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Technical Report

Gender Situational Analysis of the Banana Value Chain in Western Uganda and Strategies for Gender Equity in Postharvest Innovations

Expanding Utilization of Roots, Tubers and Bananas and Reducing Their Postharvest Losses



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A broad alliance of research-for-development stakeholders & partners



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Executive summary

This report provides a strategy for gender mainstreaming into the 'Reducing Postharvest Losses and Promoting Product Differentiation in the Cooking Banana Value Chain' one of the four sub-projects of the 'Expanding Utilization of RTB and Reducing Their Postharvest Losses' project (RTB-ENDURE) implemented in Uganda. The main purpose of this strategy is to ensure that both men and women benefit from interventions for reducing postharvest losses, promoting product differentiation and marketing innovations in the cooking banana (matooke) value chain.

The report is structured as follows: Section I provides a background of the sub-project's research activities and implementation area while Section II outlines the methodology of the study. Section III analyzes gender constraints that may deter male and female farmers and traders from adopting postharvest innovations as well as taking advantage of the emerging marketing opportunities. Section IV analyzes the perceived level of empowerment which farmers and traders have across five selected domains. Finally, in Section V, the paper suggests evidence-based mechanisms and a gender strategy to enhance the uptake and utilization of recommended improved technologies and practices along the value chain. The report also provides strategic direction to enable value chain actors to engage effectively, competitively and sustainably in the identified market opportunities. The report may be of interest to researchers and policy makers working on postharvest issues in Uganda and other countries in Sub Saharan Africa.

Actors along the cooking banana value chain in Uganda face high risk of losses due to the short green life of bananas and the damage arising from poor postharvest handling. As a result of actual or perceived risk, farmers receive low prices for their produce based on subjective visual inspections. This is a disincentive for the adoption of improved agronomic and postharvest practices, leading to inferior sensory quality and unnecessarily high postharvest losses, especially during peak harvest periods. The banana sub-project thus adopts a market-led approach aimed at curtailing postharvest losses, evening out supplies and enhancing quality in a bid to increase margins, particularly at the production-end of the cooking type banana value chain. The project seeks to address a number of constraints faced by the various actors.

Key constraints highlighted by farmers:

Access to farming inputs - equipment, fertilizer and manure: female farmers mentioned a challenge in accessing equipment while male farmers mentioned that manure is very scarce during the rainy season and thus very expensive. The proposed solutions included access to financing mechanisms to procure good quality equipment (e.g., spray pumps), linkage to reliable agro input dealers within the community with good quality equipment and chemicals, and training in compost making; among others.

Access to market, price fluctuation and low prices: male farmers mentioned that brokers obstruct direct interaction between producers and traders or final buyers. As a result farmers are forced to trade at a local level. Furthermore, they face seasonal price fluctuations and at times they would completely fail to sell their matooke. Suggested solutions included: linkage to reliable traders/markets, strengthened dialogue with the final buyers, formation of marketing groups and linking such groups to buyers who purchase by weight.

Access to agricultural and women friendly credit: the perennial nature of the crop makes loan providers averse to providing credit, and delays in approval of loans mean that farmers cannot



procure the required inputs in time. This was the challenge mostly mentioned by male farmers. The proposed strategies included linkages to credit providers who are willing to design agricultural friendly loan packages, and also to design women friendly loan products.

Access to quality suckers: farmers indicated that quality suckers are hard to find within the community, especially those of varieties preferred by the market. Suggested solutions included linkages to quality sources of suckers, or support to set up centrally managed nurseries that would be able to provide suckers to farmers within the area.

Key constraints highlighted by traders:

Female traders face constraints related to mobility: banana trade required inspection of banana gardens and selection of marketable bunches. These activities are not very easy for women and they depend on men for this. Transportation is another major challenge they face, while negotiating with final buyers in major cities was also cited. Male traders interfaced with in the study were mostly brokers. Their biggest challenge is having limited decision making power on volumes to trade, price to offers and also always being regarded as the 'bad guy'. Both male and female traders face a challenge of limited capital to boost their business. Suggested solutions included access to low interest loans as they believe that most of the challenges could be solved if they had more funds to invest.

Access to Postharvest and marketing innovations:

Many of the farmers interfaced were eager and excited to engage in the proposed postharvest and marketing innovations. Farmers had already been sensitized about these innovations and were willing to engage in them, as they believed that their access to marketable varieties would be enhanced. With regards to marketing innovations, some farmers were already engaged with exporters who purchase by weight and many of the farmers interfaced with during the study were eager to sell their matooke in such a way. However, for the women, the lingering question was if they would be able to access and have control over the potential benefits from them. Therefore, the project's gender team initially developed a draft strategy which was then shared with the banana sub-project team members for validation in a workshop. The validated strategy is presented in Section V of this report.



1. Introduction

Cooking banana is the main staple crop in Uganda with a total annual production of about eight million tons. It is mainly produced by smallholders who depend on it as a source of food (60% of total production is auto-consumed) and income (35% is sold to rural and urban consumers) (Scoping study, 2014). However, actors along the cooking banana value chain face risks of high postharvest (PH) losses due to short green life of bananas and damage arising from poor postharvest handling. The forms in which bananas are handled and marketed after harvest promote losses; the bananas are transported to markets mainly as bunches on bicycles or stacked on trucks and unprotected. They are also transported as fingers tightly packed in poorly aerated polythene bags that build up heat around the bananas in transit. The bunches are supplied to retailers operating in an open space, where they are subject to loss causative agents. Unit prices are determined by visual inspection, which is subjective and arbitrary and therefore presents risks of unfair pricing. Losses due to ripening are also associated with production gluts, which are partly due to seasonal scheduling of follower sucker selection. Gluts cause drastic price reductions and lead to surplus production being fed to livestock, used as mulch/manure and/or just disposed of. In order to reduce postharvest losses, traders prefer varieties with intrinsic longer shelf-life that are less susceptible to physical damage and weight loss such as Kibuzi, Nakitembe and Mbwazirume. Additionally, smallholder producers get the least share of the profits in the banana value chain due to a large number of middle men (Nalunga et al., 2016).

BACKGROUND

'Reducing Postharvest Losses and Promoting Product Differentiation in the Cooking Banana Value Chain' is one of the four sub-projects under the EU/IFAD funded project 'Expanding Utilization of RTB and Reducing Their Postharvest Losses' (RTB-ENDURE). The goal of the project is to contribute to increased food security and income for all actors in the cooking banana value chain. The aim is to contribute to reduction of postharvest losses and promote product differentiation in the cooking banana value chain through upgrading storage, transport, and marketing systems. The desired results include:

1. Increase farmers' margins and the value added along the chain through promotion of varieties with intrinsic longer shelf-life and better PH handling practices;
2. Increase market access and transparency in unit pricing through product differentiation and piloting of a weight-based pricing system;
3. Promote sucker staggering for evening-out banana production across seasons;
4. Link the different actors along the value chain to exploit emerging untapped market opportunities based on product differentiation.

The current study therefore sought to understand the following:

1. What factors can constrain male and female farmers and traders from fully utilizing the proposed technologies (sucker staggering, varieties with longer shelf life, peeling and preservation of bananas; protection of clusters and bunches; among others)
2. What factors can prevent them from taking advantage of the emerging marketing opportunities (e.g., sale of suckers, weight based pricing, product differentiation)?



The study is expected to come up with strategies for:

1. Mechanisms and gender-based strategies that can enhance the uptake and utilization of recommended innovations and practices along the cooking banana value chain;
2. Enabling value chain actors to engage effectively, competitively and sustainably in the identified market opportunities.

GENDER AND ACCESS TO MARKETS

In most agricultural based livelihood systems, enhanced market access is regarded as one of the ways a family or a community can use to improve its quality of life and fight the vicious cycle of poverty. Markets and new market opportunities are therefore seen as drivers of innovation which could lead to greater benefit for all actors in the chain (Pyburn & Woodhill, 2013). In the recent past, there have been a number of advocates for 'sustainable and inclusive agri-business'. Inclusive business development has been defined as 'the inclusion of both men and women, as well as people from vulnerable social categories in the community' and by others as 'participation of smallholders in the value chains' (Verhart et al, 2012; Pyburn & Woodhill, 2013; Vorley et al., 2015,). The major reasons for advancing this paradigm include the quest for sustainability, consumers' increasing demand for fairness or 'responsible businesses' as well as the realization that this can open up new business opportunities.

This hence brings to the table the question of who has access to remunerable markets? Inadvertently, gender is a determining factor in "who does what, who has what, who decides and who has power" (UNICEF, 2011) and thus the need to study and analyze the gender dynamics in banana production and marketing at household and community level so as to ensure that the interests of all members are addressed (Meinzen-Dick et al., 2011). Research findings elsewhere acknowledge that women play critical roles in production, marketing and processing of agricultural and food related products (UNCTAD, 2011; Uher et al., 2013). The type and nature of markets that women access may depend on a number of issues including distance to the market, access to market intelligence, formalities and barriers to entry; among others (Handschuch and Wollni, 2015). Additionally, control of benefits from sales considerably depends on power relations at household level (Forsythe et al, 2016).

GENDER AND ACCESS TO TECHNOLOGY

In banana value chains, technologies such as tissue culture (TC) plantlets and solar drying have been introduced to address the challenge of declining yields and postharvest losses. Such technologies require that new or improved agricultural practices are taken up, often coupled with others (e.g., use of fertilizer) to guarantee the expected benefits. However, many farmers, especially women, are unable to adopt the entire technology 'packages' due to lack of funds, technical expertise or support and limited availability of additional labor sometimes required by the technology (Maerere et.al., 2007; Mboya, 2005). Though women may appreciate a technology many are forced to adopt partial technology packages and often do not fully benefit from it (Kroma, 2002). In instances where the technology has been adopted, spin-off effects may outweigh the benefits for women as in the case of increased banana yields from TC plantlets leading to an oversupply and eventual price drops, yet the farmers faces higher labor and time costs due to intense management required at establishment (Qaim, 1999). Beuchelt and Badstue (2013) further note that most solutions advanced for addressing food insecurity



have a high technology bias with insufficient attention given to gender and social disparities. As noted by Pyburn (2014), women's capacity to develop, adapt and put technologies into use are less recognized than men's, and this exclusion negatively affects not only women but the entire innovation system. On the other hand, women-led technological innovations have been noted to be more institutional in nature (e.g., at group or association level) and it is argued that, by including women, the benefits are likely to be both in the realm of technological and institutional innovations (UNCTAD, 2011).

Gender relations and household dynamics related to who makes decisions on which crops to plant and who makes management decisions related to the family farm or a particular crop may determine technology adoption. At this regard it has been observed that, women's time is less valued and farmers are more likely to adopt technologies that saves men's time (Doss, 2001). Yet, as argued by Ognulana (2004), female farmers can easily adopt innovations that can enhance their economic status if their constraints to access and use the technology (e.g., information and ease of utilization) are taken into consideration.

CONTEXT ANALYSIS OF THE RESEARCH AREA

Rakai District is located in South Western Uganda and borders Lyantonde, Masaka, Kalangala, Kiruhura and Isingiro districts, as well as Tanzania. The district enjoys a fair distribution of rainfall throughout the year, which favors banana production, but also experiences periods of drought. The population is estimated at 400,806 of which 96% is rural based (National Census, 2002); and, according to the District Development Plan (DDP, 2011), primarily depends on agriculture for its livelihood. Banana is the main crop grown in the district for food and income. Unfortunately, the crop has faced the scourge of Banana Bacterial Wilt (BXW) which has led to a large reduction of banana plantations. In addition to government departments, the district residents also receive services from several development partners (NGOs) and Savings and Credit Cooperatives (SACCOs). Some of the major causes of poverty that have been highlighted in the DDP include high incidences of HIV/AIDS and gender inequality. The district is one of the areas that has been heavily hit by the HIV/AIDS pandemic, which destructed entire families and led to changes in gender roles and child headed families. As such, the district still depends heavily on donor support. Gender inequality as highlighted in the DDP is seen to be caused by poor planning and utilization of household resources leading to an imbalance in access to productive resources and credit services in favor of men. Strategies to overcome this imbalance include sensitization and advocacy, recruitment of female extension workers and women group formation.

Isingiro district was carved out of Mbarara district in 2005, and lies next to Mbarara, Rakai, Kiruhura and Ntungamo districts in South Western Uganda, sharing boundaries with Tanzania. The district experiences a bimodal rainfall pattern and many parts are suited for banana production. According to the National Census (2002), the population is estimated at 385,500 of which 51% of the adult population are women. Agricultural is the main source of livelihood for 89% of the population and, according to UBOS (2009), banana is the most important crop grown by 39% of the households. Similarly, the most important livestock is goats. Gender imbalance is exhibited in land ownership (less than 15% of land owners are women) and policy making where the ratio of women to men in such positions is 1:3. The district has over 80 registered Community Based Organizations (CBOs) and a few NGOs that support government institutions in service provision in the areas of adult literacy, farming and credit services. About 52% of the residents receive information (market and other) through the radio, while the most common form of transportation is the bicycle.



2. Methodology

This report is based on the qualitative component of the gender baseline study in which analysis of cooking banana production, postharvest handling, consumption and trade in South Western Uganda was conducted. The study took place in Rakai (Dwaniro and Lwakaloolo parishes) and Isingiro (Kabaare and Kyampango parishes) districts in order to identify gender based constraints and opportunities along the cooking banana value chain. Rakai and Dwaniro were selected for this study given that Bioversity International and its partners are piloting various postharvest innovations in the framework of the RTB-ENDURE project. The study used sex disaggregated Focus Group Discussions (FGD) with farmers and traders. In total 11 FGDs were conducted, i.e., 4 with female farmers, 4 with male farmers, 1 with female traders and 2 with male traders. A total of 65 farmers (32 F, 33M) and 21 traders (10F, 11M) participated in the FGDs.

THEORETICAL UNDERPINNINGS

This study uses a Social Relations Approach to understand the ability of women to adopt technologies as well as to engage in marketing. This approach states that 'inequality is caused by structural and institutional forces through: Rules – how things get done; Activities – what is done; Resources – what is used and/or produced; People – responsibilities, other inequalities, who is in/out; Power – who decides, whose interests (New Zealand AID, 2012). Therefore, the study adopted tools that allowed researchers to look at who does what, who has access to what resources, what are the rules and power differences between men and women and how these can affect adoption of postharvest technologies as well as ability to benefit from resulting new market opportunities.

In order to understand gender responsiveness and appropriateness of a given technology, it is necessary to understand the roles of men and women in agricultural related processes, the gender relations that shape what men and women can do so to understand whether they will be able to take advantage of the new technology. As part of this analysis the qualitative study employed two tools. The first one, the 'Gender Constraints Analysis tool (Terrillon et al., 2013) allowed farmers and traders to discuss gender division of roles and responsibilities along the banana value chain and identify related gender based constraints. The second one, 'Comparison of the five dimensions of men's and women's empowerment' tool (hereafter, referred to as the Comparison Tool), is loosely based on the Women Empowerment in Agriculture Index (WEAI) tool (Feed the Future Initiative, Agri Pro Focus, 2013). The original tool was developed by Feed the Future to track the change in women's empowerment levels that occurs as a direct or indirect result of a value chain development intervention. It is an aggregative index that measures five domains of empowerment for both men and women in the community (using communal perceptions) and at household level (individual perceptions). It compares men and women and, therefore, it provides an indication for the degree of gender parity in the household.

According to Golla et al. (2011), a woman is economically empowered when she has both: a) access to resources: the options to advance economically; and b) agency: the power to make and act on economic decisions. The Comparison tool allowed farmers and traders to discuss and assess the level to which they had access to different productive resources including decision making power, access to information and services that would allow them to adopt and benefit from new technologies; and the power or ability to make economic decisions related to investments in agriculture.



TOOLS AND DATA COLLECTION

Kroma (2002) suggest that it is critical to understand the relationship between men and women and how this relationship is shaped by gender ideologies operating with certain cultural, social and economic contexts in order to develop technologies that can benefit women. 'Through gender analyses, it becomes possible to show that men and women may have separate, yet interdependent spheres of activities that shape and determine women's access to agricultural technologies and other services to support their productive as well as reproductive activities'.

The Gender Constraint Analysis tool enabled identification of the different activities that men and women are engaged in, the resources they need at each stage and also the constraints they face during production, postharvest management and marketing. Respondents were then asked to prioritize three key constraints, analyze the underlying cause and consequences and suggest potential actions that can be taken to address these constraints.

The Comparison tool is, as explained earlier, an adapted version of the WEAI tool (Agri Pro Focus, 2012). The original version of the WEAI is in line with Social Relations approaches in the sense that it 'measures women's empowerment relative to men within their household' across five domains including production, resources, income, leadership and time. IFPRI (2012:3) defines the five dimensions as below:

- Agricultural production: sole or joint decision-making over food and cash-crop farming, livestock and fisheries as well as autonomy in agricultural production.
- Resources: ownership: access to and decision-making power over productive resources such as land, livestock, agricultural equipment, consumer durables and credit.
- Income: sole or joint control over income and expenditures.
- Leadership: membership in economic or social groups and comfort in speaking in public.
- Time: Allocation of time to productive and domestic tasks and satisfaction with the available time for leisure activities.

The Comparison tool adopts a simplified approach and is subjected to participants from the same farmer groups, trader associations or communities in single sex groups. We adapted and modified a set of indicators and attributes developed by Agri Pro Focus and identified a weight for each domain. Participants were then asked to score each attribute on a scale of 0 to 5 where zero would mean the participants have no power to make decisions or be engaged in a particular attribute; and five the reverse.

A two phased approach was used. Participants (farmers or traders) were first asked to vote in private for each attribute. The score for a single domain was obtained by calculating the simple average of the scores given to all attributes of the given domain. An empowerment score is then obtained by calculating the weighted average of the scores obtained for each domain. Once individuals cast their vote, they would then discuss with the rest of the group and agree on a community score (reflecting the status for men or women in the community) and give reasons for the score. Focus group facilitators captured the votes as well as the reasons raised for the level of involvement in each domain. While the empowerment score is calculated as the weighted average of the scores for the domains, the Comparison tool also gives researchers and program implementers the ability to dig into each domain to understand the dynamics involved so as order to develop relevant strategies.

We took this approach to understand what happens at the micro-level (within the households) and meso-level (within the communities) as these can affect the ability of men and women to



adopt and benefit from selected technologies. The Comparison tool was critical because it allowed researchers to analyze whether farmer suggested strategies and solutions in the Constraint Analysis tools also took into account the different resources and services that farmers had access to. We adopted qualitative tools for developing elements of the strategy because they allowed for deeper analysis as to how gender relations interact and influence adoption and benefit thereof of the technologies. Additionally qualitative approaches allow researchers to go deeper into people's experiences as well as household and community dynamics (Slater, 2010) which also affect ability of men and women to adopt and benefit from innovations.

STUDY PARTICIPANTS RECRUITMENT

Recruitment of FGDs participants was done through the sub-county extension officers of Dwaniro (Rakai) and Rugaaga (Isingiro). Targeted banana farmer groups were those that Bioversity International and its partners had selected to pilot various technologies under the RTB-ENDURE sub-project. Lead farmers assisted the research team to identify and recruit an equal number of male and female participants. Traders were also recruited in a similar manner, where a contact trader was requested to mobilize others. Both farmers and traders were informed that participation was voluntary and refusing to participate in the study would not result in any penalization. While participating farmer groups responded to both the Gender Constraint Analysis tool and the Comparison tool, because of traders' time constraints, the traders in Isingiro were not subjected to the Comparison tool.

3. Results

In this section, we present the results from the study in a two pronged structure: the first part focuses on findings from the gender based constraints analysis in production and marketing activities for male and female farmers and traders; and the second part on the potential solutions to the constraints as prioritized by the respondents.

GENDER BASED CONSTRAINTS IN PRODUCTION PROCESSES

Site selection

Site selection was identified as the first activity farmers do before they commence on banana production. It involves identification of fertile land suited for banana production in the community. There was general consensus that this was mostly a man's responsibility. Male farmers stated that they were best placed to undertake this activity since it requires one to be mobile to be able to identify suitable land. However, other norms regarding household headship were also used to explain why men took responsibility: Below is what women in an FGD in Kabare said about why this is a responsibility for men:

Men are the overall heads of the households. Even if you go and look for the land and buy it, the man will ask you to put the land in his name so we just leave him to do it. (Women FGD Participants, Kabare).

In Isingiro, this indicates the reluctance of men to allow women own land. So while in some



instances in Kabare it was noted that women could buy land, the land was often registered in their husband's name. Similar views were also expressed regarding men's responsibility to purchase more land in the event that the family did not have access to enough land. However, in other discussions it also emerged that widowed women as household heads had to take over the role of looking for land and selecting site. In Lwakaloolo women stated that they could buy land although it was not clear whether they could also register the land in their names.

Both men and women indicated that one needs to have a general idea of good fertile soil as one of the pre-requisites for identifying a plot where to successfully grow banana. This is mostly done by men who visually assess the performance of surrounding banana plantations. While women mentioned that they could also identify quality land, men were left with this responsibility because women were worried about losing money to fake land sales.

You can buy land and someone comes and says the land you bought belongs to someone else. So you end up buying nothing after you have paid a lot of money for the land. (Woman FGD Participant, Kyampango).

Two out of the three women FGDs mentioned fake land deals, and all women groups mentioned the possibility of being sold infertile land. Men, on the other hand were often concerned about lack of finance or competition of land with other crops.

However, though men are mostly in charge of identifying land for banana production, it was clear during the focus group discussions that this may be changing as women are increasingly involved in joint land purchases together with their husbands or in individual outright purchases.

When someone is selling, women can also buy land if they have money. (Women FGD Participant, Kabare).

Yes women can buy land on their own in this village, if they sell crops they grow like Irish potato. (Women FGC Participants, Lwakaloolo).

In addition, the new policies by government that are enforced by the councils state that women need to ratify land sales. Furthermore, men also affirmed that when they need loans to purchase land, the wife need to cosign the loan papers which has further increased women's involvement and participation in land sales, although men may still be mostly responsible for identifying the land to purchase. This gives women the opportunity to know how family resources are being utilized which was not the case in the past.

Constraints related to site selection

The biggest constraint identified was money – in FGDs both men and women farmers indicated that they needed money to buy new land especially for expansion; however the challenges included lack of money to buy land, lack of access to credit, high interest rates and unfavorable repayment terms as key constraints. These constrained are further elaborated in the section on access to credit.

Both men and women farmers also mentioned lack of quality land to buy. Male farmers especially mentioned scarcity of good fertile land close to their farms. Male participants in the FGD in Kyampango, for example mentioned that if land was located far from the village, it was difficult to monitor the crop. In terms of assessing land quality women in Lwakaloolo mentioned that one had to observe if the bananas surrounding the land in interest were doing well as a sign of soil fertility. Men in Kabare had a different view as illustrated below:



If you assess the suitability of the land based on neighboring plantations, you may be misled about the suitability because you are not able to tell the agronomic practices the owner undertakes. After you buy the land, your own bananas may not perform well and you may realize that the land requires high inputs like fertilizer. (Men FGD Participant, Kabare).

This may indicate that farmer methods of assessing land quality are not reliable. Farmer preferred fertile land in order to reduce input costs in terms of fertilizer. Site selection thus not only requires money to be able to purchase the land, but also knowledge of land that is suitable for banana production but within close proximity to a farmers' existing plantation(s) to ease management.

Land preparation and ploughing

Both male and female farmers indicated that this activity which involves clearing of the seed bed was mostly done by men, but where possible, with assistance from casual laborers. Rudimentary tools like hoes, slashers and pangas and, in some instances, herbicides were used. Mechanized tools like tractors were rarely used. As a result, it was noted to be a back-breaking activity and most families had now resorted to depending on casual labor.

Constraints related to land preparation

Timely access to casual labor was highlighted as a major constraint in most focus groups since it was seen as one of the ways to reduce labor demands on both men and women. Below is what a woman FGD participant in Dwaniro said:

It is difficult for our husbands to get money to pay the laborers, and even when they get the money, the laborers are scarce to find. (Women FGD Participants, Dwaniro).

In all FGDs men and women mentioned lack of money to hire labor as a key constraint although male heads of household were expected to pay for this. While the constraints faced affected both men and women, widows indicated that they were more affected than others. They mentioned that were growing much older and hence did not have enough energy to carry out this task yet they do not have a partner to support them and furthermore, lack resources to pay for hired labor. Women also mentioned lack of tools such as good quality hoes and spray pumps. Although technologies such as use of herbicides could lesson some of the drudgery related to land preparation, high costs of herbicides restricted their use. Below is what men in Kyampango said:

.....herbicides are very expensive, and sometimes are not available in local agro-dealer shops – if they were easy to get, this would reduce on the labor cost. (Men FGD Participant, Kyampango).

From the above it is clear that not only accessibility but also availability of herbicides constrained their use and application.

Selecting varieties to plant and sourcing suckers

Women and men farmers shared that they were all involved in this activity. When looking for



suckers, men and women farmers would ask their neighbors or other people from neighboring communities for suckers. Women considered themselves best placed to source for suckers since they were naturally more polite and humble than men and were well networked in their communities. Women in Lwakaloolo indicated that six out of ten women in the community are primary responsible for variety selection, and widows have to do this on their own. Below is what women in an FGD in Lwakaloolo said about their role in looking for suckers:

Women do it mostly because we have networks that we use to look for suckers. Our networks are stronger than the networks the men have; because they are so busy and do not have the time to look for suckers.

The men send us to look for suckers so we go and ask our neighbors for suckers. When we find the suckers the men will go to uproot them. (Women FGC Participants, Lwakaloolo).

Networking is thus very important in sourcing for suckers. However collaboration between men and women was critical in this activity since men and youth were responsible for transporting the sourced suckers home. In other FGDs it was indicated that women would identify the suckers, men would uproot them and women would carry them on their heads to the garden for planting.

However, there was not always agreement regarding who between men and women was responsible for sourcing suckers. In Kyampango, for example, women stated that men were also heavily involved in sourcing for suckers particularly in sourcing good varieties from distant locations and in households headed by younger couples. With regards to roles and responsibilities for this activity, it can be concluded that in some communities women source suckers from gardens that are within their community, while men are responsible for sourcing varieties that may be rare to find within the community and may require moving long distances. This may be related to norms regarding mobility as mentioned before as men were mobile than women.

Both men and women pointed out the lack of reliable nurseries or input suppliers as a challenges in accessing quality suckers as a constraint. This poses challenges to farmers' ability to access preferred varieties and quality planting material as illustrated below:

You may end up getting a variety that you did not desire (which may not be easy to sell)scarcity of suckers is a major constraint – especially in September. Around this time, suckers are very expensive.

It is not easy to access the desired varieties – especially those required by the market like Nakitembe, Musakala, Mbwazirume and Kibuzi. These varieties are also drought resistant, so they are in very high demand. (Men FGD Participants, Kyampango).

Suckers are scarce, and when you get them, they are of poor quality and do not grow well. The suckers of variety that we prefer are often diseased (Women FGD Participant, Dwaniro).

It is clear that in Kyampango male farmers perceived that there was high demand for improved varieties countered by low supply which constrained their ability to cultivate these and take advantage of market opportunities. Drudgery associated with both activities was indicated to be the major constraint and was acknowledged by both men and women. Other constraints included limited access to quality suckers as well as funds to transport the suckers or pay laborers to assist with these chores.



Digging holes

All male participants indicated that this was one of their major roles, as confirmed by nearly all female FGDs. Even among widowed/single women, they had to hire male laborers because digging holes was regarded as a difficult and tiresome chore which men had the energy to do. Men shared that they substantially depended on hired labor for this chore, since digging holes of the right size requires a lot of energy and this has implications on the longevity of the plantation. The men further explained that shallow holes are not good as bananas planted in such holes do not usually bear big bunches.

Constraints to digging holes:

Women mentioned poor quality hoes, broken hoes, hard soil during the dry season and stony land which makes it difficult for farmers to dig holes of the appropriate depth. However digging shallow holes was considered as problematic in the long term as explained by a male farmer in Lwakaloolo:

When the holes/pits are shallow, the manure quickly runs off, and the plants are not able to resist drought. (Men FGD Participant, Lwakaloolo).

Given that the issue of poor/stony land was mentioned in many group discussions, this may point to the need to introduce labor saving technologies to make digging more efficient.

In men's groups they frequently mentioned lack of money to hire labor as a key constraint for this activity. This may be because in many communities this was regarded as a man's role which was labor intense and necessitated extra help which often came in the form of hired young men.

However, casual labor to assist in digging holes in such areas were not easy to recruit due to limited funds and failure to access credit on good terms. Lack of access to funds to hire labor was mentioned in many FGDs:

We usually do not have the ability to access credit to pay for laborers for digging holes, because we do not have collateral. When we get a chance to access a loan, we receive the money quite late after a lot of struggle, and yet we have to pay very high interest rates. (Men FGD Participant, Lwakaloolo).

When faced with such situations, some farmers were forced to dig shallow holes which as mentioned earlier are not ideal as they cannot retain manure. Availability of appropriate credit facilities or appropriate low cost technologies will go a long well in alleviating labor demands on men or reducing drudgery associated with digging holes.

Purchasing and applying manure

Male farmers mentioned that they are the ones responsible purchasing the manure, since it requires knowledge of good sources and men, being more mobile, were better suited to get this information. Manure was mostly bought from distant places and, hence, the men needed funds to buy, transport and offload the manure in the garden.

Composting, mixing and applying manure is an activity mainly carried out by women, but they also involve the youth. Manure comprises of cow dung, kitchen wastes, rotten banana peels,



coffee husks as well as other wastes from the home and the farm. Children also participate because they are expected to learn since they are the ones who will have the responsibility of carry out this activity in the future.

We are usually the ones who are involved in composting. We are the ones who have to look for the rubbish to put in the compost. After peeling the matooke or cooking other things we throw the rubbish into the pit. (Women FGD Participant, Kabare).

Here, we note the clear differentiation of roles: men have the responsibility to ensure that manure is sourced and delivered to the farm while the women are in charge of composting, mixing and applying the manure.

Constraints to purchase and apply manure

Manure is very scarce during the rainy season and therefore very expensive. When one is lucky to get it, it may come with seeds of weeds, and may introduce foreign weeds into the garden which are hard to curb. Women also mentioned that sometimes they skill and lacked knowledge on how to mix and apply manure and also lacked appropriate tools. Knowledge on when best to apply manure was regarded as important since some farmers are said to lose this important resource due to run-off after heavy rains. This points to the need to have farmers especially women who are responsible for applying manure on soil and water conservation approaches to prevent soil runoff and wastage. Hence manure application will need to be done in tandem with application of other soil and water conservation technologies and methods.

Key to note also is that farmers did not regard manure as their first option but instead preferred to use synthetic fertilizer which, in their view, would be easier to apply. Farmers often mentioned using manure because of lack of money to purchase fertilizer.

Planting

The entire family is involved because of the need to catch up with the season. Both women and men agreed that planting is very labor intensive. Ideally, farmers require support from paid labor.

Constraints in planting

Male and female farmers indicated that they lack capital to pay for hired labor, which labor is also very scarce and expensive. However, there was also lack of trust between hired laborer and farmers hiring them. This mistrust is illustrated by an FGD participant from Kyampango below:

If you cannot hire labor, you get so many problems because planting needs to be done very fast before the suckers get spoilt. Hiring labor is also risky because they insist that you advance them some payment and yet they may not come, or if they do, they never complete the job. (Participant, Men FGD, Kyampango)

The laborers know when they are most needed, and they play a game of 'hide and seek' causing planting delays. This was clearly illustrated in an FGD with men from Kyampango:

You can identify a laborer in advance, agree on the wages and even pay a deposit. He will even start working and come for two days. On the third day, he will not come and he



will spend about a week without reporting for work. When you ask around, you are told that he is working for another farmer, who probably has paid him more.

You cannot even report such a laborer to local authorities as this would only make matters worse. If you do so, all his friends will red mark you and none of them will ever agree to work for you again. (Men FGD Participant, Kyampango).

As discussed earlier, labor is very scarce and the few available are 'booked' to support many farmers in the community which leaves the farmers in a very vulnerable position.

Another constraint is related to drying up of planted suckers during extended dry periods, before full establishment. In the dry period, the young plants are also prone to destruction by cows and goats.

Women mentioned that they get intense back pains, chest pains and general fatigue. This, according to the respondents, reduces quality of life and may also destroy the marriage.

Too much work tires you and also makes you grow older very quickly. As a result, your husband stops desiring you and gets another wife – and sometimes indeed when you look at yourself you can also see that you do not look good. (Women FGD Participants, Dwaniro).

Thus, while there is a desire for increased productivity, such an increase may come at the expense of farmer quality of life especially if no labor saving technologies are introduced in tandem with the push for more high yielding varieties and expansion of area under production.

Weeding

Weeding is a very intense activity done mostly by women especially during the rainy season. It was mentioned in both men and women groups that men were not interested in weeding, were hardly ever involved except to manage and monitor whether it was being done properly. Women relied on help from their children if and when they were not in school. Women further noted that male and female children are taught how to weed so that they can do a good job. When the boys are young they cannot refuse to weed because they cannot defy their mothers, however as they become young adults, women youth are more involved in weeding than male youths are.

Women mentioned the need for hired labor at this time, however this is not easy as they do not have money to pay for labor. Talking of the labor, drudgery and time involved women in and FGD in Dwaniro said:

You see us here – some of us are quiet because we are contemplating the amount of work waiting for us when we go back home. Though we managed to weed yesterday, now that it has rained, the weeds are going to reemerge so fast it will almost be like we never weeded.

In the rainy season, you are constantly in the garden weeding.

(Laughter) Weeding is done by women. Men do not have the time to bend down and uproot the weed. Even when hiring, you hire women because they do it better. (Women FGD Participant, Dwaniro).



Women in all groups mentioned that weeding was labor intensive and time consuming. Men often did not mention time and drudgery as a constraint in weeding because they were often not involved.

The drudgery associated with weeding and the times demands also resulted in stressful situation in the household. For example, men also agreed that weeding was a very strenuous time and impacted on social relations in the family, as noted by men in Kyampango below:

.....there is no happiness in the home during such times. Everyone is extremely busy, and yet the chores never get done, and in addition, the laborers never perform their tasks like you want them to.

....the wife gets very tired and irritable because she also has to cook and attend to other household chores. Meals are cooked and served very late because the wife first has to attend to the garden. When meals are served late, we get annoyed because we are very hungry and we may quarrel with the wife – though it is not entirely her fault. This is a very stressful time indeed. (Men FGD Participants, Kyampango and Kabare).

Thus while men acknowledged the times demands on women during this time they still expected women to efficiently perform their other domestic chores as efficiently as they did in other times of the years when there is no demand for weeding labor. In order to address women's needs in banana farming technologies that seek to reduce drudgery during weeding are key.

Pruning and de-suckering

Pruning and de-suckering requires considerable energy and is done by the men sometimes supported by hired labor. When pruning is not done properly and on time, the plants are prone to lodging and are more exposed to pests like the banana weevil hence the need to give it adequate attention.

Constraints to pruning and de-suckering

Rapid sucker emergence especially during the rains and scarcity of funds to hire labor were some of the challenges the men mentioned. Pruning tools can easily spread banana bacterial wilt throughout the plantation and wipe it out. Pruning is also very labor intensive since it involves uprooting the undesired plants and laborers demand for high wages for this activity. Due to the high labor demands, male farmers mentioned that, at times, they are forced to take loans from the matooke brokers/assemblers. This renders them vulnerable during marketing because the broker offers them very low prices since he would have advanced them loans. Male farmers in Isingiro shared that to avoid this, one has to constantly be in the garden to prune which calls for a lot of time and effort.

Mulching

Men are intensively engaged in this activity, because it needs considerable resources. The men shared that mulching grass is very expensive and is increasingly hard to find it in places close to the farm. As such, substantial resources have to be spent in sourcing the grass, hiring labor to cut the grass, and transport it to the garden. Women also participate in ferrying and spreading



the mulch in the garden, and often they are left to carry out this activity with limited support from the men – except in instances where a family can afford to hire labor. Women also mentioned that mulching is important since it stems the growth of weeds.

Constraints to mulching

Men mentioned that it was difficult to get credit to fund mulching activities because of the long gestation period of matooke (1.5 years). Where credit applications were approved, there were delays in releasing funds to farmers yet mulching had to be done during the rainy season. In such instances it becomes useless to mulch after the rains and farmers then have to wait for the next rains – this increases the weeding burden. Another constraint mentioned was destruction of mulch by jealous people who may burn it up especially if one delays to pick it up.

However women mentioned different constraints including lack of time to mulch as well as several health concerns. In Kyampango women mentioned that while men could bring lots of mulch to the field using cars, women may not have enough time to spread the mulch. In all communities women mentioned the problem of poisonous snakes which hid under the mulch and bit them. Delayed mulching could therefore put women at risk of snake bites. In relation to the risk of snake bites, below is what a woman from Dwaniro said:

..... after I was bitten by a snake, my finger got septic and it was amputated. I was so sick, I almost died. I swore never to carry mulching grass again. Unfortunately, my husband passed away and I now have to do it myself. (Woman FGD Participant, Dwaniro).

Thus the need for protective clothing, knowledge on preventing snake bites as well as first aid cannot be overestimated in these communities because snake bites can result in the death of a farmer and when a snake bites a family member, activities stall, and resources have to be diverted to health care.

Other constraints include introduction of invasive weed species that may come with the mulch as well as drudgery since women had to carry the grass on their head.

Removing the male bud

Male farmers are largely responsible for carrying out this activity. Women, however, indicated that they do this to protect their 'turf' since at this stage, the banana is already showing how big the bunch will be and how much it could cost.

Men become active because they know that the banana is now about to ripen (laughter).

They also want to be involved at this stage because they want to know how many bunches they have. (Women FGD Participants, Lwakaloolo).

Engaging in this activity thus helps the men to estimate how many bunches will be sold and also to estimate their earnings, hence the reason why most men would not let women participate in removing the male bud. This also signifies how men commence to protect their 'turf'.

Constraints to removing the male bud

The major constraints cited by men were injuries such as neck pain, eye injuries from falling



male buds, and bee stings. Other constraints were spread of disease as a result of delays in removing the male bud – which was a common occurrence in large plantations.

GENDER BASED CONSTRAINTS IN POSTHARVEST MANAGEMENT AND MARKETING

Harvesting and selling are usually done at the same time so will be discussed together in this section. In addition, there is little processing and bananas are not stored since farmers do not have any method to store the bananas or preserve them. In the past, they used to sundry the matooke in the dry season and then take it for milling into flour. However, the practice is not common because there is no market for matooke flour, and most farmers sell fresh banana. A few farmers in Kabare mentioned that they still sundry a few quantities for their own consumption. Below we will describe who identifies buyers and then move to discuss harvesting and selling of matooke.

Identifying buyers

Principally, it is the men who look for the markets, though sometimes the wife can inform the husband if she gets to know of a good buyer. However, from the discussions in Rakai, it appeared that the husband may heed to the wife's suggestion, but that largely depends on interpersonal relationships within the home.

It is us adults who move from area to area looking for buyers and children and youth are not involved in that. (Women FGD Participants, Lwakaloolo).

Men may fail to identify a good market because they lack money to go to several markets and would have to rely on brokers.

Harvesting and selling

In many areas, harvesting is done by the buyer, but with the authorization of the husband/male farmer. Farmers shared that once a buyer was identified, he would go with the farmer to the plantation and identify which bananas he was interested in. The two parties would agree on the price and thereafter the buyer would come with his team to harvest and load the bananas on a truck. Farmers also revealed that with the advent of the banana bacterial wilt, farmers now have the right to decide which tools (e.g. pangas) are used to harvest, in effort to curb the disease.

Constraints to selling

The men were constrained by having to sell through intermediaries (brokers or buyers agents), who deter them from negotiating with the final buyer. As such, the negotiating power is skewed towards buyers and farmers have to accept poor terms of trade ranging from low prices to being forced to include extra bunches of bananas in a trading lot for free; among others. Below men FGD participants from Lwakaloolo and Kyampango highlight some of these issues:

Brokers offer very low prices – they stand between us and the final buyer, and they determine the price. They don't allow us to negotiate with the buyer.

...we don't sell by weight, rather by the bunch, which is not good for us. During bumper harvests, they offer us very low prices, yet at that time, most of the bananas



mature at the same time and ripen in the plantation.

.....we suffer high losses during such a time, prices are low, yet many bunches ripen in the field. During bumper harvests, traders may harvest a bunch, and on second thoughts decide not to buy it. Yet, had it not been harvested, you could probably get another buyer to take it after a few days. But now you are forced to give away some for free.

.....when brokers realize you have a lot of bunches that are ripening, they insist that for every 10 bunches, you should give them an additional three bunches for free. (Men FGD Participants, Lwakaloolo).

.....sometimes brokers take our produce on credit and do not pay. If you complain and try to follow up, they gang up against you and may refuse to buy from you in the future. (Men FGD Participants, Kyampango).

Although it was not clear whether farmers had done a cost benefit analysis to see if indeed the middlemen were making a lot of profit whilst paying them little in return, what is clear is the high level of mistrust between buyers and sellers as well as the power relations in favour of brokers which make farmers desperate and sometimes sell at low prices. Though farmers had no information about the final sale price in Kampala, they had strong perceptions that buyers cheat them and the best way out would be trying to sell as close to the final market as possible. Nonetheless, they recognized that breaking into such markets was not easy.

In Lwakaloolo, farmers mentioned that it was more beneficial if they harvested their bananas and transported them to the main road to wait for buyers. Farmers perceived that colleagues who had been able to go beyond selling at the farmgate were getting more benefits than them, hence the desire to do so.

A neighbor who buys and sells matooke here in the village has bought lots of cars.

Someone earns a lot from buying and selling matooke in this village so every time he comes to buy matooke he brings us a loaf of bread. You know in the village when you bring someone a loaf of bread they can even sell you a bunch for 2,000. (Men FGD Participants, Lwakaloolo).

Thus there may be need to farmers to do a proper cost benefit analysis to evaluate the profitability of selling to different markets. Furthermore, there is also urgent need for farmers to easily access market prices to help them in negotiation with buyers and middlemen/brokers.

Another challenge highlighted was the practice of brokers removing fingers from each bunch they harvest which they later pack in bags for sale. In so doing, a broker may end up getting a whole bag for free (unpaid for) – the traders complain and the consumers are not happy with the fact that many fingers are missing from the bunch. Sometimes, small bunches and big bunches are all bought at the same price – this is very discouraging since farmers would have spent a lot of resources to grow large bunches. The farmers were thus happy to learn that the banana project intends to address some of these challenges through promoting sale by weight and direct linkages to local traders and exporters. Such interventions would help curb the brokers' malpractices.

Male farmers also mentioned that they face the challenge of theft by the youth when they are employed to ferry bananas from the garden to the point of sale. This usually happens during the rainy season when trucks cannot come go right up to the shambas due to slippery roads.



Another practice mentioned by women in Kyampango was pouring water on the matooke to make them slippery so they can pack a bag to maximum capacity. When the sack gets full they create extra space by inserting banana stems at the top of the bag which enables them to put more banana fingers on the top. Other challenges mentioned were related to infrastructure, especially for farms located far away from the main feeder roads.

Matooke ripens a lot during July, August, Jan and Feb. These months are also when the bumper harvest occurs in the area. If your plantation is far, the traders will never get to it because they get all the bananas they need from plantations closer to the roads.

Logging – when the matooke becomes very heavy, it falls with heavy winds.

The roads become impassable during the rains and traders find it hard to reach our plantations. (Male FGD Participants, Lwakaloolo).

In times of plenty, farmers thus found it hard to market their produce.

Women specific constraints to marketing

Women involvement in marketing differed from community to community as shown below my FGD participants from Rakai and Kyampango:

We sell our matooke from the plantation. Buyers come with cars and negotiate with our husbands on the price, and our husbands in turn consult us as to whether they should accept the price offered. If the wife says no and rejects the price the husband will not sell. (Women FGD Participant, Lwakaloolo).

When the buyers come the husband goes to the field with the buyers. He shows them the matooke, they decide what they want, they harvest and he collects the money and puts it into his pocket.

Women never sell matooke. It had always been like that. From our grandmothers time authority was given to men. Women have no authority to sell. Men sell and look after the women. We only get a chance when men are not around to sell but when they are around there is no chance. (Women FGD Participants, Kyampango).

However in Lwakaloolo, women stated that their husbands consult them when negotiating with the buyers and they had a say in the decision on the price to sell, as indicated below:

Here (in Lwakaloolo) we are blessed. We plan and work jointly with our men, so even after selling the matooke I will sit and plan with him. Now that I have seen the money I will say what we need and we discuss. Our husbands are understanding. The men in Isingiro do not care about their wives – they can even sell a goat or a cow and never give anything to the wife but here it is different. (Women FGD Participants, Lwakaloolo).

The Lwakaloolo women's experience shows that joint decision making in the household was beneficial for women since they could also benefit from sales by contributing to decision on expenditure. Women in Isingiro, on the other hand, shared that this is a man's role, and men do not involve women at all. When buyers go to the home they only discuss with men because it is only men who have the authority to sell. It is not clear while there was a difference between women in Lwakaloolo and Isingiro regarding their ability to contribute to marketing decisions.



This raises the questions as to whether women in Isingiro can access benefits from the sale of matooke if they are excluded in the actual marketing transactions.

In Dwaniro, a neighboring parish to Lwakaloolo, women indicated that they played a very limited role in harvesting and selling the banana. This was very discouraging for them, especially given the fact they considerably contribute in terms of labor and general management of the plantation. Below is what women from Dwaniro said:

Men never inform us when they are selling. When it is planting or weeding time, you are his darling – but come selling time – ha! He just never tells you anything - when you ask about the money, he tells you ‘your children are the ones who take all the money (school fees) – where do you think the meal you ate last night came from? (Women FGD Participant, Dwaniro).

Men will always consult us during times of intense activities (e.g., weeding) but it is totally the opposite when it comes to marketing. (Women FGD Participant, Dwaniro).

Thus in many of the communities in the study, women were normally not involved in selling of banana except those from Lwakaloolo. Women also mentioned that they had limited access to and control over the proceeds from the banana sales, despite the fact that they are always consulted on issues to do with the plantation management.

As a coping strategy, some women shared that they had resorted to ‘stealing’ and hiding a bunch or two, which they would sell off without the husband’s knowledge in an effort to get some money. Unfortunately for some, this is a futile exercise as the buyers sometimes refuse to pay, being sure that the wife cannot seek for redress anywhere.

You cannot to sell even one bunch – unless you steal it. If you are lucky and steal a bunch, the buyer will offer a very low price because he knows it is a ‘deal’.

....buyers also like to buy from us our ‘stolen’ bunches on credit, and they know you will not ask for your money because if you do, then they report you to your husband. (Women FGD Participant, Dwaniro).

This shows that the gendered nature of markets put women at risk of exploitation if they decided to be involved. Some women shared that even when the husband gives you a piece of land to grow your own bananas, you may never get all the proceeds from the sales. In the event that he lets you get the money, he then abandons his husbandly duties of providing for the household.

If you are lucky and the man apportions you a small piece of land to grow bananas, when it gets to harvesting, he will still take all the money claiming – ‘did you come with any land?’.

If he does not take the money, then he ceases to provide for the family – he will expect you to cater for the household necessities, and when your children ask him for school materials, he will tell them: ‘go to your mother – she has money’. (Women FGD Participant, Dwaniro).

Therefore it was not a surprise that the major constraints mentioned by women in Dwaniro was lack of say in planning and budgeting for the benefits accruing from banana sales. Men, on the other hand, mentioned limited access to reliable buyers and credit as some of the limiting factors.

For women, this situation points to a need for fundamental changes of gender norms in Isingiro,



which might not be fully possible in this project. Nonetheless, it is important that steps are taken to commence on this journey, e.g., through sensitization, lobbying and advocacy for increased participation of women in marketing.

EXPLORING GENDER BASED CONSTRAINTS FOR TRADERS

Table 1 below shows the activities that male and female traders are engaged in as well as some of the identified constraints they face that deter them from trading efficiently. Data were only collected from male and female traders in Isingiro, in a mixed sex FGD. This was due to miscommunication on the meeting time and venue, which meant that the researchers had a very short time to interact with the traders.

From Table 1, it is easy to discern that female traders faced greater constraints than their male counterparts, particularly due to their limited mobility. As a consequence, in some cases, they were not able to engage in some activities pertinent to the banana trade to the same level of participation as male traders, which again may impact on the volumes they can trade. Respondents also mentioned that it was not easy for female traders to engage and prosper in matooke trade. Most ladies who tried to do so had failed and the men overtook them.

These issues are expounded on below:

Inspecting plantations to identify marketable bananas

This is an activity in which male traders participated to a much higher degree as compared to female traders. While they faced similar constraints in executing this activity, female traders in addition indicated that they could not ride bicycles or motorbikes, which greatly affected their mobility. This implied that they had to depend on other people for identifying ready to harvest matooke and assessing the quality of the bananas they purchased.

Harvesting

Female traders did not participate at all in this activity, again probably due to mobility issues. The implication would be that they would have to accept all the bananas that were delivered to them at their collecting/bulking centers, regardless of the quality. In addition, their bargaining ability could not be as effective given that they are not in position to physically see the bananas before they are harvested.

Transporting bananas to collection point and loading distance trucks to major cities

Female traders indicated that they did not possess driving permits and therefore could not drive trucks to pick up the bananas. This gives a competitive edge to the male traders who owned truck and would drive them, since they can make some savings in the long run if they operate their trucks as opposed to hiring. They also mentioned other constraints including limited capital, access to credit and market intelligence which would enable them negotiate for better prices. While it was not possible to ascertain the volume of trade for male vs female traders, the fact that we could engage with six male and only two female traders indicates that this is still a male dominated field.



Table 1: Identification of gender based constraints for male (6) and female (2) banana traders in Isingiro

Activities carried out by chain actor (on average 3 days to carry out all activities)	Roles and responsibilities low=x, medium=xx, high=xxx				Resources or service needed to carry-out the activity	Constraints that limit access to and control of resources	
	M	F	Youth (often hired labor)			Male	Female
			F	M			
Inspecting plantation	xxx	x	x	x	-motorbike -bicycle -money	- Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area	- Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area - Can't ride a bicycle/motorbike
Harvesting	xxx			xx	-tools: pangas -gumboots -overall -hired labor -motorbike -bicycle -money	- Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area	- Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area - Can't ride a bicycle/motorbike
Collecting				xxx	-hired labor -money -sacks -ropes -gloves	- Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area	- Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area
Purchase/payment	xx	xx			-money -market information	- Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area	- Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area
Load truck				xxx	-hired labor -money	- Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area	- Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area



Transport to collection point	xx	x			-truck -money for fuel	<ul style="list-style-type: none"> - Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area - Poor roads 	<ul style="list-style-type: none"> - Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area - Poor roads - Can't drive a truck - No driving permit
Off-load truck at collection point				xxx	-hired labor -money	<ul style="list-style-type: none"> - Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area 	<ul style="list-style-type: none"> - Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area
Load long-distance truck (to major cities – Kampala)				xxx	-truck -money for fuel	<ul style="list-style-type: none"> - Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area - Poor roads 	<ul style="list-style-type: none"> - Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area - Poor roads - Can't drive a truck - No driving permit
Off-load truck in major cities – Kampala				xxx	-hired labor -money	<ul style="list-style-type: none"> - Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area 	<ul style="list-style-type: none"> - Shortage of money - Limited access to credit due to lack of collateral - No MFIs in the area
Sale	xx	xx			-market information	<ul style="list-style-type: none"> - Often unaware of the price paid at the retail market: planning is a challenge 	<ul style="list-style-type: none"> - Often unaware of the price paid at the retail market: planning is a challenge



PRIORITIZING THREE MAJOR CONSTRAINTS AND SUGGESTED SOLUTIONS FOR FARMERS

Farmers FGD participants were asked to review the constraints they had shared in the first part of the exercise, prioritize and rank the three most important ones that should be addressed in a bid to enable them to take advantage of the potential market opportunities that could arise during the project. They were also tasked to suggest potential solutions to the prioritized constraints. One group however prioritized two constraints only.

Figure 1 shows the major constraints that need to be addressed as prioritized by male and female farmers from the two project areas

It emerged that access to agricultural friendly credit and finance (mentioned 5 times - 4 times by men group), access to farming equipment (mentioned 4 times - 3 times by women groups), access to reliable markets (mentioned 4 times - 3 times by women groups), price fluctuation and low prices (mentioned 3 times - 2 by men groups) and access to fertilizer and manure (mentioned 3 times - 2 times by women groups) were the main constraints to the farming activity. Some men's groups also prioritized the poor state of roads and limited access to quality suckers while poor sales of matooke and exclusion from planning on how to use the proceeds from banana sales were also mentioned by some women's groups.

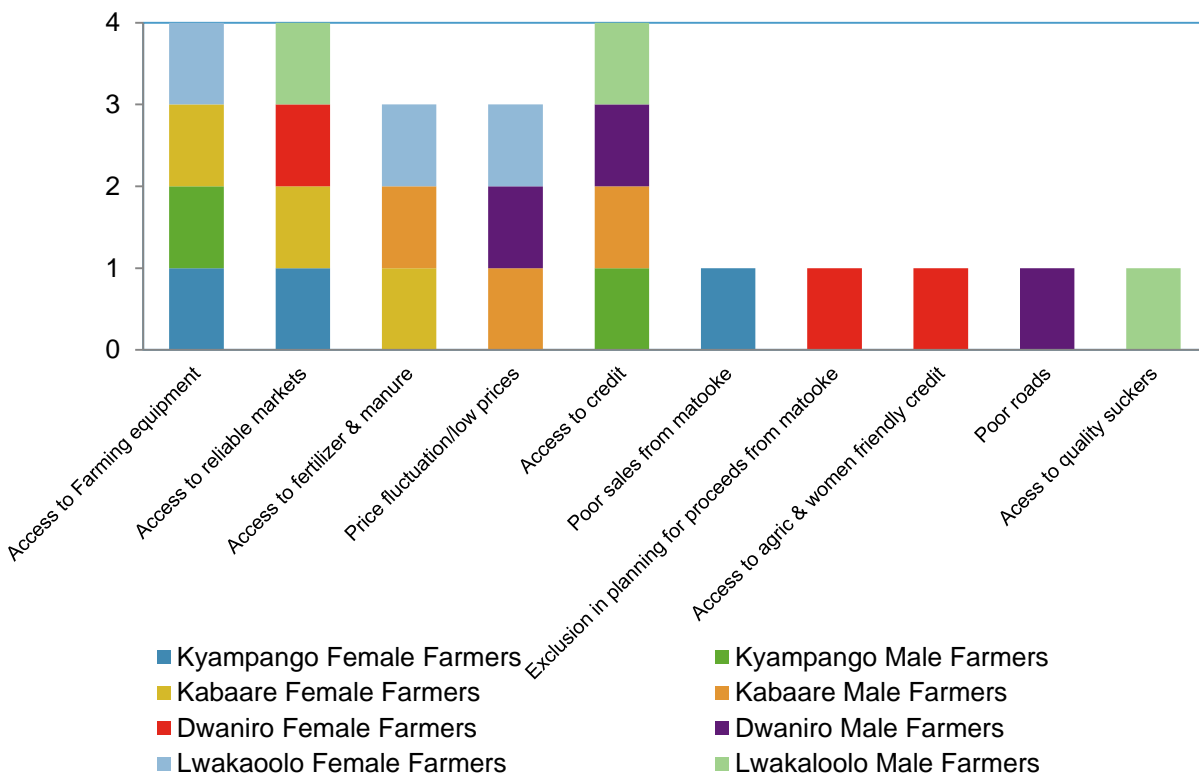


Figure 1: The major constraints to banana production and marketing by sex and location



From the prioritized issues above, it is easy to discern that women mostly prioritized production related (access to equipment and manure) and market access related constraints. Men prioritized access to finance and credit and fluctuating prices mostly.

Before the prioritization session, women consistently mentioned lack of access to markets and lack of control of income as a key obstacle to benefiting from banana farming and marketing. This is further augmented by a related concern of lack of a say in budgeting and planning for the proceeds arising out of banana sales as prioritized by one women's group. Given these findings, the strategy will propose ways of ensuring that women benefit from marketing of banana, for instance by training them in business planning and linking them to final buyers.

As expected, both women and men were more likely to prioritize constraints related to areas where they were mostly involved in. For example, because women frequently mentioned being responsible for cultivation, mulching and manuring, they prioritized limited access to farming equipment and manure as their major constraints. Men, on the other hand, prioritized access to finance to pay for hired labor, transporting mulch and buying land for expansion. They also mentioned the unfair practices of the brokers especially in preventing direct price negotiation with the final buyer, and indeed these were reported among their main constraints.

Farmers suggested solutions to prioritized constraints

Below is reported what the farmers suggested as solutions to the constraints they had prioritized.

Access to farming equipment:

- Better access to markets to enable farmers to buy tools
- Access to financing mechanisms to procure good quality equipment, e.g., spray pumps

The current spray pumps we have are of poor quality – you can only use the pump twice before it breaks down.

Because of the low prices of matooke at the market we are not able to save and buy equipment.

- Provision of storage facilities and training on how to use the stores
- Linkage to reliable agro input dealers located within the community with good quality equipment and spray chemicals

Access to fertilizer, manure and quality suckers:

- Vehicles to fetch fertilizer/cowdung from distant places
- Access to SACCOs however the challenge is failure to pay back, hence the need for friendly loans
- Sensitization on alternatives to manure, e.g., compost, artificial fertilizers
- Training on compost making and production of quality suckers
- Linkage to agro input dealers with good quality fertilizer

We usually pay a lot of money for fake chemicals.

Sometimes we buy fertilizer and when we apply it on the plants, they die.



Access to finance and credit:

- Training in establishment of farmers SACCOs
- Linkage to credit institutions
- Access to better markets
- Linkage to credit providers with an agricultural friendly soft loans
- Sensitizing the husbands so that they can appreciate that women can also be involved in planning and budgeting for the banana enterprise

...this will help men to realize that we are fundamental part of the household so we need to be involved in decision making, not only during growing bananas, but also when deciding on how to spend the money. After all, we left our parents homes when we were still young girls and have spent all our lives and energy towards the development of the home. (Women FGD, Dwaniro).

Access to markets, low and fluctuating prices

- Linkage to reliable buyers/markets with stable markets

..... for example, some of our colleagues sell to buyers who purchase on weight basis. The price offered by kg is almost stable, it hardly fluctuates. We do not know how it works, but we would like a market like that. (Women FGD, Dwaniro and Kyampango).

We would also like to have dialogue with the final buyers and understand how the market operates so that even when the price goes down, we know that it is not just the brokers who are trying to make extra money from us. (Men FGD, Lwakaloolo).

- Linkage to buyers who can buy the bananas on a cash basis
- Access to a processing machine which can make flour

...if there was a flour market, this can even go abroad. (Women FGD, Kabaare and Kyampango).

- Formation of marketing groups and training on how to form and manage the groups
- Sensitization and training of groups on the need and benefits of collective marketing as an avenue to accessing better and reliable markets
- Linkage of marketing groups to reliable buyers.

4. Women and men's empowerment in banana production and marketing

In the second part of the FGDs, the facilitators used the Comparison tool (see Section 2) and participants undertook a scoring exercise with an aim of estimating their current levels of empowerment along five domains: agricultural production, resources, income, leadership and time. In this section we present the main findings tool followed by a brief discussion on the implications of the perceived levels of empowerment. This analysis will help us to validate strategies suggested by farmers and traders as well as interrogate how the social, economic



and political context that men and women farmers and traders find themselves in may promote or deter adaption of the proposed banana postharvest innovations.

INPUT INTO PRODUCTION DECISION

Ability to make production related decisions - farmers

As explained earlier, participants undertook two forms of scoring: individual and communal. From the individual scores obtained on the ability to make decision related to production, female farmers from Lwakaloolo (all attributes) and Kabare (five attributes) seem to perceive that they had greater ability than men to make decisions, whilst the reverse was true for female farmers in Kyampango and Dwaniro. This can be further visualized in Figure 2.

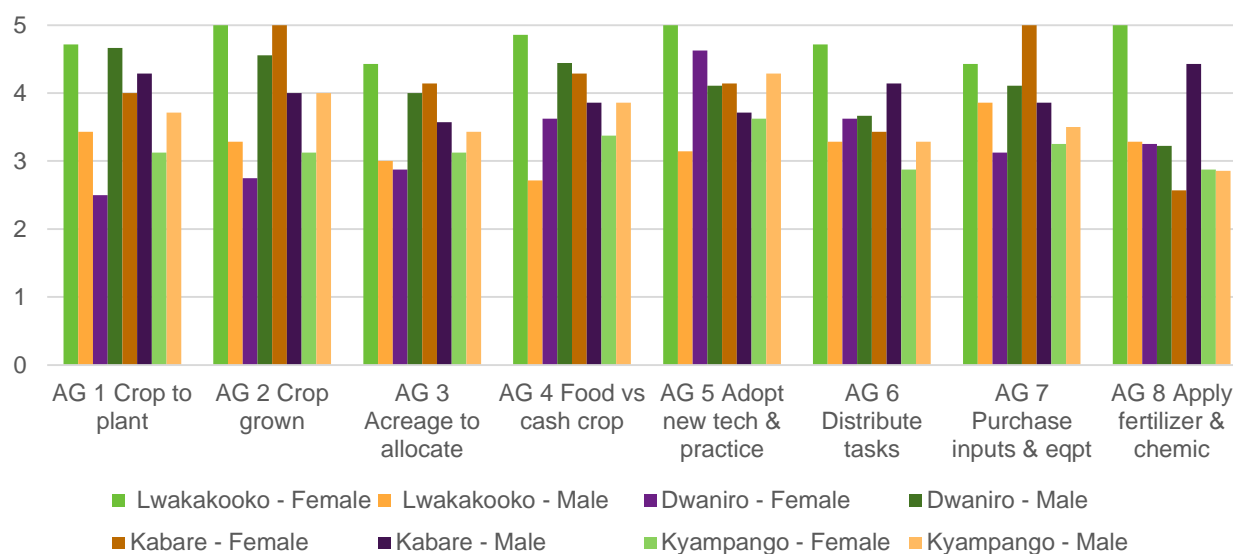


Figure 2: Extent to which male and female farmers perceive ability to make production related decisions

With regards to decision to adopt new technologies and distribution of tasks, male farmers in Kabare stated that women could make decisions about certain things, they did not have money to buy equipment and depended on men for that, while in Lwakaloolo men were of the view that women need to be consulted when making production decisions otherwise they will refuse to join and assist the man. Here is what the men and women FGD participants said regarding women's involvement in production decisions:

Women are the ones who attend trainings, and the ones who learn about new technologies and adopt them. Women also are responsible for distributing tasks because they are the ones at home. However, they never purchase tools and equipment because they hardly ever handle cash/revenue from sale of crops. (Men FGD Participants, Kabare).



We have power to convince the man that the technology can help us improve our farming. They will listen. (Women FGD Participants, Kabare).

Women have become men: if you do not consult them, they can easily refuse to join you in the farming activities. This is because they have learnt how to make money for themselves – they are very creative: so they are becoming more empowered. It is therefore important to consult them, and most men consult their wives in this community. (Men FGD Participants, Lwakaloolo).

The fact that men also acknowledged that women do not have the ability to buy input since they hardly ever have money of their own implies that it is very hard for women to invest in matooke production, and may call for affirmative action to change the status quo.

With regards to distribution of tasks, men generally indicated that this was done jointly. However, women in Kyampango expressed opposite views, explaining that they had very little say on deciding labor roles for men.

Men are resistant. You cannot force the man to do what you want. They decide for themselves. As mother I can force my child to do what I want because he cannot refuse but I cannot tell a man and he knows it. We are ruled by our husbands so if they refuse what you suggest you just give up. (Women FGD Participants, Kyampango).

Women also mentioned that they would like to have more power to determine whether to allocate land to food or cash crops.

Ability to make business related decisions – traders

In Rakai, female and male traders interfaced with had distinct roles. While the men were mostly brokers, women owned their businesses and thus had more autonomy over how the business was run. The only exception was related to major purchases, such as in the case of a motorbike, where male traders still have more decision making power than female traders (Figure 3). Male traders explained that their businesses depended a lot on the wholesalers, who they sourced and collected the bananas for. The wholesalers decided the price, volumes and payment terms. They shared that at times they would change the price without prior notice, which would greatly affect business relations with the farmers, who many times would think they are the 'bad guys'.

Men further explained that they are not the ones who make decisions on the quantity to buy. They were at times limited by availability of matooke and even when they were in a position to buy, they would consult their wives. With regards to decision making on which varieties to buy, men mentioned that they had to accept what farmers have. If the wholesalers wanted a specific variety they have to pay more (e.g. Kibuzi is the most expensive because it has longer shelf-life - on average Ugx 5,000 more expensive per bunch). The second most expensive variety is Musakala (again because of longer shelf-life). Longer shelf-life is important for minimizing PH losses particularly for the export market that represents 3-5% of local purchases.

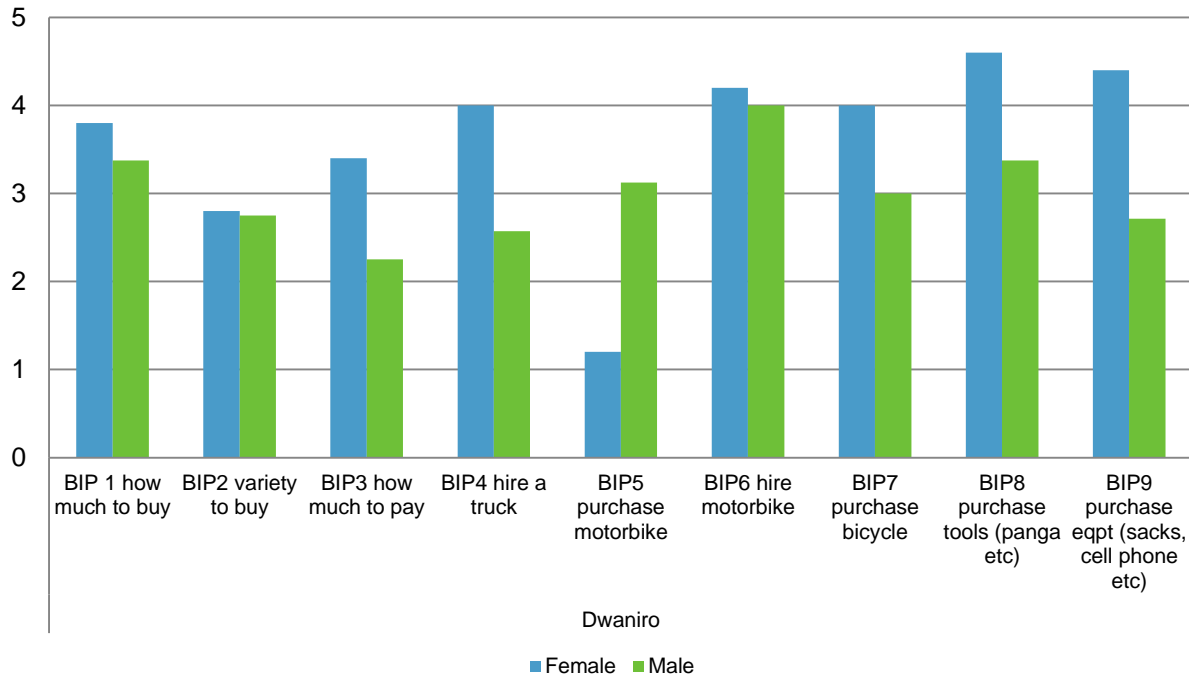


Figure 3: Extent to which male and female traders perceive ability to make business related decisions

With regards to price setting, the traders revealed that this was a compromise between farmers (usually in the weakest position), traders and end buyers in the destination market (the strongest). When it came to purchase of assets like motorbikes and bicycles, all the male traders indicated that they would have to consult the wife before doing so. However, some of them indicated that they did not have resources to buy such assets. They also mentioned that harvesting equipment is always pre-agreed with the farmers who are concerned about the spread of diseases.

Ability to make marketing related decisions - farmers

With regards to decision making on price to sell, women from Lwakaloolo and Kyampango perceived that they had more ability to make decisions on this than their male counterparts. However, with regards to where to sell and who to sell to, men had an edge over women except in Lwakaloolo. This was further validated by the scores obtained regarding where to sell, who to sell to and what price to sell (Figure 4). In Rakai district, women from Lwakaloolo scored highest in all 3 sub-domains while, on the other hand, those from Dwaniro scored lowest across all the three sub-domains. This could be attributed to continuous sensitization on gender equity that both men and women from Lwakaloolo attested to have received from various service providers such as NGOs.

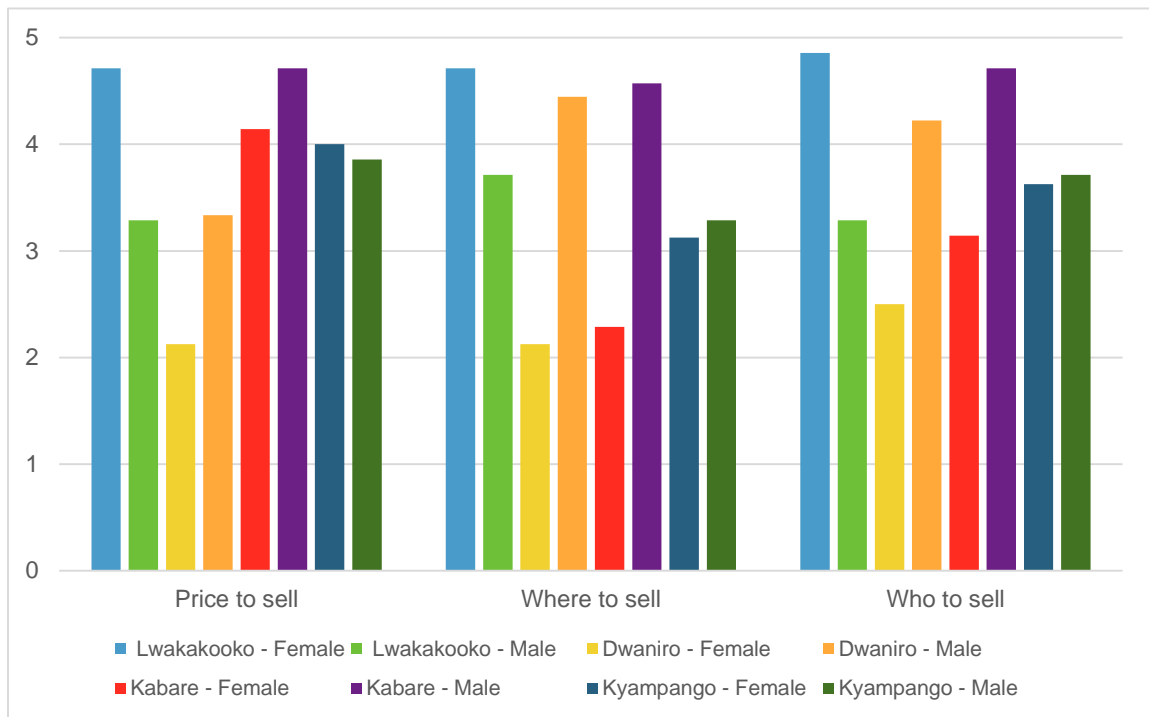


Figure 4: Extent to which male and female farmers perceive ability to make marketing related decisions

Although women in Dwaniro mentioned that sometimes they will be consulted by their husbands, they still argued that men had final say as noted below:

A wife can be consulted on marketing decisions, but the last decision is always made by the man. Even the wife knows it. (Women FGD Participant, Dwaniro).

In Isingiro district, Kabare women perceived a similar situation as those in Dwaniro, as further reiterated by male participants from Kabare below:

Men make all the decisions related to marketing - at most, they will just inform the wife that they got a buyer, but many never say how much they have earned to the wife. (Men FGD Participants, Kabare).

However, in Kyampango, women had an edge over men in one sub-domain (price to sell) and while they scored lower in the other two areas, the perceptions of men and women are not significantly different. This could also be attributed to sensitization and exposure to the need to view women as partners in the family business.



Ability to make marketing related decisions - traders

With regards to traders, men (almost exclusively brokers) indicated that they had only limited power to decide on who to sell to. Brokers could only sell to a pre-determined trader who dictated the terms.

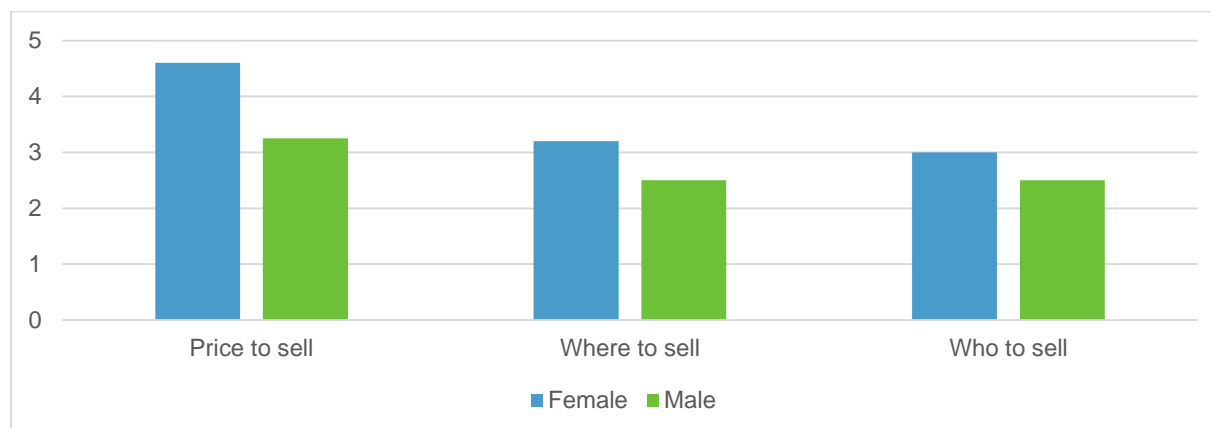


Figure 5: Extent to which male and female traders perceive ability to make marketing related decisions

Again, the female traders seemed to have more leverage in this area given that they were the owners of the business and could decide who to sell to, after negotiating the price (Figure 5).

ACCESS TO PRODUCTIVE RESOURCES

Ownership of assets - farmers

In both districts, men mentioned that they owned most of the land and the farm equipment, while women could only own land if they inherited it from their parents, or in the cases of widows, from their late husbands (Figure 6). Women in Dwaniro mentioned that it was very difficult for them to own land, and that is why they were not able to grow perennial crops like banana. Most of them would grow annual crops like beans and Irish potato for food and income.

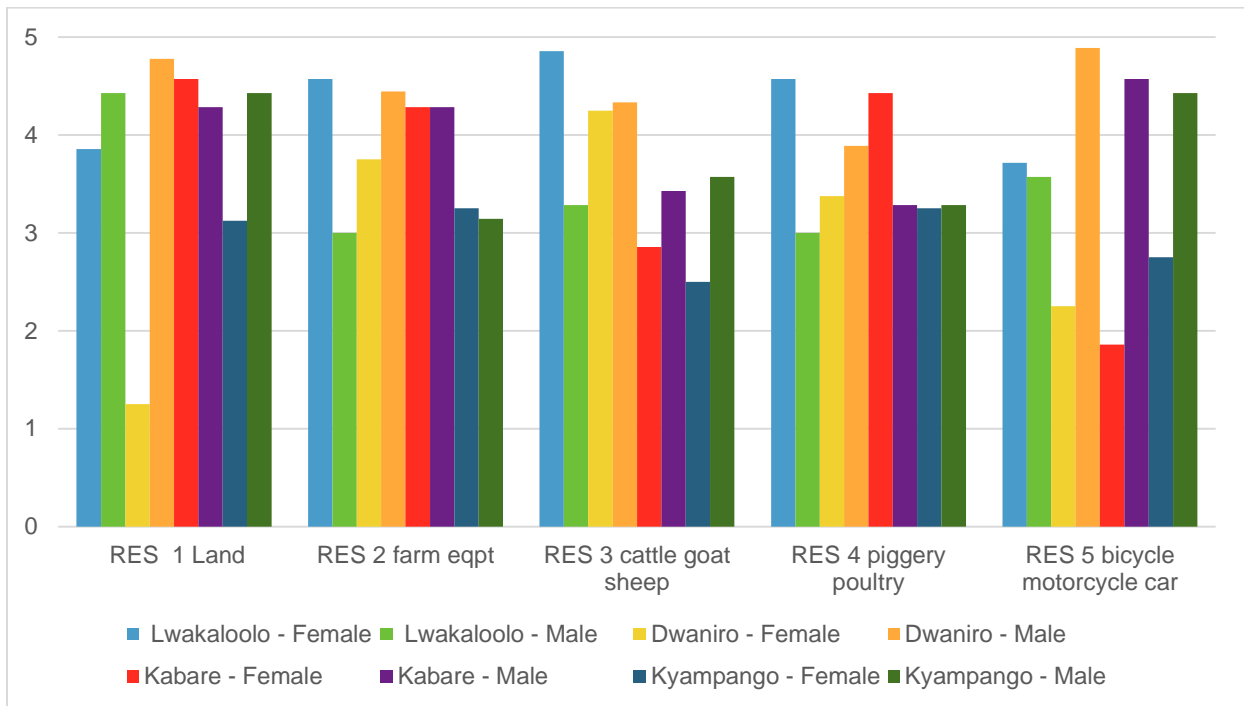


Figure 6: Extent to which male and female farmers perceive to have ownership of assets

A few women were also noted to have become more enterprising and had bought some land especially in Kabare and Lwakaloolo.

Ownership of assets – traders

Female traders had limited ability to own land and means of transport. Limited access to own means of transport renders them less mobile which greatly affects their business. In addition, it is not culturally common for women to ride bicycles and motorbikes, which implies that even when they purchase one, they would have to find/hire a man to ride the bike for them. With regards to land, men shared that land with title deeds is not common in the area. About 70% of the land is owned by men, but the decision to sell is always done in consultation with the spouse (Figure 7).

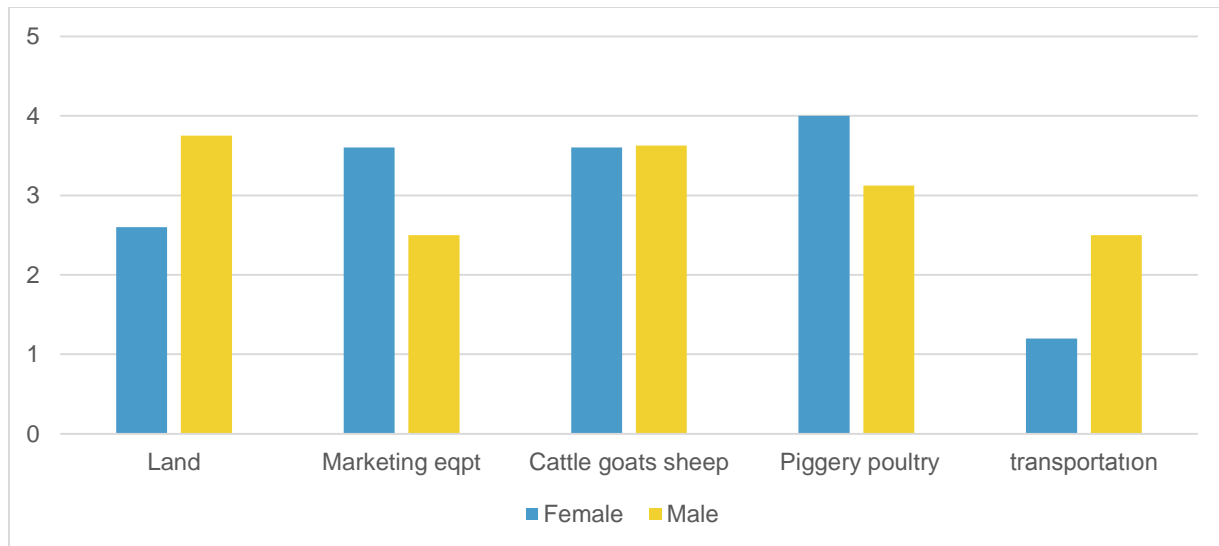


Figure 7: Extent to which male and female traders perceive to have ownership of assets

Male traders' lower perceived ownership of marketing equipment is explained by the fact that they are mainly brokers, purchasing on behalf of others.

Decision to purchase, sale or transfer of assets

Most female farmers perceived that they had the considerable less power to dispose of assets as compared to male farmers (Figure 8). In general, women perceived that they had less ability to dispose of fixed assets, and some shared that, despite the fact that the law now requires that they are consulted before assets like land are sold off, their husbands coerce them to do so.

In Kyampango, although some women perceived that they had some power to make decision regarding sell of assets - particularly land - that the husbands was mandated by law not to sell without getting consent from the wife, some participants in the same group had completely different views, and stressed that men would find ways to sell the land, if they were determined to do so.

I think women have less power. The man can decide that he wants to sell. If I do not want to sell and I refuse to sell my husband may leave my house and go. So in fear of divorce, I will sign.

You can try to use your power but if men refuse there is nothing you can do.

In this community there are some women who have taken their husbands to the district's court.

If they ask the wife whether the land should be sold (when at the district's court) she will keep quite so they do not sell it (a woman imitating a woman who is being asked at district and not answering). There are some who have been pressured and they agree to sell; they always regret and say 'I wish I knew, I would have refused'.



I have no power. There is no difference if I tell someone not to sell and they will still sell anyway. That means we have no power. A man can go out there, borrow money and say 'If I fail to pay you will come to get my cattle'. So what power will I have? When he fails to pay the people will take the cattle. (Women FGD participants, Kyampango).

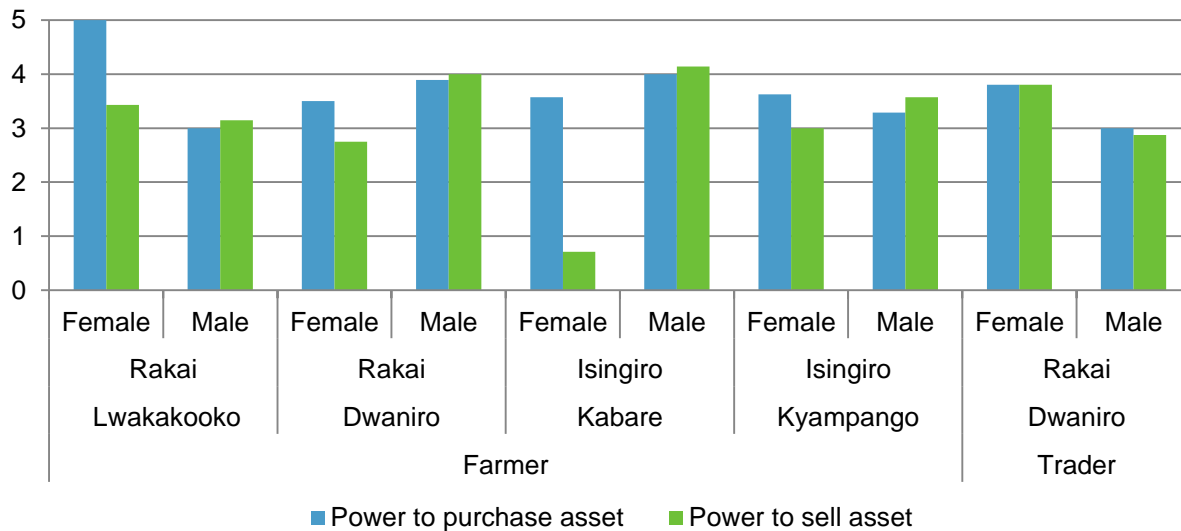


Figure 8: Extent to which male and female farmers and traders perceive to have power to purchase, sell or transfer assets

This implies that even if measures have been taken by the authorities to grant women the ability to have a say in the sale of the land, this may still be a dream for many of them who would prefer to suffer in silence than suffer the repercussions of an angry husband. This brings to the fore the question about effectiveness of policy instruments to protect women’s rights and interest without engaging with the men who are also targeted by such policies.

However in the same community husbands insisted that they consulted their wives before selling land. Below is what men in an FGD in Kyampango said about the issue:

How can you sell an asset without telling your wife? If you do so, you would just get slapped on the cheeks. (Men FGD Participant, Kyampango).

Once you get married, your wife becomes your partner and the assets belong to both of you. These days, there is equity: a woman can also give you good advice, and since the assets belong to both of you, you cannot sell without consulting her. (Men FGD Participant, Kyampango).

The differences between men and women’s views about the issue cannot be easily explained. This may mean that men regarding informing the wife about an impending sell as a form of consultation, while women did not regard being informed as being consulted since the husband could still go ahead to dispose of family property against their wishes using other forms of social coercion.



While women could buy small assets and household items they stated that they needed their husband's consent and permission before they could buy a major asset. Below is what women said regarding this:

If you buy assets using your own money without consulting your husband, he may ask you to take back the asset or he won't allow you to ever use it in his home. (Women FGD Participant, Dwaniro).

This may also be related to norms that were mentioned earlier, for example where husbands were not in favor of women owning land, therefore a woman could not make an independent decision to buy such an asset whereas a man could. Men also believed that women did not have money since money from banana sells belonged to the husband who could then share it with his wife and the rest of the family.

In Kyampango, there was a debate as to whether women sell animals without the husband's consent. Different views emerged. Some women testified that they only have the power to sell small animals, but not cows and large assets like cars and land. However, others felt that they had the power to challenge and influence their husbands

We have the power because you can ask the men: 'Why are you selling the cattle?' If it is not for school fees for your child I can ask. So by asking I have some power. For example, if the children are sent back from school for unpaid fees and he is not around, I have the power to sell so that I can take them back to school. (Woman FGD participant, Kyampango)

The debate among women can show that there are changes happening in the community where some men are increasingly consulting and listening to their wives. However, our data cannot answer what had brought about such change and what type of men consult and what type of men do not.

In Lwakaloolo, however, men FGD participants mentioned that not all men consult their wives before they sell assets. They further advised that the assets should be ranked separately as it was difficult to give a uniform score for fixed and movable assets. They, however, mentioned that while it was difficult to sell land with seeking the wife's consent, one could sell off a car without even letting the wife know.

It is difficult to score because all the assets have been lumped together. For example, I would score sell of a car at 5, but for land it is obviously a 3 - how can you sell land without consulting your wife? In this era, this is almost impossible - she has to be consulted and she has to append her signature on the transfer deed. (Men FGD Participant, Lwakaloolo).

This also illustrates that decision making regarding assets is changing with women having more and more power over some assets but not others.

Female traders mentioned that they can only sell assets in consultation with the spouse. However, the decision to buy depended on which spouse had the money: the women had a good level of autonomy if they were the ones putting the money.

It is clear that sensitization sessions about gender roles and the need for men to consult their partners are important, as seen from the last testimony. While such a strategy may take some time to take root in very traditional societies, small and incremental changes may over time lead to a change in attitude and norms for the benefit of women.



Access to services

This section focuses on access to financial, extension and business development services.

Financial services

Both farmers and traders mentioned the need for financial services in order to access capital for various farming and trading activities such as buying farm implements, mulch, manure, pay for labor as well as transport and trading expenses. Men and women mentioned limited access to formal financial services. For example, in Dwaniro, women mentioned that financial services are difficult to access in the area, and some claimed that they had never even stepped in a bank. However, male farmers were very grateful to microfinance service providers (MFIs), as attested by farmers in Isingiro. Generally, most of the service providers (SACCOs, banks) are located far away from the area. As a result, most farmers have very limited access to loans and other financial products (Figure 9). In addition, some of the products available may not be suitable for their needs.

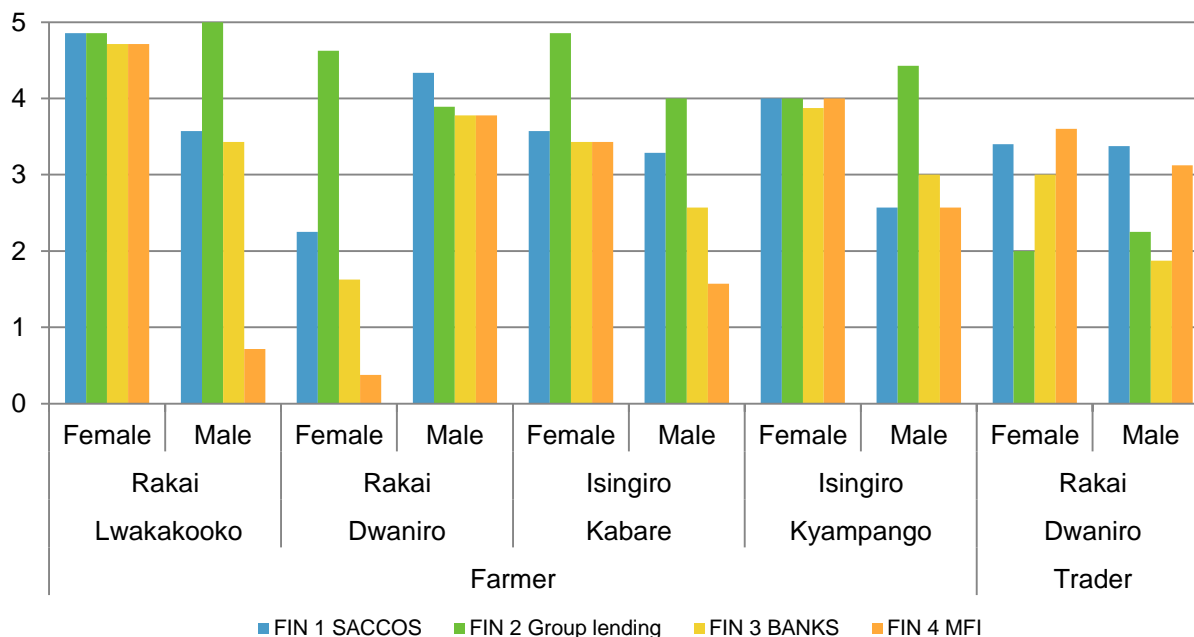


Figure 9: Extent to which women and men farmers and traders perceive they have access to financial services

Apart from mentioning that banks were located far away from their locality, female farmers were of the view that they did not have any business to transact with the banks, as they often have very limited capital base, and would not even have the ability to get loans from the bank. This is further elaborated by female FGD participants from Dwaniro:

The banks are located so far away. Many women have never even been close to their doors - by the way, what business would you have going to a bank?



On the other hand, as mentioned above, male farmers in Kyampango were really thankful for the services they were obtaining from MFIs. They shared testimonies of the benefits they had received, which included access to working capital and savings and credit literacy:

MFIs are the ones that made us reach this level of prosperity. They also helped us to get exposed to the world of loans, now we are not that green - they really helped us. (Men FGD Participant, Kyampango).

However, access to and use of banks may also be related to exposure to nearby banks. For example, in Kyampango it was shared that they were able to access banking services, given that they lived quite close to the trading center where they had access to banks and some even had bank accounts. However, they also pointed out the associated risks in case one failed to pay back a loan in time:

Women here have bank accounts because we live close to the center where we can get bank accounts.

It is easy for us to get loans at the bank we have to use our property as security. If we fail to pay they will take our property away to pay back the loan.

If your account is operating well at the bank, that bank can give you a loan easily.

We also have access to SACCOS but we use them to pay our debts so we borrow from this one to pay the other one like that (laughter)

However, although women in Kyampango had access to financial services providers such as banks and SACCOs, it is also clear that they do not have business acumen as evidenced by the fact that they get loans to pay off other loans resulting in a cycle of debt. There may be need to study and understand the ways women use loans to such an extent that they cannot repay the loan using profits from their business investment.

Male traders mentioned that SACCOs were not very popular and only a few were members. Most of them accessed financial services from group lending and banks. None of them was aware of any MFIs in the locality. Female traders had similar perceptions of the aforementioned financial services except for banks, which they find difficult to access due to the cumbersome procedures.

Extension and business development services for farmers

In terms of access to extension and business development services Figure 10 illustrates that women in Lwakaloolo had better perception about their ability to access compared to other women and also men's groups.

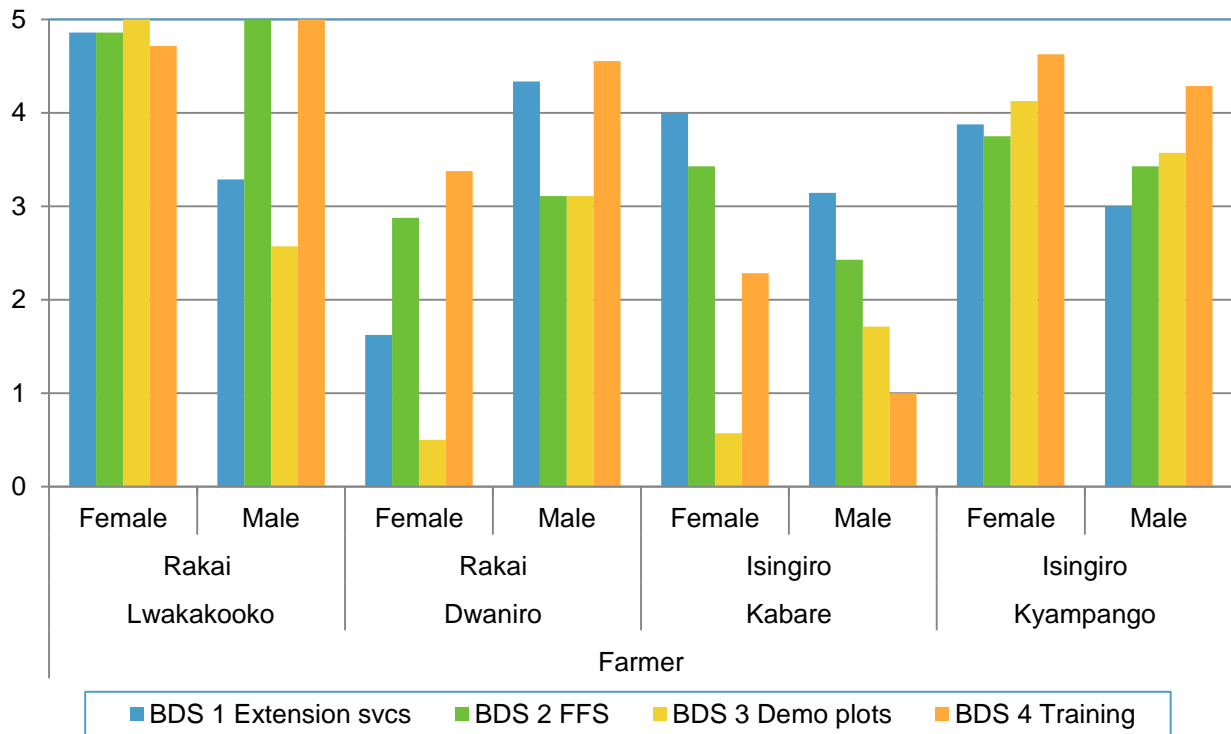


Figure 10: Extent to which male and female farmers perceive access to extension services

Figure 10 also shows that men in Lwakaloolo had better perception about their access to extension and business development services. In the FGD, they were full of praises for their extension worker – often they referred to him by name and indicated that he had played a big role in provision of training and technical assistance. They also mentioned that several NGOs had supported them by providing a number of services including training, savings and credit group formation and demonstration farms.

Male farmers in Isingiro rated access to extension and business development services as only being fair, and explained that these services were mostly project driven. Some farmers shared that they were forced to sell off their cattle due to diseases and limited access to extension services, while others noted that banana bacterial wilt had almost wiped out some gardens, had it not been for support from projects. Talking about their lack of access to timely extension advice men farmers in Kabare said:

You cannot talk of improving banana production and marketing unless you have a strategy to address BXW. In this area, we had farmers with very big plantations but they almost gave up on growing banana because of this disease.

The extension officers need to step in and give us timely advice when we get such problems. (Men FGD Participants, Kabare).

Clearly, there is a need to strengthen access to extension services especially with regards to control of BXW.

Women in Dwaniro mentioned that they rarely received formal extension services. Some



women in Kyampango on the other hand mentioned that they were able to access services from various service providers. However, some also mentioned that their husbands would not allow them to attend meetings or participate in group activities.

We get training on record keeping from NAADS and also Bioversity. Our husbands believe in the training and we like it too. We like to attend also because farming is our livelihood. Our husbands will allow us to go for training because they know that we will improve our farming (Women FGD Participant, Kyampango).

We like to participate in groups but our husbands do not allow us. If this meeting was not nearby my husband would not have allowed me to attend (Women FGD Participant, Kabare).

The Local Councils come and train on leadership. We already have positions in the local councils (Women FGD Participant, Kyampango).

Thus, while in some cases both men and women did not have access to extension services, it is clear from the above that there are also gender specific reasons which curtail women's access to such services. For example, lack of support or permission from husbands can affect women's ability to access extension services whereas men did not need their spouse's permission to access such services. However, the role of training in empowerment is very clear as some women mentioned that leadership training had helped them to have leadership positions in the local council.

Business development services for traders

Female traders mentioned that they had never received any business related training and also indicated that other than calls from potential clients inquiring about the trade, they have not been exposed to business-to-business learning.

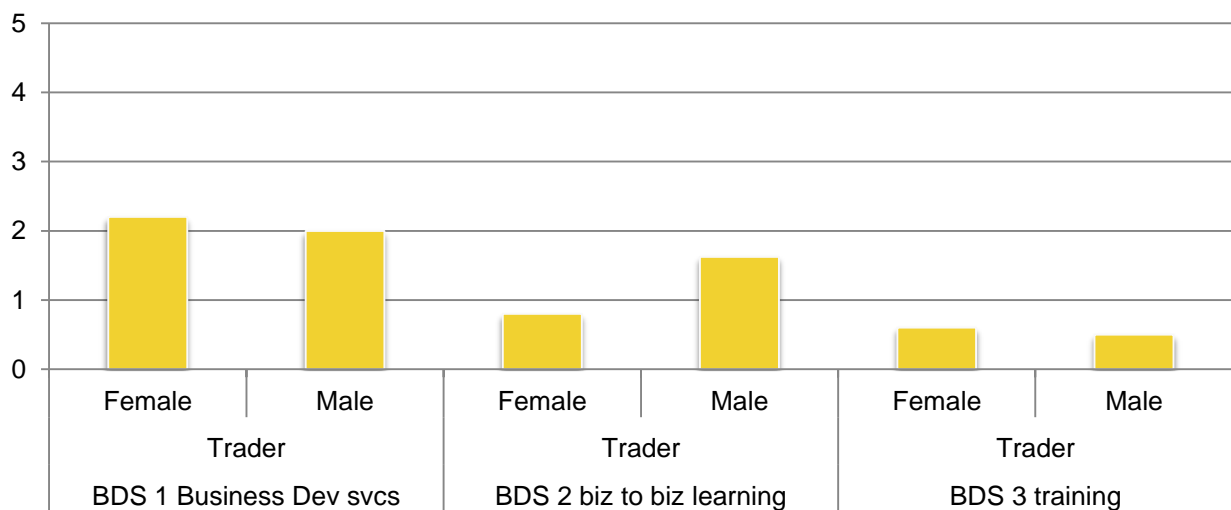


Figure 11: Extent to which male and female traders perceive access to business development services



Both male and female traders indicated that they accessed very limited or no business development services (Figure 11).

CONTROL OVER USE OF INCOME

Other than Dwaniro, women perceived that they had ability to make decisions over expenditure in most sub-domains; in most instances scoring higher than the men. Women from Dwaniro perceived very limited control over the use of income (Figure 12). In fact, most shared that they could only make decisions related to small household expenditure items, but at times even such items could cause friction at home. Because of this, they had to devise other strategies to generate income so that they could also have the ability to meet their own needs and the ones of their children without having to depend exclusively on their husbands. In Dwaniro, all the women were proud of the fact that they had managed to install solar systems in their houses, which is a good sign of progress. They also mentioned that even if you had the money, you had to consult your husband before you spent money on certain items. They also shared that men are hardly concerned with home improvement, household necessities or even children's clothing. This is what women in Dwaniro and Lwakaloolo said about decision on clothing earner and water:

Yes, even health care: if you take a child to the clinic without consulting your husband, you will stay there without his support. (Women FGD Participant, Dwaniro).

Men never bother or care about children's clothing; we take care of those ourselves. (Women FGD Participant, Dwaniro).

Women take care of the clothing especially of their children and themselves, we are rarely consulted. We may give some money for clothing on big days like Christmas. (Men FGD Participant, Lwakaloolo).

When it comes to energy, all of us here have installed solar without men's help. We got tired of asking for money to buy paraffin on a daily basis, and through group lending, have managed to install solar. (Women FGD Participant, Dwaniro).

During the drought, we buy water for the home - especially drinking water. If you don't, the husband will tell you that 'your co-wife always makes sure I have water for bathing and for drinking'. (Women FGD Participant, Dwaniro).

Men affirmed that they may not be concerned with issues such as purchase of clothes, water or paraffin, except for special occasions (e.g., clothes for Christmas) or during adverse conditions (e.g., drought). Some male participants also shared that a number of men hardly provide for such needs and leave all the burden to their wives, which calls for sensitization on the need for joint family planning and budgeting.

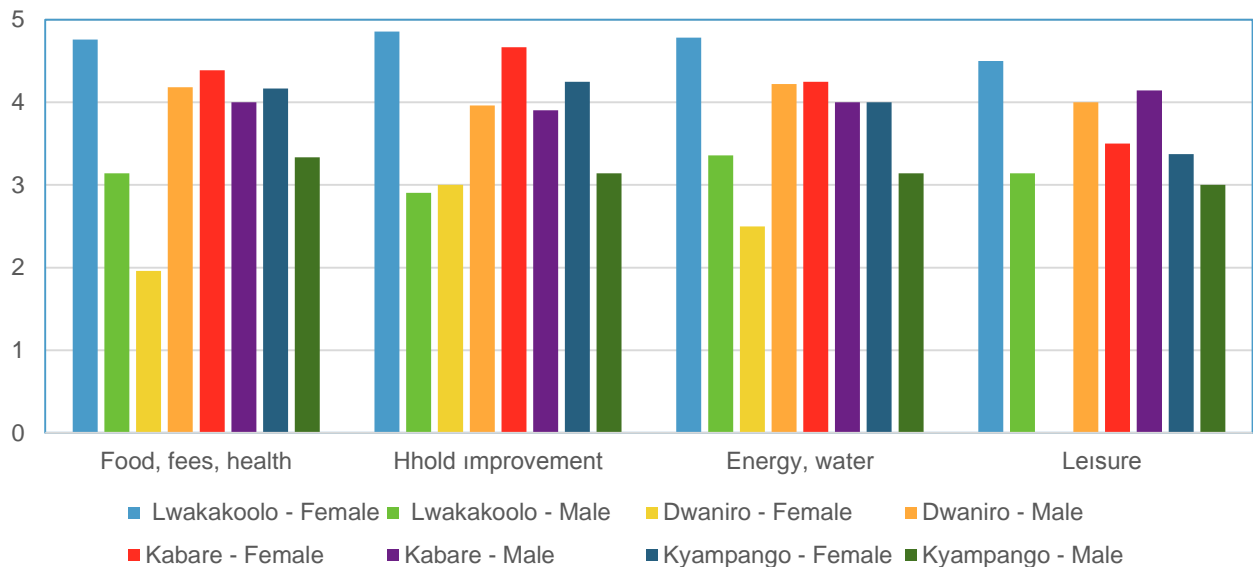


Figure 12: Extent to which men and women farmers perceive control over how income from banana is spent

However, men in Lwakaloolo countered this view, mentioning that they also took an active role in sourcing for water during times of scarcity.

During the dry season, we are all engaged in looking for water, we may buy, but we all have to fetch water. (Men FGD Participant, Lwakaloolo).

On the other hand, women in Kyampango expressed their ability to influence decisions on water harvesting, collection and utilization.

We have power to build water tank. We can influence our husbands to provide the money. We should in fact score 5 because, as a women, we decide how to use the water and also how to get it. (Women FGD Participants, Kyampango).

Women also shared that men were not willing to spend money on improving the facilities in the home, and would instead use the money to marry a second wife.

Men never invest in home improvement. Once they construct the house that is it. Some of them will earn big money from sale of matooke, but will not even repair a leaking roof. If you pester them to do so, they ask you to do it yourself, if you have the money. Instead, they would rather spend that money on building a second wife a house. (Women FGD Participant, Dwaniro).

However, men countered this view, and claimed that they apportioned a large amount of money earned from the sale of bananas in taking care of the home. They further shared that they



consult their wives especially on issues of capital expenditure. They re-affirmed what women shared on expenses related to leisure – the husband has to know and give his consent.

You make the money together with your wife, so you should involve her in making decisions on how to spend it - you have to decide together. (Men FGD Participants, Kyampango).

Men don't need to consult on what sauce to buy, we are the ones who are mobile and as I move around, I can find for instance, fish and will just buy and take it home.

With leisure, we have to ask for permission to go for leisure activities, but we pay for ourselves. (Women FGD Participants, Dwaniro).

Our husbands do not like that we have leisure. (Women FGD Participant, Kyampango).

A wife can't decide on expenditures on leisure, she has to consult the husband. But men do not consult their wives, and usually go alone for leisure activities. Even when a wedding card invites both the husband and wife, only the wife goes. The wife can go to visit the children in boarding school, and even in this case, you alternate the visits - if she goes on the first visit, you go on the second one. (Men FGD Participants, Kyampango).

From the information shared during the discussions with the participants, it appears that the ability of female farmers in Dwaniro to decide on how to use income derived from major enterprises like banana is extremely limited. This validates the information obtained during the gender constraints analysis discussion, where women acknowledged that they rarely got to know how this income was spent. It is important that the project devises strategy to address this issue, otherwise women may still be reluctant to spend their energy on an enterprise which may not be directly beneficial to them. However, the same pattern did not emerge in farming households in other survey areas.

With regards to traders, female traders perceived that they had more power to make decisions on how to spend revenues from banana sales than their male counterparts. This could be attributed to the fact that they were directly involved in the trade and thus had their own capital, as compared to men who were mostly brokers and transacted on behalf of others traders. The fact that they had a say on how they invested their capital (however small) would put them in a stronger position than male brokers who operate with other people's money. However, this does not necessarily place them in a position of superiority within the household given the patriarchal society to which they belong, but certainly gives them leverage to bargain for better access to and control over resources:

Men have a say on how we have to spend money on food in our households only if they bring money for this. (Female Traders FGD Participants, Dwaniro).

This illustrates that when women are contributing significantly to household income they may also have greater decision making power regarding how the income is used.



COMMUNITY LEADERSHIP

All female farmers from Rakai scored highly with regards to ability to participate in community leadership and, in most domains, definitively much higher than women in Isingiro. On the other hand, both female and male traders scored very low in this domain. While men in all FGDs mentioned that they did not have any problems participating in and leading group activities, women mentioned that they were not well represented in group leadership (Figure 13).

Ah, now we are empowered, most women can express their opinion in the public. (Women FGD Participant, Dwaniro).

Now women have positions on the council. (Participant, Women FGD Kyampango).

Though women are very active in going for trainings and meetings, men are the leaders in the groups. (Men FGD Participant, Lwakaloolo).

Thus while women mentioned that they were strongly involved in group activities, and had a better chance of being heard as compared to the past, they were not leaders. Even men attested to this fact.

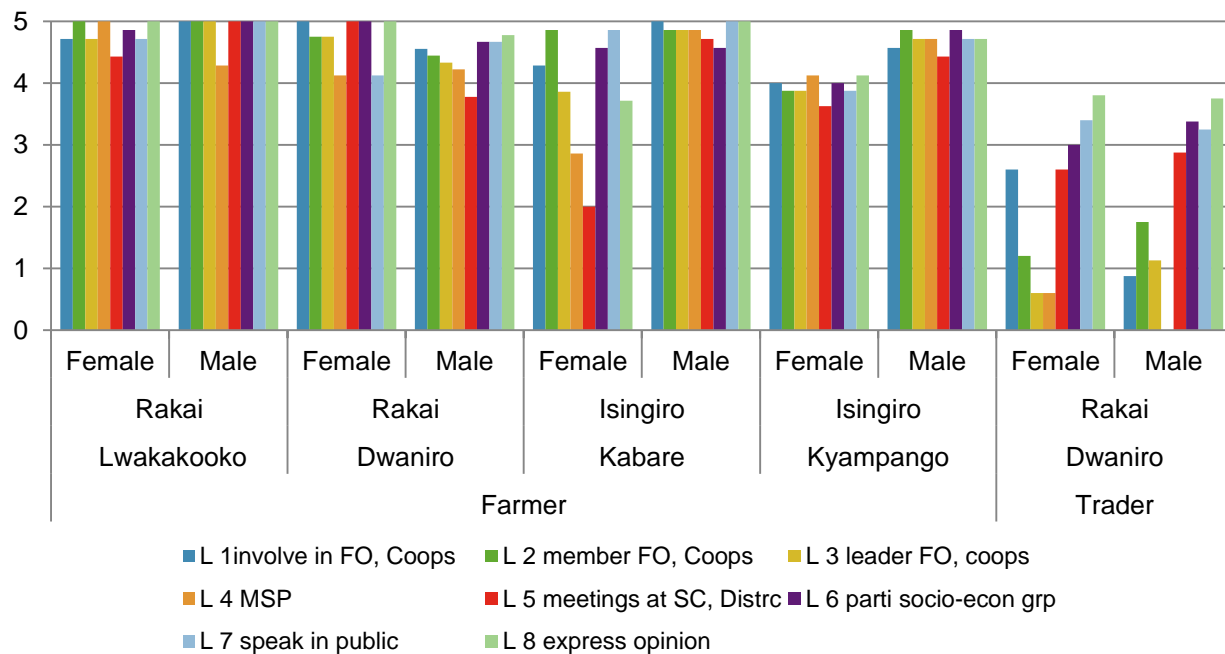


Figure 13: Extent to which women and men farmers and traders participate in community activities and leadership



Nonetheless, women were more appreciative of the fact that they were now more visible in groups and the community at large, and had greater ability to express their opinions on development related issues.

TIME ALLOCATION

Agricultural production activities

Both male and female farmers attested that this is where they spend considerable amount, if not most, of their time (Figure 14).

We are farmers. This is our job. It is like you, don't you spend most of your time in office?

However, male traders also revealed that they spend a reasonable amount of time in the garden.

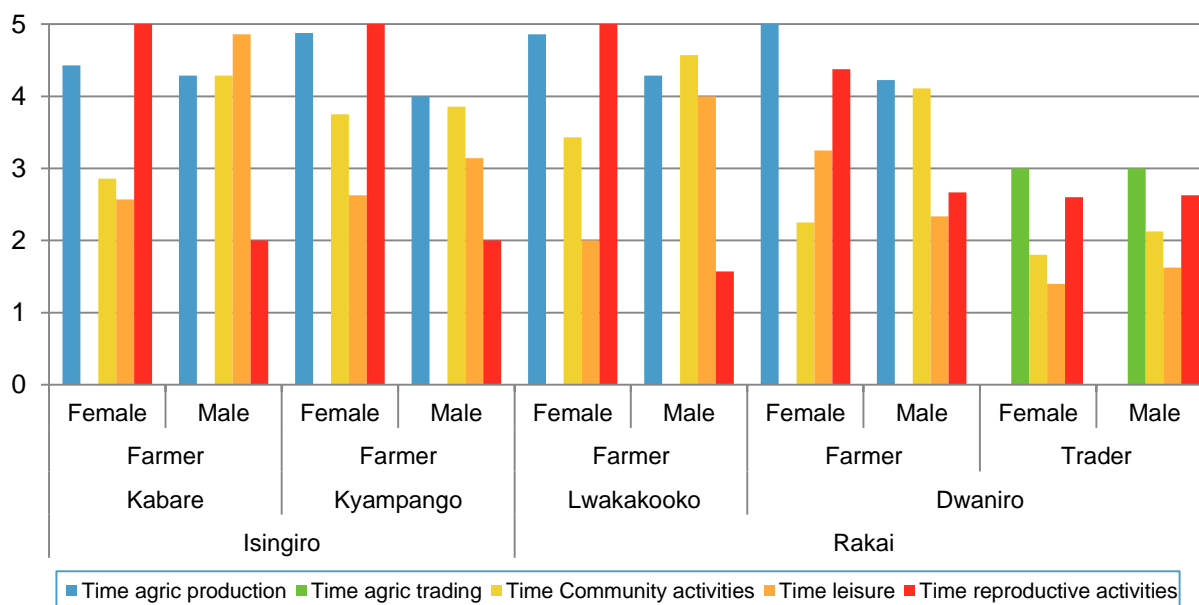


Figure 14: Extent to which female and male traders and farmers allocate their time

Reproductive activities

Most women viewed this as their domain, and men hardly ever help. Some women were of the view that such activities are never even regarded as 'work', after all you are naturally expected



to take care of them. Even when children help, there are chores that are left to the female child. For example, the boys cannot be asked to help with the cooking.

Community activities

Generally, men in both districts indicated that they participated in community activities more than women. Many men will go for community and group meetings and they will give their opinions on development issues.

We are the ones who clear the wells, repair roads, and also contribute towards the functioning of prayer places. (FGD Participant Men, Lwakaloolo).

Leisure

Men indicated that they allocate time for leisure, but this generally depends on the season and the level of intensity of the agricultural activities. However, both men and women agreed that this is not prerogative of men only:

These days, we plan for leisure and make sure that we get time for leisure. Men no longer have a big hold on us and we can go for leisure activities for as long as you ask for permission. We don't participate as much as men do in community activities. (Women FGD Participants, Dwaniro).

Although men work hard, they find time to go for leisure activities - even women go, these days you find many women in the bars. (Men FGD Participants, Kyampango).

Also male participants in Lwakaloolo indicated that women also make time to go for leisure activities. This implies that despite the heavy workload some women have managed to find ways to take time off to rest.

COMPREHENSIVE SCORE ON EMPOWERMENT PERCEPTION BY MEN AND WOMEN FARMERS AND TRADERS

Comprehensive scores presented in Figure 15 indicate that Kabare male farmers and Lwakaloolo female farmers had the highest empowerment perception scores (above 0.8). According to the WEAI scale, a person is considered empowered if they score 0.8 and above. This implies that the rest of the other respondents are not 'empowered'. Surprisingly, traders were amongst the least empowered, the male traders trailing in the entire group. Amongst female farmers, the largest contributors to women disempowerment were access to resources, ability to make decisions related to production and the use of their time. The greatest contributors to their empowerment on the other hand was leadership.

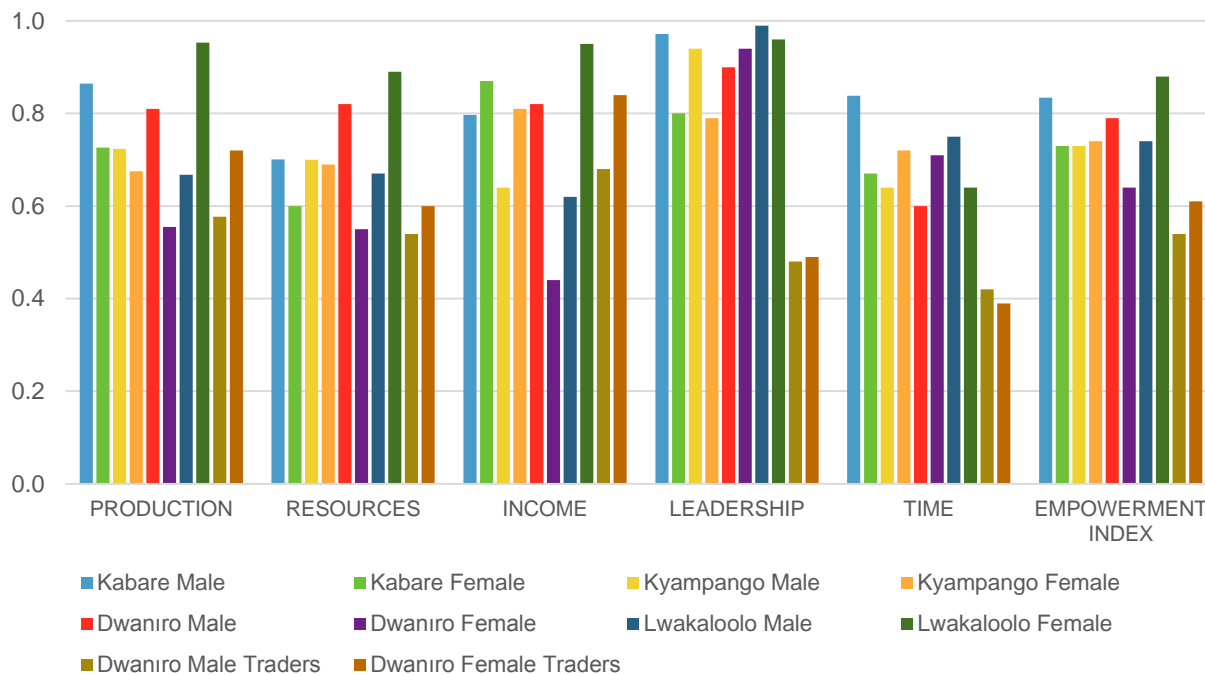


Fig 15: Overall perceived empowerment scores by sex, location and occupation

For the male farmers, leadership and the ability to make decision related to production were the greatest contributors to their empowerment; and access to resource and use of their time the most disempowering domains. Within traders, women exhibited higher levels of empowerment and the greatest contributors to this was ability to make decisions on their matooke business and the use of the derived income. Time and leadership were the greatest contributors to their disempowerment. For male traders, who were mostly brokers, their ability to make decisions on expenditure was the greatest contributor to their empowerment.

This implies that strategies must be designed to assist both traders and farmers to increase their access to resources – especially finance since it appears to be a cross-cutting element to all the actors interfaced with in the value chain. However, such strategies would have to be differentiated by sex to meet the varying needs of women and men. For women in Dwaniro, this would have to go hand in hand with strategies to increase their access to and control over benefits accruing from production and sale of matooke.



5. Discussion

As noted by Poats (1991) gender analysis is critical in research and development given that it clarifies how male and females roles interact thus leading to improved efficacy and effectiveness of development interventions. This study has clearly demonstrated the link between gender relations and the division of roles in cooking banana production, postharvest practices and marketing. As such, it provides a better understanding of the resource distributions needs and capabilities of the female and male farmers and traders as well as the existing inequalities that could deter adoption of the proposed postharvest innovations. While banana is primarily a 'male crop', our findings have demonstrated that women indeed play a major role in production and postharvest processes but are, by and large, excluded in marketing. This is further affirmed by Bardasi et al. (2007) who argue that gender inequalities constrain women more than men in competitiveness and entrepreneurship; especially in Africa. Such inequalities can be more amplified in cash or 'male' crops, just like cooking banana and indeed; as exemplified from our findings, women are often excluded from marketing matooke. However, though women play a major role in production, resource distribution usually does not favor their needs, as seen by their prioritized constraints in Section 3.

To ably address the identified inequalities and gender needs, the proposed strategy will attempt to address both practical gender needs and strategic gender interests. According to ILO (1998) practical gender needs are those that women and men identify in their socially accepted roles in society (e.g., care giving roles for women). Strategic gender interests, on the other hand, concern the position of women and men in relation to each other in a given society and may involve decision-making power or control over resources. As noted by CEDPA (2000), addressing strategic gender interests assists women and men to achieve greater equality and to change existing gender roles and stereotypes.

Amongst the identified constraints, a number affect both women and men albeit to varying degrees of scale. For women, for example, limited access to farming equipment included simple tools like hoes and rakes which ideally one would be able to purchase after selling one or two bunches of banana. But because many of them are excluded from the marketing arena, this remained a severe constraints and affected their efficacy in production. Men, on the other hand, mentioned equipment which are more costly like wheelbarrows. This difference in needs and access to resources is further affirmed by Kakooza et al. (2005) who note that the decision on who purchases and uses particular modern technological innovations such as improved seeds, fertilizer and equipment may already be predetermined, based on social and cultural dynamics of the society. Addressing such needs may thus calls for a differentiated strategy which in the case of women may need to challenge existing norms to enable their increased access to and control of benefits, or a say in how the proceeds from sale of matooke are used in the home.

Interestingly, amongst the most empowered respondents were women farmers from Lwakaloolo. Would it be possible to borrow a leaf on how they achieved this level of empowerment for the benefit of other women? Findings reveal that the 'empowered' women attributed this to improved relationships with their husbands who now consider them as



'partners' and include them in planning for allocation of resources and benefits accruing from the sale of matooke. However, they explained that this was not achieved over a short period of time – and required repeated sensitization and advocacy for their husbands by various development practitioners before they could realize this change. It has been noted elsewhere that sensitization and advocacy are important tools that positively impact on behavior change, but need careful planning since they combine innovation and creativity with grounding in theory and evidence.¹ Though recognized as a useful strategy, in this case, this need to be done in close cooperation with similar minded organizations in the project area given the short duration of the RTB-ENDURE project.

Access to credit is another constraint that was mostly mentioned by men, but also by women. Mostly, credit was required to reduce drudgery of the production activities that men were responsible for (e.g., land clearance), to procure expensive production inputs such as mulch and manure and also to expand their banana plantations. However, the fact that banana is a perennial crop with a long gestation period was highlighted as a major challenge to access timely credit to benefit the production processes. For women, credit was difficult to access due to failure to raise the desired collateral. Given the differing needs and constraints for credit, we again propose a differentiated strategy for credit – men may be linked to higher credit institutions while women could best be served by group loans since the collateral in this case is easier to obtain. This is in agreement with Doss (2001) who states that since men and women face different constraints there may be need for policy changes taking into account these constraints so that both men and women can benefit. However, it is important to note that women are not a homogeneous group. As noted by Ashby (2015), women in any social group can have different and competing interests. Whatever the social class they belong to, women have immediate, practical needs as well as strategic interests (control over strategic resources); hence the need for multi-pronged strategies that recognizes these differences. Quisumbing and McClafferty (2006b) further note that even household members prefer to act independently when it comes to decisions on utilization of resources.

Access to better remunerable markets is a constraint that the sub-project plans to address and has well laid out strategies to see this through. From the gender perspective, the strategy attempts to enlist ways to make sure that more women can access such markets, given the baseline situation. However, supporting female farmers to access the domestic and export markets will need extra efforts since this would have to go beyond actual sales but also access to and control over benefits.

The proposed strategy to purposively select female farmers to host mother gardens and macro propagation chambers though meant to increase women's access to quality seed of varieties demanded on the market, is a welcome initiative as it is also likely to increase women income from sale of seed. However, it is important to note that perceptions and adoption of modern technologies are sometimes accompanied by cultural factors that may affect how men and women embrace the technologies. It has been noted, for instance, that the new technological innovations tend to benefit men more than women, lessening the workload of the former and

¹ <http://ccp.jhu.edu/social-behavior-change-communication/>



increasing the activities carried out mostly by women, such as transplanting, weeding, harvesting and processing (Quisumbing and Pandolfelli, 2008). Others have also argued that modern biotechnology (such as tissue culture) is bound to benefit more men than women (Thomas, 2003), and that technology is highly gendered, based on access to specific resources (Kakooza et al., 2005; Buvinic and Mehra, 1990; Nompumelelo et al., 2009 in Kingiri, 2005). Nevertheless, social dynamics embedded in technological processes are still far too often overlooked in many gender and technology studies.

Promoting gender equality is thus an important part of a development strategy that seeks to enable all people, women and men alike, to escape poverty and improve their standard of living (World Bank, 2001). In conclusion, it is therefore important to continuously be cognizant of the fact that while men and women differ in their access to and control over the different elements embedded in the empowerment domains of focus in this study; efforts should be made to decrease this gap as this will spur their ability to harness the available market opportunities and thus provide benefits to both women and men.



6. Gender strategy and plan

Issue	Proposed strategy	Validated strategy and proposed activities	Timeline
Production			
Limited access to planting materials	Increase access to planting materials through macro-propagation and establishment of mother gardens	More women to own macro-propagation chambers and mother gardens since women have more time to take care of these gardens	- All chambers will be established by end of February 2016. Note: there is need to explore how to help farmers get appropriate technologies for water desalination
Limited access to agricultural inputs	Encourage farmer groups to undertake collective action in sourcing good quality manure and fertilizer	Manure is difficult to get as most of the households do not own animals. Households should be linked to credit institutions to obtain credit so that each household can own an animal Peeling bananas at farm level so that peels can be used as manure	- Involve technical staff who can train on compost making by April. - ITDG - Peeling at farm is still under study - Collaborating with World Vision to enable households access animals for manure by February 2016
Exclusion from planning and budgeting	Sensitization and training households on for the benefit of improved gender relations in households	Trainings should be conducted close to the households to enable equal participation of men and women	- Collaborate with World Vision to conduct trainings on ground by February 2016
Limited access to credit	Sensitization and training on saving for re-investment and credit management	Sensitizing farmers to form gender inclusive groups where they are able to collect money and provide credit for any member in need Organize farmers and develop business plans for an identified business opportunity so that they can be linked to SACCOs	- Link up with Dwaniro SACCO by May 2016



High postharvest losses	Explore processing and other shelf-life extension techniques	<p>Training on proper harvest time</p> <p>Planting varieties with longer shelf life like Kibuzi</p> <p>Initiate staggering of suckers' removal</p> <p>Proper transportation and packaging of bananas</p>	<p>- To be done by June 2106 after getting results from CIRAD</p> <p>Promoting of varieties with long shelf life is on going</p> <p>- Training on sucker staggering is on going</p>
Marketing			
Limited access to markets	<p>Link directly farmers to end-buyers</p> <p>Train farmers in gender responsive business planning and marketing</p>	Sharing farmer activity videos on social media to attract international buyers	Project is supporting female traders to buy from fellow female farmers

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ANNEX 1: Guide questions for the comparison of the five dimensions of men's and women's economic empowerment tool

Domain	Sub-domain	Guide questions
Production	Input into productive decisions	<p>To which extent are decisions made on the following:</p> <ul style="list-style-type: none"> • What variety to plant? What crop to grow? What acreage to allocate? • Allocation to food crops vs. cash crops • Adoption of new technologies/practices • Distribution of tasks/ labor Purchase of inputs/ equipment • Application of chemical/ fertilizer
	Autonomy in production	<p>To which extent are men/women deciding</p> <ul style="list-style-type: none"> • Where to sell • Who to sell to • What price to sell
Resources	Ownership of assets	<p>To which extent are the following assets owned</p> <ul style="list-style-type: none"> • Land • Farm Equipment • Cattle, goats and sheep • Pigs and poultry • Means of transport: bicycle, motorcycle car
	Purchase, sale or transfer of assets	<p>To which extent is there decision-making power to sell or transfer above-mentioned assets?</p>
		<p>To which extent is there decision-making power to purchase new assets?</p>
Access to services	<p>To which extent is there access to financial services:</p> <ul style="list-style-type: none"> • savings and credit cooperatives (SACCOs) • group lending • banks • MFIs <p>To which extent is there access to business development services (BDS), such as:</p> <ul style="list-style-type: none"> • Extension services • Farmer field schools • Demonstration plots <p>Trainings (record-keeping, business planning, leadership, etc.)</p>	

Income	Control over use of income	To which extent is there decided on expenditures related to: <ul style="list-style-type: none"> • Food • Education/ children’s school fees • Home improvement • Health care • Clothing • Household utensils 3 • Energy (fuel, electricity, other) • Water • Leisure
Leadership	Group member	<ul style="list-style-type: none"> • The extent of involvement in farmer organizations, cooperatives, committees • The extent of membership in above-mentioned organizations • The extent of leadership positions in above-mentioned organizations • The extent of involvement in multi-stakeholder platforms? • The extent of involvement in meetings at sub-county, district level?
	Speaking in public	<ul style="list-style-type: none"> • The extent of active participation in socio-economic groups • The level of comfort when speaking in public • The ability to express opinion
Time	Work load	<ul style="list-style-type: none"> • The extent of participation agricultural production activities crops • The extent of participation in reproductive activities • The extent of participation in community activities
	Leisure	To which extent is there time for leisure activities?