youth concerns and mobilize youth to attend trainings (Flink et al. 2018).

LEARNINGS AND BEST PRACTICES FOR YOUTH IN DAIRY COOPERATIVES

Demonstrate the economic value of supporting youth: Several past projects generated successful youth empowerment strategies that may be relevant for this project. As previously mentioned, USAID multi-country review of youth and women in agricultural market systems development projects (Cassinath & Mercer 2020) found that projects should work with the private sector to demonstrate the value of including and empowering youth in their business plans and marketing strategies. The Youth Leadership in Agriculture in Uganda worked with market actors to identify potential pain points in the engagement of youth, then co-designed value-added propositions to overcome those issues. Co-designed solutions included (a) a contract farming company that scaled up to 40 youth cooperatives and managed it through a new partnership with a digital-payments provider and (b) a mechanization-rental company facing a labor shortage who hired young females as tractor drivers and mechanics (Cassinath & Mercer 2020). These co-designed solutions led to increased youth employment, which proved to be both impactful and self-sustaining (Cassinath & Mercer 2020). The Driving Youth-led New Agribusiness and Microenterprise in Northern Uganda project trained peer educators in business, life skills, and financial literacy who supplied training services to groups of youth for a fee paid by youth themselves, employers, and financial institutions (Cassinath & Mercer 2020). There is also social value in supporting youth, especially young women whose increased incomes produce multiplier effects in terms of healthy families (Butler & Kebba 2014).

Recruit youth for staff and leadership positions: The USAID Cooperative Development 4 project in Rwanda and Malawi employed young professionals based at a district level to provide regular technical assistance and follow-up to cooperatives and to assist with business development activities. These staff had a high positive impact and were well respected and appreciated by cooperative leaders, despite being young and relatively inexpensive to employ (Smoot 2023). The project also encouraged cooperatives to hire youth for staff positions, such as accountants and agronomists; the final evaluation showed that having permanent staff, especially young staff, led to greater continuity and sustainability of skills within cooperatives, which is a boon for business performance (Smoot 2023).

Tailor support to the unique needs and preferences of youth: Although the USAID Cooperative Development 4 project in Rwanda and Malawi did not have dedicated activities for promoting youth empowerment in its cooperatives, some cooperatives formed youth committees that championed youth issues and conducted income-generating activities (e.g., processing and sale of livestock nutritional supplements). The project also prioritized youth to receive cows sourced with external funding. These measures were found to be very impactful in increasing income of youth members and piquing interest of potential new youth members (Smoot 2023). Findings from the Youth Empowerment Through Agriculture project indicated that 30-35 people is the ideal size for a new youth association, as training and engagement of all members becomes more difficult with larger groups as youth are learning to work collectively (Löwe et al. 2019). The project also utilized experienced mentors to support the youth associations, which was very important to help resolve conflicts and provide technical assistance. One best practice related to VSLAs was that annual savings share-outs (instead of retaining to facilitate more loans) are important to motivate participants, but they should not be done just before the holiday season in December, as that generally leads to spending on gifts rather than productive purposes.

Provide bundled support to address multiple challenges simultaneously: A review of youth in agriculture in Uganda recommends providing youth with more comprehensive, stacked support—to include capital; business, technical, and operational skills; and market access—to start or expand production or other dairy-related businesses. Make sure that skills training includes a full spectrum of hard and soft skills including literacy, numeracy, communication, time management, and digital skills that are in high demand. Train youth on the value of an income diversification approach that carefully balances risk mitigation with efficiency. (Butler & Kebba 2014).

PRELIMINARY PLAN TO ADDRESS YOUTH INCLUSION AND EMPOWERMENT

Priority Interventions

The following interventions to address youth inclusion and empowerment will be highly prioritized by CCC in each project country:

- Ensure that project staff candidates include youth. As youth are hired, provide on-the-job training that helps build their technical and general skills for future economic opportunities (e.g., digital skills, communication, leadership, management, organization, financial literacy). Promote an open and equitable work environment, and encourage staff creativity and innovation. Include behaviors and attitudes related to youth inclusion and empowerment as a staff performance metric.
- Include cooperative and cooperative leadership practices and attitudes related to youth membership as a consideration during project cooperative selection, including current proportion of youth, youth-specific accommodations for trainings or services, and recruitment mechanisms to attract additional youth. CCC is targeting a 30 percent rate of active cooperative membership from youth by the end of the project.
- Review cooperative by-laws and advocate for modification if they contain any conditions that restrict youth membership (e.g., land or cattle ownership requirements; high membership fees; limitations on membership by multiple household members).
- Advocate for project cooperatives to require youth representation in elected leadership, and work with all elected leaders to foster democratic principles during leadership sessions and value diversity in leadership. Provide tailored leadership training and support to elected youth leaders.
- Ensure that youth are proportionately represented in cooperative meetings, votes, technical trainings, and events through means that they choose, potentially to include accommodating their schedules or grouping them together to share communication and information in preferred formats. All events should consider the needs and preferences of youth both logistically and technically.
- Support youth to adopt new practices and techniques by recognizing potential barriers for youth—such as cost, asset, or land requirements—and determining practical solutions.
- Collect quality data disaggregated by age and locality on all elements of the program throughout implementation and in all MEL activities, and analyze the data properly to identify trends, anomalies, correlations, and patterns of change. Embed cooperative-level youth assessments into annual cooperative surveys to inform cooperative-specific performance. Share project data on youth with cooperatives and relevant local authorities to help inform their understanding, policies, and practices.
- Provide direct support to cooperatives to collect, organize, share, and use their own quality data to inform strategies, decisions, and activities.

Potential Interventions

The following interventions to address youth inclusion and empowerment will be considered by CCC in each project country and potentially implemented depending on context, capacities, and resources:

- Encourage recruitment campaigns to formally register more youth members. In tandem, encourage higher rates of active participation by youth members, targeting a preliminary 30 percent active membership by youth (life-of-project target to be determined during baseline data collection). Emphasize agriculture as a stable source of employment, especially during economic crises like COVID-19, and an additional source of income alongside other employment. Introduce opportunities for youth to work in off-farm activities (e.g., milk collection, veterinary medicine) and to showcase their familiarity with technology or climate-resilient practices to older members.
- Encourage cooperative leadership and event facilitators to include youth in presentations and discussions and pair youth/non-youth to allow young, more educated members to support and assist older, less educated members and thus demonstrate their value.

- Consider piloting bundled service models with local service providers and cooperatives as partners, whereby youth are providing a set of inputs, services, and training for a single price on up-front credit from the cooperative and repaid by youth later through milk sales.
- Encourage cooperatives to establish youth committees that advocate for youth issues within the cooperative and allow youth to engage in tailored trainings, peer support, savings systems, and/or specialized income-generating activities.
- Encourage cooperatives to establish mentorship programs, whereby youth and non-youth are paired together during trainings and services, then tasked with shared objectives to accomplish over the course of a year for an award.
- Require improved inclusion as a requirement for some types of project support, such as grants. The definition of "improved inclusion" should be specific to each cooperative and based on progress from baseline. The parameters of the support—and "improved inclusion" measurement—should be discussed with all cooperative members for broad input, understanding, and buy-in.
- Support cooperatives to improve access to financing for dairy inputs and services, either directly by providing in-kind loans to members that are repaid through milk sales or by working with financial institutions to provide new products tailored to their youth members (e.g., alternative collateral instead of land; group borrowing; mobile money platforms).

PROPOSED LEARNING AGENDA & EVALUATION QUESTIONS

CCC will use the following learning questions to guide staff pause-and-reflect sessions, annual work plan design, and project adaptations related to gender and youth inclusion and empowerment over the course of the project. Since our learning agenda is a living document, we will adapt questions as we learn and grow as a project team, potentially tailoring learning agendas to each of the three project countries as necessary. Our mid-term evaluation, which will cover Years 1 and 2, will focus heavily on whether and to what extent female cooperative members and leadership and increasing participation and empowerment as a result of project support. We will select mid-term evaluation questions from the questions below.

- What are the barriers to and impacts of women and youth taking on roles as cooperative leaders (e.g., executive committees, sub-committees) or staff supported by this and similar projects?
    - What proportion of women and youth apply for these roles? How do their qualifications and initial skills compare to other candidates?
    - What are common characteristics of applicants for these roles? What variables contribute to their decision to apply for a particular role?
    - What number and proportion of leaders are women and youth?
    - How is the relative performance of women and youth leaders? In what areas are they most successful? Least successful?
    - What is the relative retention of women and youth? What are contributing factors to their decisions to leave or be asked to leave?
    - How do cooperative leaders and members treat female and youth leaders and staff, disaggregated by demographic groups (e.g., older men; older women; younger men; younger women)? In addition to how they *treat* them, how do they *feel* about female and youth leaders and staff?
    - What qualities or characteristics are most likely to contribute to attitudes about female and youth leaders and staff consider "high quality" versus those perceived as "low quality" (e.g., training style, frequency of contact, language skills, inter-personal skills)?
- What is the level of female and youth involvement in cooperatives at the beginning of the project, how does it change over the course of the project, and what program elements most likely contributed to any changes?
    - Did cooperatives conduct youth and/or female membership campaigns? Did they change by-laws related to female and/or youth participation, including setting quotas for leadership? Did they start a women's or youth sub-committee? Are there any initiates in the cooperatives that specifically support women or youth, helping to address their particular needs? If they have permanent staff, did they target women or youth for these positions?
    - What is the number and percent of women and youth *registered* members in each cooperative? Of women and youth *active* members in each cooperative? How does the ratio of active-to-registered women and youth members compare to male and non-youth members, respectively?
    - What is level of attendance in meetings and trainings by these groups? What is level of active participation in these activities? After participation in trainings, what is the adoption rate of improved practices highlighted in trainings by women and youth? How do these rates compare to adoption rates by men and non-youth members? Which practices are most commonly adopted? What are barriers to adoption of improved practices by women? By youth?
    - Aside from trainings, what percent of women and youth are using services provided by the cooperative (e.g., milk collection, veterinary services)? How do these rates compare to those of men and non-youth members? Which services are most commonly used? What are barriers to service use by women? By youth?

- What effects has the project had on women's empowerment within cooperatives and at an individual level for women?
    - How do scores on the WELI over time compare for women who are members of project cooperatives in each of the sub-modules (e.g., access to productive capital, role in household decision making, access to financial services, time allocation, group membership, physical mobility, intra-household relationships, autonomy in decision-making)?
    - Have social or economic opportunities for female cooperative members, staff, or leaders changed as a result of the project?
    - How have male attitudes about gender roles changed over the course of the project? Women's attitudes about gender roles? How do these changed attitudes impact other aspects of household life?
- Can dairy cooperatives help to increase youth employment opportunities and incomes?
    - How many new youths joined dairy cooperatives during the course of the project, and why? How many became cooperative staff or elected leadership?
    - How did youth membership in project cooperatives affect their incomes? Other economic activities outside of milk production?
    - Did any existing mixed-aged cooperatives set up youth sub-committees during the project? What activities did such sub-committees engage in, and were they successful?
    - What hard or soft skills have youth members acquired as a result of the project?
    - If youth attitudes about dairy farming changed over the course of the project, how so?

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