



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative



Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova)

Findings from a Qualitative Study on Gender Norms in Farming, Input Use, and Distribution in Manica Province
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Table of Contents

Acronyms.....	iii
Introduction.....	1
Research Design and Sampling Strategy	3
Study Limitations.....	5
Findings	7
Gender Norms Relating to Farming Activities.....	7
Key Findings.....	7
Detailed Analysis	10
Gender Norms Within the Input Distribution Market System.....	18
Female SHFs as Buyers and Users of Inputs	21
Key Findings	21
Marketing Channels	22
Women’s Preferences and Characteristics as Customers	24
Recommendations	25
Concept Idea #1: Woman-Focused Input Marketing and Distribution.....	25
Concept Idea #2: Female Agro-Dealer Model.....	26
References	29

Tables and Figures

Table

I: Gender Breakdown of Market Actors Interviewed	3
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Figures

1: Farm Size (by hectare) Disaggregated by Gender.....	4
2: Number of Dependents Disaggregated by Gender	4
3: Age of Farmers Disaggregated by Gender	4
4: Allocation of Planting Tasks (Interviews with Married Women)	10
5: Allocation of Planting Tasks (Interviews with Men)	10
6: Allocation of Crop Management Tasks (Interviews with Married Women)	11
7: Allocation of Crop Management Tasks (Interviews with Men)	12
8: Allocation of Harvest and Marketing Tasks (Interviews with Married Women)	13
9: Allocation of Harvest and Marketing Tasks (Interviews with Men).....	13
10: Allocation of Knowledge Management Tasks (Interviews with Married Women).....	15
11: Allocation of Knowledge Management Tasks (Interviews with Men).....	15
12: Gender Map of the Input Distribution Market System	18

Acronyms

CdA	<i>Casa do Agricultor</i>
CLUSA	Cooperative League of the United States of America
CRM	customer relationship management
FFS	farmer field school
FTF Inova	Feed the Future Mozambique Agricultural Innovations Activity
FTF RAMA-BC	Feed the Future Mozambique Resilient Agricultural Markets Activity – Beira Corridor
ha	hectare
HQ	headquarters
IAV	<i>Insumos Agrícolas e Veterinários</i>
K2	Klein Karoo
LEO	Leveraging Economic Opportunities
MSA	MarketShare Associates
MSD	market systems development
NGO	nongovernmental organization
OECD	Organisation for Economic Co-operation and Development
SHF	smallholder farmer
SMS	short messaging service
USAID	United States Agency for International Development
VBA	village-based agent
WEE	women’s economic empowerment

Introduction

This document summarizes key findings from the Qualitative Study on Gender Norms in Farming, Input Use, and Distribution in Manica Province (Gender Norms Study) undertaken by the Feed the Future Mozambique Agricultural Innovations Activity (FTF Inova).

The research objectives for the study were twofold: 1) map out men's and women's roles and responsibilities in farming and particularly the input distribution market system; and 2) conduct an analysis on women as buyers and users of inputs in terms of understanding the information flows, norms, and incentives driving women's preferences, household decision making around inputs, and the implications for marketing and sales strategies of input distributors. In addition, the research team also endeavored to capture information on gender roles within the supply chain management market system to the extent allowed by the research schedule and sampling strategy.

This report follows the following format:

- A research design and sampling strategy section outlining the research methodology and key demographic characteristics of the farmers and market actors interviewed as part of the research.
- Findings on gender norms relating to farming activities and women's participation in the input distribution market system as entrepreneurs, employees, and buyers, preceded by a section summarizing key findings, which have implications for FTF Inova's programming.
- Findings on female smallholder farmers (SHFs) as buyers and users of inputs, analyzing women's preferences and the implications for marketing and sales strategies of input distributors, preceded by a section summarizing key findings, which have implications for FTF Inova's programming. This section also includes a table summarizing female SHFs preferences for different marketing channels.
- A recommendations section summarizing key gender-based constraints and opportunities for FTF Inova's programming and presenting three potential concept ideas that can help the FTF Inova team test some of the study's findings and refine the business case proposition for gender-inclusive practices for input distribution.

Research Design and Sampling Strategy

Initial research took place from May 28 to June 8, 2018, with a team composed of Chimoio-, Nampula-, and Maputo-based FTF Inova staff, the Women’s Economic Empowerment (WEE) Specialist and two consultants/data collectors engaged by FTF Inova to assist with translations. The research took place in Manica Province, covering the districts of Manica, Gondola, and Sussundenga. This location was chosen for the research because the FTF Inova baseline data collection also focused on Manica Province and data from the baseline could be used to triangulate study data. In addition, a number of FTF Inova’s partner firms (e.g., Luteari, Klein Karoo (K2), *Casa do Agricultor* (CdA)) in the input distribution network market function have a strong presence in Manica Province.

The researchers employed a chain referral sampling strategy, interviewing lead firms and other actors involved in the market system down to the SHFs. The researchers traced these market actors both vertically (moving downward through the system, from input suppliers to agro-retailers, agro-agents, and SHFs) and horizontally (actors of the same or similar type, e.g., SHFs belonging to the same association/cooperative). For SHFs, the team employed a purposive sampling strategy, targeting farmers cultivating/owning more than one hectare (ha) of land and prioritizing SHFs currently using improved seeds and agro-chemicals.

The research team began with a goal of interviewing 18 SHFs (11 women, 7 men), as well as 17 market actors (2–3 interviews per market actor type). The research team exceeded these targets, conducting a total of 44 interviews, 24 of which were with SHFs (17 female, 7 male), and 20 of which were with market actors (10 female, 10 male).

Table 1: Gender Breakdown of Market Actors Interviewed

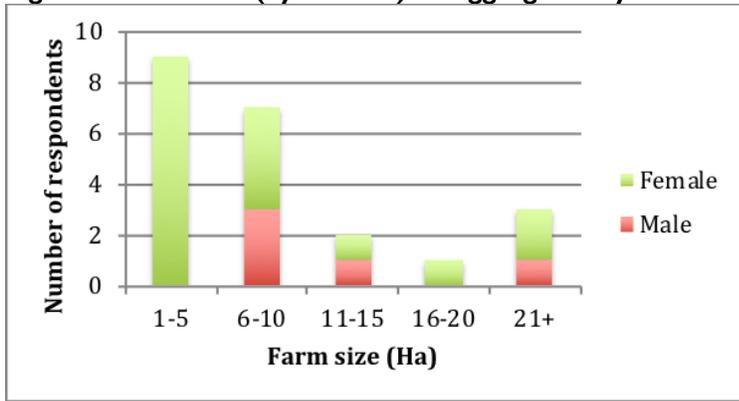
	Total	Male	Female
SHF	24	7	17
Government	1	1	0
Nongovernmental organization (NGO)	1	1	0
Large agro-input distributor	2	1	1
Input producer	5	4	1
Retailer	4	1	3
Agro-agent	2	1	1
Extension worker	2	0	2
Association	1	1	0
Large farmer	1	0	1
Buyer	1	0	1

The SHFs interviewed possessed the following characteristics, as outlined in Figures 1–3:

- The majority of farmers (75 percent), owned/cultivated farms between 1 and 10 ha in size.¹ Forty-six percent of SHFs were cultivating land between 1 and 5 ha, and 29 percent of SHFs were cultivating land between 6 and 10 ha. The female SHFs interviewed were more likely to own smaller farms between 1 and 5 ha in size (see Figure 1 for details).

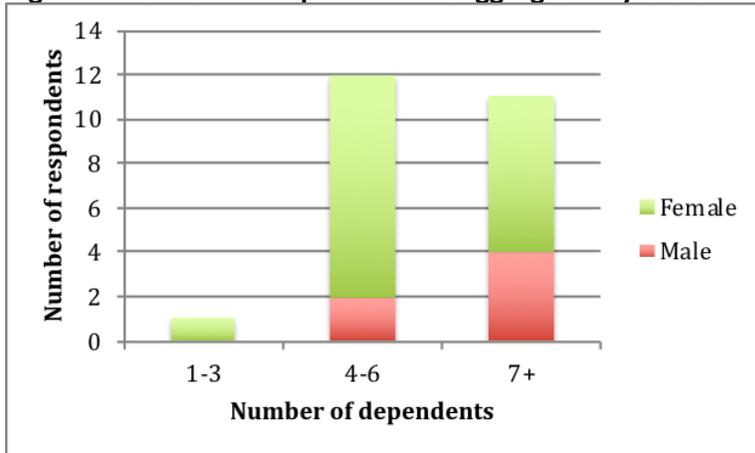
¹ The definition of “smallholder” adopted by FTF Inova is the same as the Mozambican National Institute of Statistics. FTF Inova classifies a smallholder as having less than 10 ha of non-irrigated land, or less than 5 ha of irrigated land, under cultivation. A smallholder is also a producer with less than 5 ha of horticulture or orchards in production (see *Instituto Nacional Estatística Moçambique, Censo Agro-pecuário, 2009–2010*).

Figure 1: Farm Size (by hectare) Disaggregated by Gender



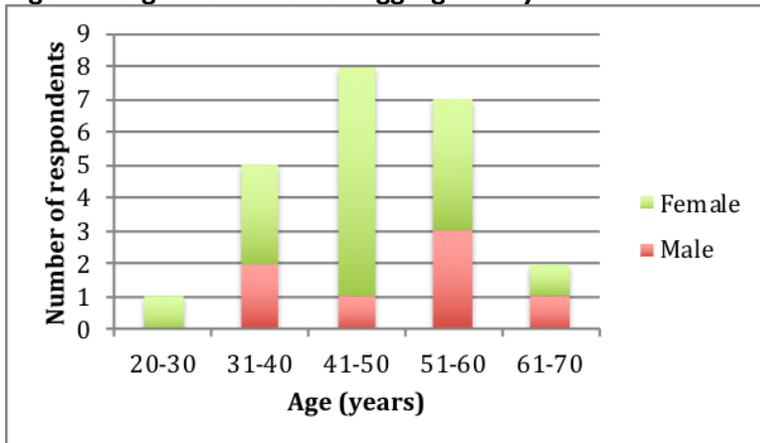
- 50 percent of the farmers had between 4 and 6 dependents, and 46 percent had 7 or more dependents (see Figure 2 for details).

Figure 2: Number of Dependents Disaggregated by Gender



- A majority of SHFs were in their 40s and 50s (see Figure 3 for details).

Figure 3: Age of Farmers Disaggregated by Gender



Study Limitations

Following are study limitations:

- Because the sampling strategy employed for the study focuses on market actors within the input distribution market system, findings on the supply chain management market system are limited.
- The study is focused on information flows within the market system, which is of particular interest to private sector partners. The study did not look at other flows, such as financial flows within the market systems, but endeavored to capture some of the constraints faced by female SHFs relating to modes and terms of payment for inputs.
- In households where both the husband and wife were interviewed, there was often a substantial difference in farming task allocation, particularly for crop management. It is likely that male interviewees were telling researchers what they thought the researchers wanted to hear, although it does show a degree of gender awareness on their part. During the interviews, men often gave defensive responses to certain questions. It is likely that they knew the researchers were seeking a gender balance in the allocation of farming tasks, and therefore male interviewees were not completely honest in order to provide a more positive representation. An alternative interpretation is that men are simply unaware of the degree to which they are sidelining women in these tasks.

Findings

Gender Norms Relating to Farming Activities

Research questions:

- **What are the roles and tasks assigned to men and women? How flexible are these roles and tasks? What are the indicative norms that determine the roles and tasks assigned to men and women?**
- **How are the decisions on input purchase and use made in SHF households? Who tends to be the key decision makers at the household level on input purchase and use matters?**

Key Findings

There is a gendered division of tasks. Labor-intensive tasks (planting, land preparation, harvesting) are usually done by members of the household, both men and women, as well as casual laborers and other community members, particularly for farmers farming more than 10 ha and female-headed households. Particularly strenuous tasks (clearing trees, fertilizer and pesticide application), however, are done by men. Time-intensive tasks (weeding, processing, selling at market) are done by women because they spend more time on the farm, while men might pursue other income-generating activities outside of the farm.

There is a gendered division of crops. Men are more involved in growing and selling staples for commercial purposes, and women are more involved in growing crops for personal consumption and horticultural products for selling at the local market.

Flexibility of gender norms relating to input purchase and use varies for different types of inputs. Gender norms around input purchase and use are more flexible for seeds, less flexible for fertilizers, and least flexible for pesticides. Any changes in who within a household performs these tasks would raise questions within the community, but there are no sanctions. Norms around input purchasing relate to women's mobility. Due to women's household and childcare responsibilities, as well as limited transportation options, men will usually go into town to purchase the inputs. Such norms also have to do with access to technical knowledge, where women are less informed on different agro-chemicals and their application. Norms around the use of agro-chemicals relate to the perception of the task as strenuous (i.e., loading fertilizer on and off the cart, carrying the pesticide sprayer) and that it is dangerous for children and by extension women (who handle children and food); women's lower literacy (i.e., inability to read the instructions on pesticide bottles); and women's access to technical knowledge on safe application. For fertilizers, gender norms are less flexible around acquisition and more flexible around application (the task is labor and time-intensive, and is therefore often carried out jointly by a couple). For pesticides, gender norms are more flexible around acquisition (the bag is sealed and therefore safe for the woman to touch) and less flexible around application. Gender norms are more flexible in instances where the man has other employment off the farm, is disabled, or is not present. The more involved a man is in activities off the farm (e.g., paid employment, running a business) the more leadership the woman takes on the farm and the more tasks she is allowed to do, including ones relating to input purchase and use.

“They buy fertilizer and equipment together because wives are involved in agricultural production – they know the calendar, when they need to buy equipment, when to apply fertilizer. They need to plan these purchases together. As [an] agro-dealer he is busy, has many meetings.”

—Male agro-dealer in Sussundenga District

“If she were to apply pesticide when the husband is around, people will talk negatively about it. If the husband is away, she can do it and people are more accepting because there is no alternative.”

—Female farmer in Sussundenga District

Gender norms are more flexible in non-traditional households. Gender norms are more flexible for female-headed households. However, some female-headed households will still choose to have certain tasks executed by the sons, even though the woman is the decision maker and managing the farm.

“A woman can do these tasks if needed, i.e., there is no man and she is a female-headed household like Donna Emilia. Society will be supportive of this, as is her case. However, if it is a joint household, a man should do these tasks. If a woman were to do them, people will talk, say she is the head of the household and the man is lazy. Some tasks will be difficult for her, for example, if she has a baby on her back she can’t go applying pesticide.”

—Male farmer in Gondola District

Women are integral to decisions around input purchase and use. In terms of purchasing inputs, women are more likely to be directly involved in purchasing seeds (particularly ones for horticulture) than other types of inputs. However, women are a vital part of the decision-making process around purchasing all inputs, including agro-chemicals. They are, in general, more involved in farming and spend more time on the farm while the man might be pursuing other income-generating activities. **As a result, women are often the first ones to spot a pest attacking a crop or recognize that the land requires fertilizer because yields have decreased. Because they are also the ones selling the produce at the market, they are able to spot new trends and suggest that the household test out new crops or varieties.** Even when men are the ones purchasing the seeds, they will usually consult the wife on which crops to plant and which seed varieties to buy, suggesting that women have significant influence over potential sales, especially for seeds.

“This year she bought a new seed variety for vegetables. She bought it because she saw someone at the market who produced using those seeds and the yield was really good. She is happy with the choice as the seeds germinated well.”

—Female farmer in Inchope District

“He bought four sacks of fertilizer. He bought it because in his farm there are parts of land that are a bit infertile. His wife suggested this, because she knew the yields were going down. They also consulted the extension worker. He is happy with the decision.”

—Male farmer in Sussundenga District

“She tells the husband what she needs and he goes to buy it. This includes pesticide, fertilizer, and equipment. When she plants a crop, she knows how to check for pests. She knows when they need pesticide. She knows about most pesticides. In her association, they have been trained on this.”

—Female farmer in Sussundenga District

Lack of access to knowledge and immobility are key barriers for women. A lack of access to knowledge and women’s immobility (due to household responsibilities and a scarcity of safe transportation options) are the two key barriers preventing women from being more engaged with input purchase and use. Women are perceived as being less knowledgeable about making input purchases, because they attend less training and engage less with extension workers. Men dominate these tasks, because they can easily travel and be away from the farm and the household, and have preferential access to knowledge and training opportunities.

Men are the gatekeepers. Among both women and men in traditional households, there is a strong perception that the man is the head of the household, is responsible for providing for the family, and requires respect. Because of the dominant position men have, they want to maintain control over input purchase and use (seen as a technical skill) as well as access to technical knowledge in the form of training, participation in association meetings, and engagement with extension agents. Men will use the argument that the woman has

to stay at home and look after the household and children as justification for keeping women away from such tasks. Even when women might disagree with this, they must respect the man's decision.

Norms are changing. All interviewees noted that things are improving, with a more equitable division of roles in farming between women and men.

“Things are changing. If extension staff are hosting demo days, they will try to have more women than men attend. Most extension agents are men, but there she is seeing more women recently.”

—Female farmer in Sussundenga District

“Some joint households are more flexible because they have received gender training. Things are changing and women are now more involved in decisions on the farm and taking on more tasks, even marketing.”

—Female farmer in Gondola District

More equitable households are generally better off. Households where women are more empowered and where there is a more equitable division of roles and responsibilities have higher farm productivity.² While not common, a handful of households in our sample have decided to split up some tasks on the farm more equitably. This decision is usually driven by factors such as the household has received some form of gender awareness training, the woman has control over some of the assets (e.g., owning the land from a previous marriage or having a bank account in her name), the woman has received some training and knowledge transfer, the woman has a strong role model (e.g., if her mother came from a female-headed household and managed the farm on her own, her daughter might be inspired to take a more active role in farm management even once she marries), or the man has some other wage employment off the farm.

“The way they divide tasks in their house – culturally it's not very acceptable. People are used to men going to work while the woman is at home. They saw that all the people following these cultural norms were struggling and can't even put their kids through school. Meanwhile, they have been able to put their kids through school up to grade 12, through their way of life.”

—Male farmer in Inchope District

Women have access to land. A surprising proportion of women own land. A common practice among communities in Manica seems to be the subdivision of plots. The man's plot is used to farm commercial crops for sale, while the woman's plot is used to farm crops for household consumption (with any excess to be sold at market) and horticultural products for sale at the local market. Women prefer this, because it gives them some financial independency and security. A number of women expressed interest in investing in inputs for their plots so that they can boost yields and sell more. Even though women's plot sizes are much smaller (1–2 ha), women's access to land suggests that women are a potential customer in their own right, but might prefer smaller input packages.

² Due to the qualitative nature of this study and the small sample size, it was only able to generate anecdotal evidence to support this statement. However, ample literature exists to show that farming households (both female-headed and joint households) where women are more empowered and have more equal access to and control over assets and resources, have higher productivity. The Food and Agriculture Organization's State of Food and Agriculture Report (2010) states “if women had the same access to productive resources as men, farm yields would increase by 20–30 percent.” More recent studies such as World Bank (2014), Diirro GM et al. (2018), and Farnworth et al. (2018) provide additional evidence on this topic.

Detailed Analysis³

Planting

Figure 4: Allocation of Planting Tasks (Interviews with Married Women)^{4, 5}

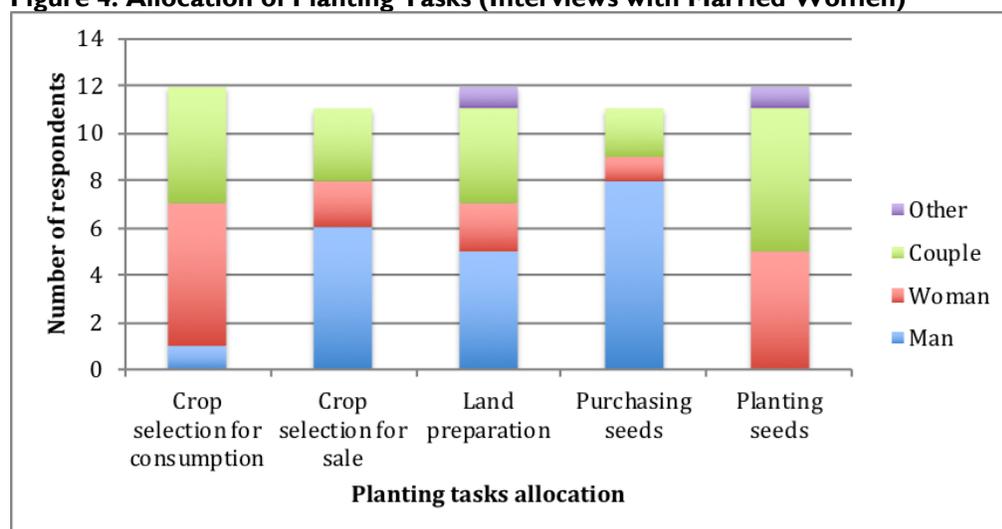
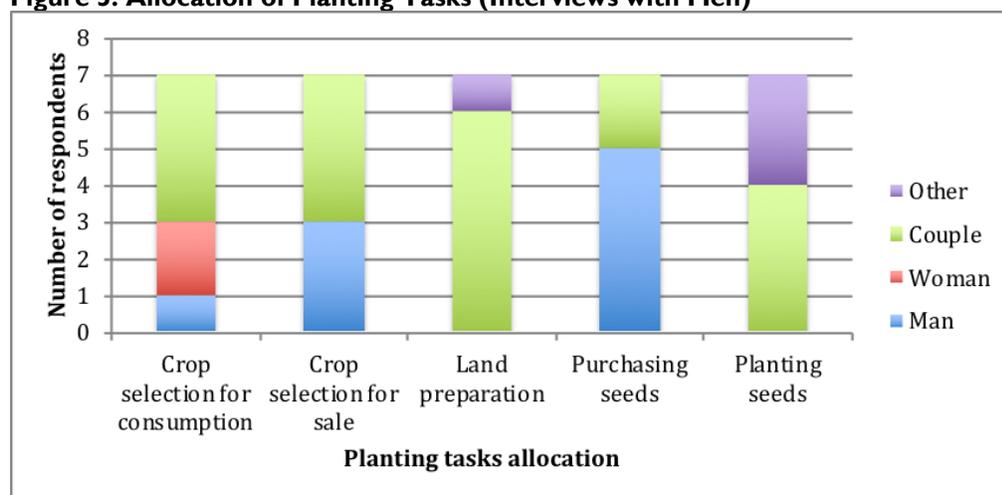


Figure 5: Allocation of Planting Tasks (Interviews with Men)⁶



Crop selection for home consumption is generally done by women or both partners, while crop selection for sale is generally done by men or both partners. This division has to do with gender norms relating to women's household responsibilities like cooking, preparing food for consumption (e.g., taking maize to the mill), and looking after the household. When selecting crops for sale, husbands generally consult their wives, but are usually the final decision makers. This relates to the issue of mobility—men leave the farm more frequently and are seen to be more aware of market demand. Interestingly, however, women are the ones

³ The y-axis in all graphs indicates number of respondents.

⁴ In Manica, most households are not formally married, but are co-habiting, so marriage here is used to denote co-habitation.

⁵ Only four female-headed households were surveyed as part of the research. The figures outlining their task allocation have been excluded because naturally most tasks were carried out by the women themselves as head of the household. However, where tasks were carried out by someone other than the woman this has been noted in the text.

⁶ Only married men were surveyed as part of the research.

selling goods at market and seem to be the ones who often spot new market trends and/or new crop varieties. Providing for the family is also perceived as the man’s responsibility, which therefore extends to decisions on what crops to plant and sell. Labor-intensive tasks such as land preparation are generally done by men or both partners. Men will usually take over the tasks when heavier machinery is involved (e.g., plowing using a cow or tractor), or when land preparation is more strenuous (e.g., removing trees). Planting is generally done either by both partners or women. As land preparation and planting are often done simultaneously, a common practice is that the man will prepare the land and the woman will follow, planting the seeds.

Households with larger farms and female-headed households will also often involve others in land preparation and planting. Often, this will be their children; extended family; neighbors; friends; members of the associations/farming groups to which they belong; or casual, often seasonal, workers. When casual workers are hired, men are more likely to be involved in land preparation and women in planting. For female-headed households, women lead all tasks related to planting, but will involve their children or casual laborers in land preparation and planting.

Men are usually in charge of purchasing seeds, although for about 30 percent of households, both partners will purchase seeds. This is due mostly to women’s immobility. Due to household and childcare responsibilities and limited transportation options, women are often unable to travel long distances to town to visit input/seed stores. As for all inputs, access to technical knowledge, where men have more access to training and learning opportunities, also contributes to men’s oversight of input/seed purchases. This division, however, varies across crops—women are more likely to oversee purchasing seeds for home consumption and horticultural products for sale at the local market, while men purchase seeds for commercial crops and staples. However, women are very much involved in decisions around purchasing seeds, especially with trying new crops, brands, and varieties.

“They are trying matuba seeds. It was her idea. She went to the village-based agent (VBA) and saw a demo plot and then suggested they plant this variety to her husband. She likes it because she can eat it and there is demand in the market. She suggested they divide the plot and try the new seeds on half. Her husband agreed. She consulted the VBA in making this decision. She is happy with her choice as the yield is higher with the new variety.”
 —Female farmer in Sussundenga District

Crop Management

Figure 6: Allocation of Crop Management Tasks (Interviews with Married Women)

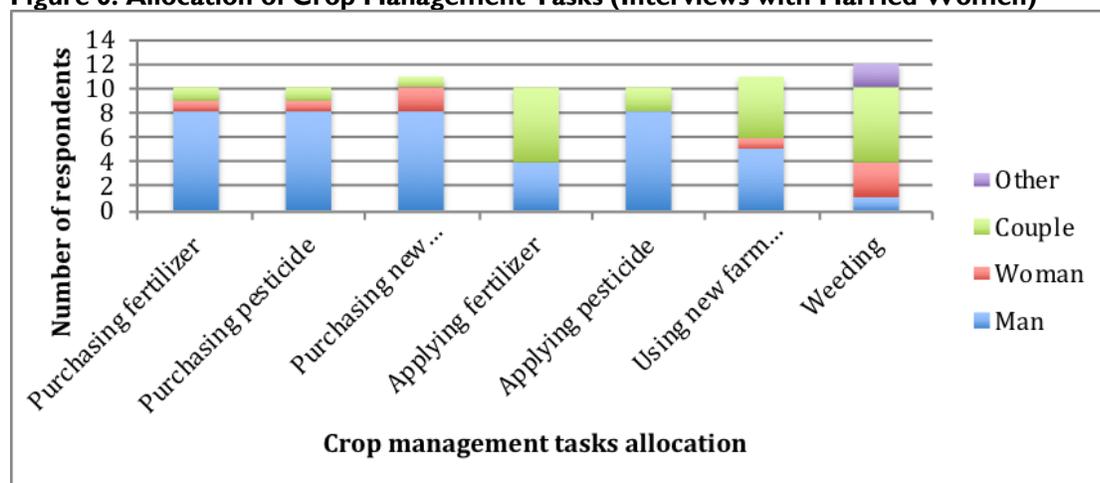
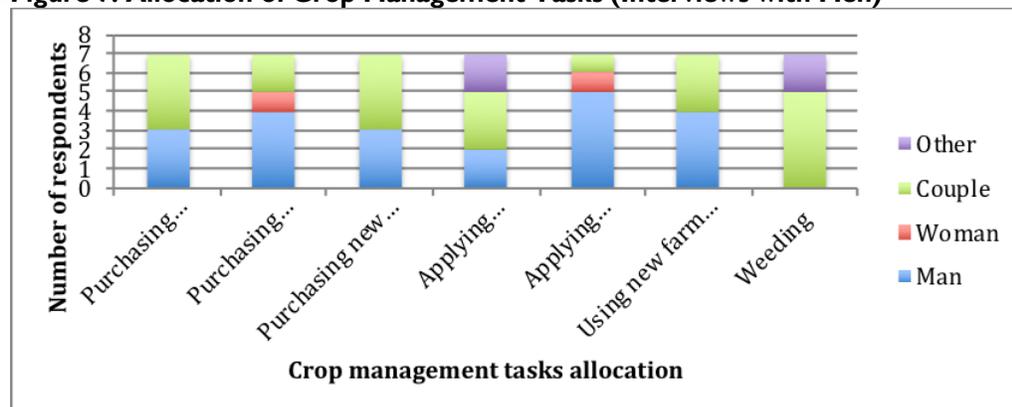


Figure 7: Allocation of Crop Management Tasks (Interviews with Men)



Men are primarily responsible for purchasing fertilizers and pesticides, and to a lesser extent, new farm equipment. As with seeds, this has to do with women’s lack of mobility and access to transport, household and childcare responsibilities that keep them at home, and lack of access to technical knowledge, training, and literacy (e.g., instructions for pesticides are often written on the package). There is also a perception among men that women are more likely to get cheated on price and quality when purchasing these inputs. New farm equipment is usually tested by the man as a sign of respect, but both the wife and the husband (as well as casual workers) end up using the tools.

There is a relatively strong norm regarding women being able to purchase and apply pesticides. Many SHFs perceive it as dangerous for women to apply and even handle (i.e., purchase) pesticides. SHFs have been told (often by extension workers) that pesticides are dangerous for children. Although most women do not bring their children to the field when carrying out such work, there is a concern that if proper cleaning and disposal procedures after using pesticides are not followed, women could bring chemicals into contact with children or food. This also has to do with women’s literacy levels (i.e., ability to read labels/instructions) and access to training opportunities, where they might learn about proper pesticide application. A few respondents also mentioned that men prefer to buy the pesticides and keep them locked up, because the women might use it to commit suicide.⁷ Pesticide application is also seen as strenuous work—the sprayer is heavy, and uniform application requires the farmer to be out in the field all day. However, the norm appears flexible; more educated farmers noted that a woman can apply pesticides if she has been trained and has the right protective gear.

“He knows how to apply pesticide and fertilizer, but his wife doesn't. He was trained by the extension worker. He applies pesticide because it’s dangerous, his wife can’t apply [it] because she is taking care of the baby. They were instructed by the extension service not to let women apply pesticide. They can both go buy fertilizer and pesticide because it’s protected and covered in plastic so his wife can take it home without touching it.”
—Male farmer in Sussundenga District

“His wife buys and applies pesticide. She purchases the pesticide because she is at the farm and knows when there is an attack on the crop, she can explain at the shop what is happening. She also applies the pesticide. Applying pesticide is not dangerous if you have the right equipment—you just need to have the right gear and be protected.”
—Male farmer in Sussundenga District

⁷ We were unable to explore this further in our research. According to Wagenaar et al. (2016), Mozambique does have the highest suicide rate in Africa and women make up 68 percent of suicide attempts and are more likely to use toxic substances to try to commit suicide, but this was usually rat poison rather than pesticide (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5133176>).

Because it is quite a labor-intensive task, the application of fertilizers is often done jointly by husband and wife. Gender norms are less flexible in acquisition and more flexible in use of fertilizers. Some farmers, particularly ones farming more than 10 ha and female-headed households, also hire casual workers, usually men, to assist with fertilizer and pesticide application.

Weeding, which is a time-intensive task, is done by either the woman or a couple. Some households, particularly ones farming more than 10 ha and female-headed households, also hire casual workers to assist, or engage their children. Men are perceived as too busy for this type of work and lacking in patience.

Harvesting and Marketing⁸

Figure 8: Allocation of Harvest and Marketing Tasks (Interviews with Married Women)

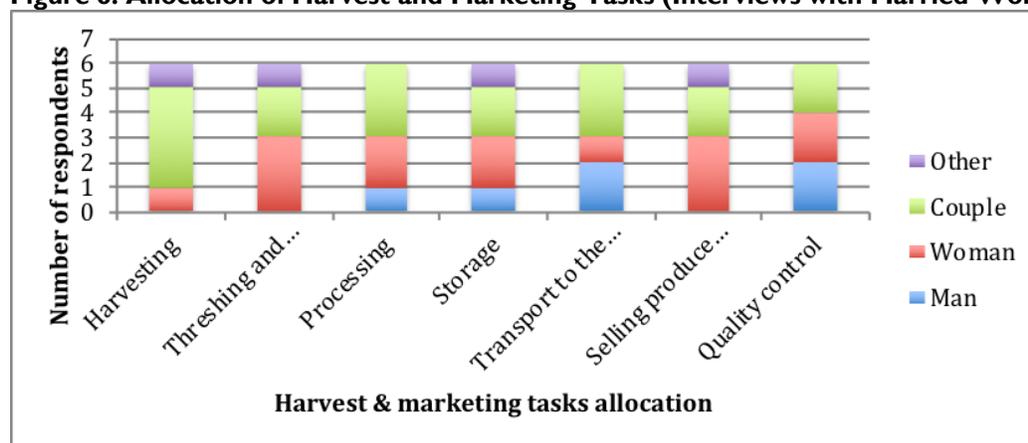
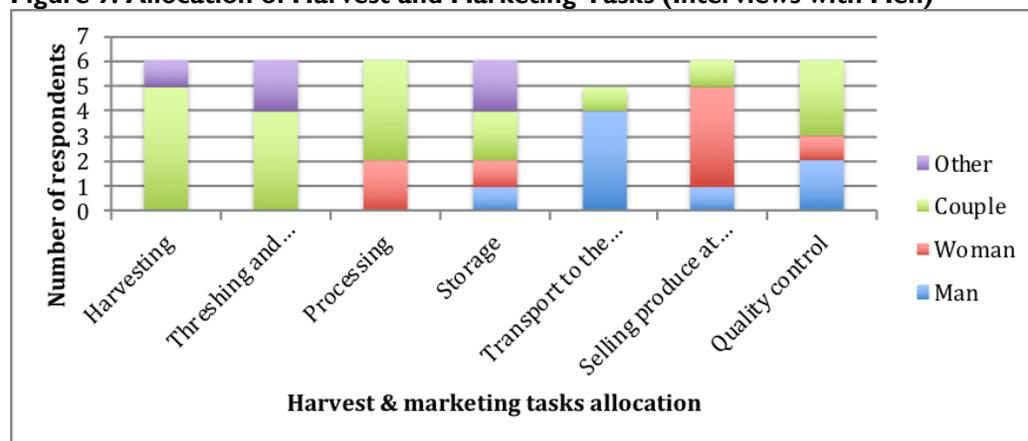


Figure 9: Allocation of Harvest and Marketing Tasks (Interviews with Men)



Harvesting is generally done jointly by the couple because it is a labor-intensive task. Households with larger farms, including female-headed households, often involve others in harvest and marketing tasks—either their children, extended family, neighbors, friends, members of associations/farming groups to which they belong, or casual (often seasonal) workers, both female and male.

⁸ Note that the sample for allocation of harvesting and marketing and knowledge management tasks is lower than the previous two groups of tasks. For certain interviews, researchers had to limit the interview time, for example, because the interviewee was busy and had to return to farm activities. Therefore, planting and crop management groups of tasks were prioritized because those were the primary focus of the research.

Threshing and shelling, as well as processing, are more likely to be done by a woman, because they are considered time-intensive tasks. It is seen as appropriate that women do them, because females have more “patience” and time, and stay at the farm while men might travel to town to undertake other economic activities. Because women will often process crops for both household consumption and sale at market, at the same time, this task is perceived as an extension of the woman’s household responsibilities related to cooking and ensuring that the family has food to eat. There is a negative perception in the community around men fetching water (used for cleaning maize) or taking maize to the mill for processing. As with harvesting, certain households will engage casual workers or their children to assist with these tasks.

“She takes care of threshing, shelling, and processing because it’s hard for the man to do these tasks. Also, it’s an issue of cultural acceptance. If a man does this task, people will think he has no wife or is a farm worker. This might be one of the reasons men don’t like going to the mill, because of what people will think about them.”

—Female farmer in Sussundenga District

There is not a pattern in the allocation of storage as a task by gender, because men, women, and casual workers engage in this task. In some communities, a traditional warehouse is used to store goods and women are perceived as specialists on this.

Quality control is generally undertaken by both as well, although the man is sometimes the final decision maker. This is a sign of respect for him as head of the household, even in instances where he does not participate much in other farming activities. In general, whoever is involved in selling the produce at market controls quality, because that person will have a better idea of market demand and the quality customers require.

Transport to market is generally undertaken by men. Although, in some cases, the couple will do this jointly or hire casual workers, particularly ones farming more than 10 ha and female-headed households. This, again, is linked to women’s limited mobility and transportation options. Negotiating transport and logistics services is perceived as a man’s task, with the view that it is easier for a woman to be cheated on these types of services, likely because most transport and logistics providers are male. Loading and unloading heavy bags of produce is strenuous and therefore perceived as a more appropriate task for men rather than women, who might also be carrying babies on their backs.

Selling produce at market is generally done by women. Although, in some cases, the couple will share responsibility of this task or hire casual workers, particularly those farming more than 10 ha and female-headed households. Selling at market is a time-intensive task that requires patience, so it is perceived as a task more appropriate for women. Women are also perceived as more mindful of family finances and ensuring that the family has sufficient food to eat, and therefore more responsible and committed to selling the produce. Most SHFs sell their goods either at the farm gate or at the nearest market (Sussundenga, Gondola, Inchope), with few having sufficient funds to hire transport all the way to Chimoio. A few SHFs are members of cooperatives that buy cash crops from them at set prices or have out-grower contracts with Shoprite, Companhia do Vanduzi, or Westfalia. Selling to a specific buyer/broker will usually be handled by the man, because it requires arranging transport/logistics to bring the goods to the selling point, and there is also a perceived risk in terms of safely bringing the money back home.

“His wife manages the stall at the market because she knows the costs to take care of the house, so she is careful when she is selling—she isn’t spending things lightly. She controls quality and does processing because she knows what will sell in the market.”

—Male farmer in Sussundenga District

Decisions regarding how to spend income from farming activities are made jointly, although money is usually ultimately controlled by the man. The woman is often allocated a portion of the funds for household expenses, and the woman will still need to request approval from her husband for larger expenses. The man retains his portion of the funds for personal expenses. Decisions regarding what inputs to purchase for the farm (especially seeds and fertilizers) will usually be made soon after harvest, and the household will

separate a portion of their joint income for purchasing inputs. Some households, however, purchase inputs using other income made from the farm. Only a handful of households have bank accounts, although interestingly, a number of women have bank accounts.

Knowledge Management⁹

Figure 10: Allocation of Knowledge Management Tasks (Interviews with Married Women)

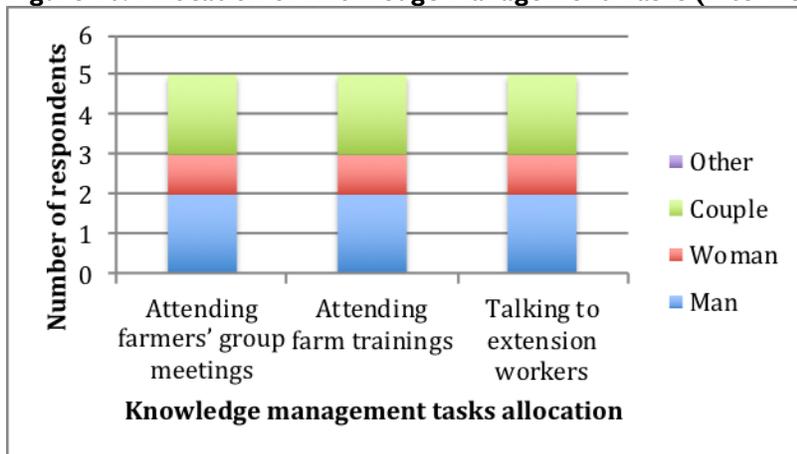
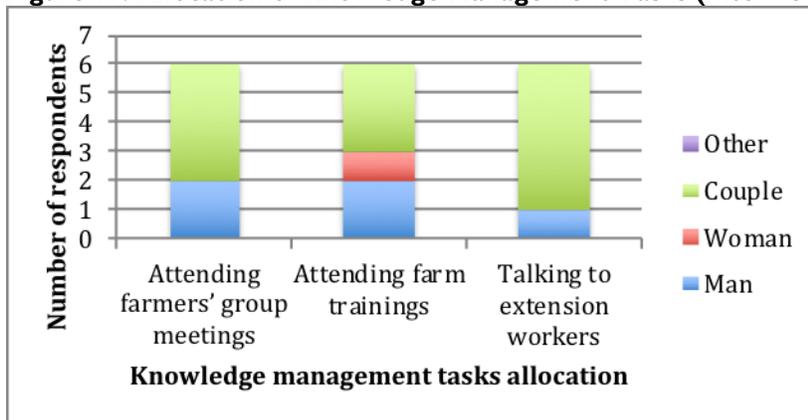


Figure 11: Allocation of Knowledge Management Tasks (Interviews with Men)



Men tend to dominate knowledge management activities and are protective of their access to knowledge.¹⁰ Men are protective of this knowledge, because they see themselves as head of the household and because they appreciate the material/financial benefits such opportunities will bring to them personally. Virtually any agricultural training is usually taken by men, unless the organization running the training explicitly requests that both spouses or women attend (there are a number of NGOs operating in Manica targeting women farmers for agricultural training). Even when organizations explicitly target both men and women, only the man may show up and choose to leave the woman at home.

⁹ Note that the sample for allocation of harvesting and marketing and knowledge management tasks is lower than the previous two groups of tasks. For certain interviews, researchers had to limit the interview time, for example, because the interviewee was busy and had to return to farm activities. Therefore, planting and crop management groups of tasks were prioritized because those were the primary focus of the research.

¹⁰ This was corroborated by interviews with market actors, especially VBAs and extension agents, who said that men are protective of their access to knowledge, and actively prevent women from accessing knowledge and learning opportunities.

This is linked to women's time poverty¹¹ and various household responsibilities, as well as lack of access to safe and affordable transportation services, especially when training is held farther away. These scenarios are also the case for farmer association meetings, which men tend to attend more than women.

“One of the factors stopping women from having more access to training, knowledge, and to participate to [sic] association meetings, is the fact that the man would feel threatened that she would take over the role of the head of the household.”

—Female farmer in Gondola District

Farmer associations/cooperatives are dominated by men, unless a specific women's subgroup/association exists. The Deputy Chairman of the Cooperative Moyo Unwe of Munhinga in Sussundenga District expressed that they struggle to get female leaders within the cooperative, because of women's time poverty, the responsibilities they have at home, and the fact that women prioritize other income-generating activities, because leadership positions are usually unpaid. The few existing associations specifically targeting women farmers are very active and receive support from both the government extension service and various NGOs. For example, the Women's Association in Inchope, created through the support of World Bank, purchases tapioca and maize from their members, which they process using bank-purchased machines, and sell them at a higher price. The association also receives training and support from a female extension worker.

Both female and male farmers interact with extension workers. This is usually decided by whoever is available when the extension worker visits the farm. There are no issues with female farmers talking to male extension workers when alone, but some female farmers prefer dealing with a woman, because they find them more understanding and patient. However, extension workers often do not speak the local language, which disadvantages the women who are less likely to be literate and/or speak Portuguese.

Extension workers, even female ones, also demonstrate a relatively low level of gender awareness. They noted that when dealing with married women in the presence of their spouses, the women tend to be shy and not active in engaging with extension agents, but in the absence of their spouses, the women are more active and engaged. However, extension workers are not proactive in speaking to or approaching women, because they see their service as demand-driven (i.e., extension workers expect farmers to request assistance from them), yet women often do not request assistance, because they are shy. While two female extension workers interviewed expressed that they did not think women were particularly interested in learning and that women had no preference for speaking to a female extension worker, interviews with women farmers indicated that they actually do want to learn and do prefer speaking to female extension workers. In addition, if an extension worker provides any farm training, the man is more likely to take it, with the idea that he will then train his wife, which in reality usually does not happen.

A handful of households were relatively more equitable in division of knowledge management tasks. This stems from an awareness that the couple jointly manages the farm and therefore both need to stay informed of good agricultural practices. All of the more equitable households noted that because of this practice, their farm productivity had increased.

Women are curious and interested in learning about improved farming practices, input use, and new technologies. They would like to receive this information directly rather than through their husbands, and some women actively seek out opportunities for learning, such as demo plots and farmer field schools (FFSs), which are close to home and where their participation is less likely to be prohibited by men. Extension agents are a key source of information for SHFs, with women particularly reliant on them for knowledge and advice.

¹¹ Time poverty is defined as a situation where some individuals do not have enough time for rest and leisure after time spent working, whether in the labor market, for domestic work, or for other activities such as fetching water and wood (Blackden and Wodon, 2006). Worldwide, there is a significant gender disparity in time poverty, with women spending an average of 4.5 hours per day on unpaid work—more than double the amount of time men spend on the same tasks (Organisation for Economic Co-operation and Development (OECD). This disparity is likely further exacerbated for SHF households.

Other Findings

A common practice among communities in Manica seems to be the subdivision of plots between husband and wife. The man has his plot and the woman has hers, but the woman might have to work on both plots. The man's plot is used to farm commercial crops for sale, while the woman's plot is used to farm crops for household consumption (with any excess to be sold at market) and horticultural products for sale in the local market. Women prefer this division, because it gives them some financial independency and security, (i.e., they can use the income from their plot however they please and they are able to have additional income they can draw on should their husbands not have enough). Some men expressed that men like to subdivide the plot so that they can have personal income for purchasing alcohol or to support a second partner/wife. In certain households where the woman has her own plot, however, she is required to sell through the man who can travel to the market and broker deals. In these cases, while the woman had land ownership, she was still disempowered in terms of her access to markets.

Mini Case Studies: Gender Norms in Three Farming Households

Maria, Female SHF in Sussundenga District

Maria and her husband own a 20 ha farm, 8 of which is currently being farmed. They grow maize, beans, sesame, and vegetables. She also runs a small kiosk, but is mainly involved in farming. Her husband is the Vice-Chairman of Cooperative Moyo Unwe in Munhinga and draws a salary from this role; he often travels into Munhinga and Sussundenga. Maria carries out most of the work on the farm, except for land preparation and purchasing inputs. Her house and farm are located in a very remote area and, because of her household and childcare responsibilities and limited transport options, she cannot travel into town to purchase inputs. She tells her husband what she needs and he goes to buy it. This includes seeds, pesticides, fertilizers, and equipment. She stated, "Her husband does the purchasing, because culturally it's the wife who should be at home and the husband going out doing the shopping. However, she could go to buy the inputs—she knows where to buy them. But, if the husband tells her he will go, she knows to respect that, that's how the social set up is." They both are able to apply fertilizers and pesticides, but she does the planting. For the same reasons, her husband also transports and sells the goods in the market, but presents the income to her and allocates her 70 percent for household expenses. They use the salary from his work to buy inputs. They usually sit down, discuss what they need to buy for the farm and house, and plan together. She participates in most knowledge-management activities, because her husband is busy and often away from the farm. Not all households in her community have a harmonious social set up—she believes her husband trusts her with applying pesticides and fertilizers, because she respects him and she has been trained and is literate so she can read the instructions on the label.

Anna, Female SHF in Gondola District

Anna and her husband own a 10 ha farm where they grow maize, beans, tomatoes, cabbage, onions, citrus, and bananas. The 10 ha farm is considered her husband's farm and they use it for commercial farming. She owns a 1 ha farm from her previous marriage, which she uses for home consumption and selling the surplus in the local market. She does not know how to do any of the activities related to purchasing and using improved inputs, but she would like to learn. On her farm, she does not use improved seeds or fertilizers, because she does not have money to do so and does not know how to buy and transport them. She cannot apply pesticides, because she does not know how to mix the chemicals and use the sprayer; she is scared of pesticides. She would like to participate in agricultural production training to get the same yields as her husband, but she is not allowed because of the home activities for which she is responsible. Her husband sells the produce from her 1 ha field, because she does not have access to the market. He brings the goods to the market and then gives her the money, telling her what the sale price was for the produce. It is unclear if he takes a portion of the proceeds, or if he is honest about the price. She plans to start using improved inputs on only a small part of her field, because she has limited money to purchase inputs.

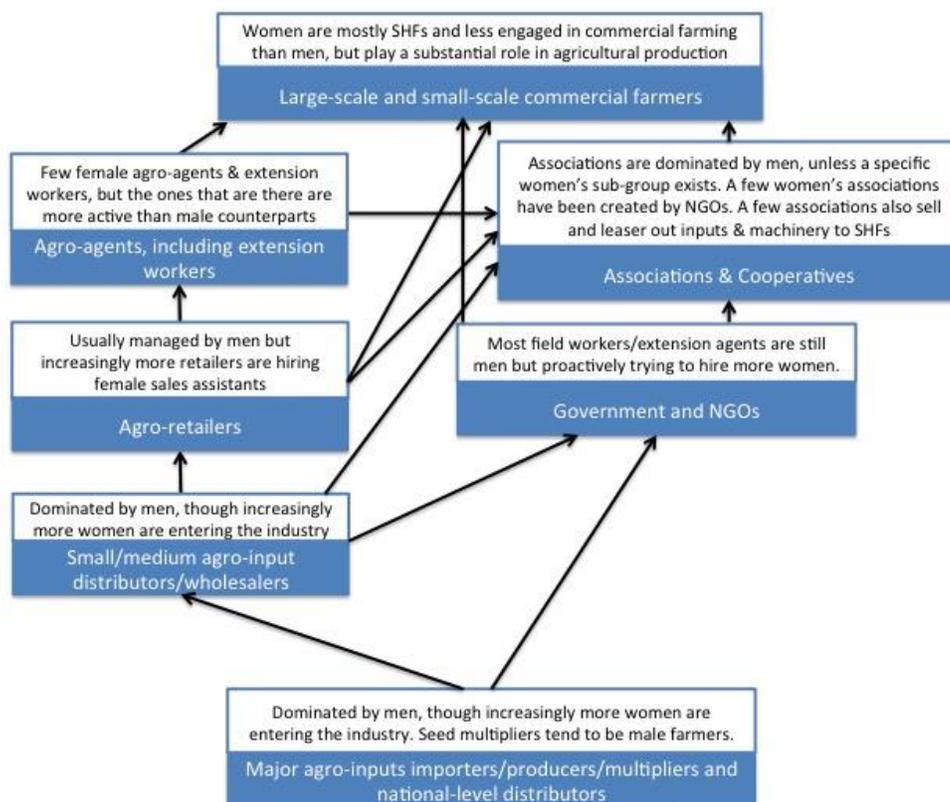
Edna, Female SHF in Sussundenga District

Edna is a widow and manages a 34 ha farm where she grows soya beans, maize, groundnuts, and beans. She inherited a 20 ha plot from her father and was given a 14 ha plot by the local chief when she became a widow. She manages the entire farm herself, although her daughter assists her with applying pesticides and fertilizers, because she has problems with her heart. She also sells all of their goods in the market. She hires casual workers to assist with land preparation, planting, weeding, and harvesting. She purchases inputs from the agro-dealer in Munhinga—she goes there because she can use her e-voucher/government subsidy at his shop. She also likes to go there because she trusts his quality and the shop is close to her home. Sometimes she travels to Chimoio to buy horticultural seeds because they have better and cheaper options than the local agro-dealer. She visits Savon Trading and *Insumos Agrícolas e Veterinários* (IAV). When she sees that other farmers have good-quality yields, she asks them where they buy their seeds and what variety they are. She said, “People like seeing a woman doing things in the farm. Before, the men used to prevent women from applying fertilizers and pesticides, but now they are allowing women to do this. If the woman is more involved in the farm management, it gives better results. The men usually move around, don’t stay on the farm. The woman needs to be able to run the farm while the man is away.” She sells most of her maize to the local cooperative, where she is a member and the secretary. For some of her goods, she takes them all the way to Chimoio—she asks the agro-dealer or the chairman of the cooperative if they have transport and what the prices are, and sends some of her produce with them.

Gender Norms Within the Input Distribution Market System

Figure 12 provides a gender map of the input distribution market system.

Figure 12: Gender Map of the Input Distribution Market System



Gender norms around women working as extension workers, village-based agro-agents, or agro-retailers appear to be changing. In the past, men would not have taken farming advice from a female agent, however, this has changed, and men are now comfortable consulting women.

“At the beginning, men were skeptical about being transmitted knowledge by a young, female extension agent, but they are now used to it and openly accept her advice.”

—Extension worker in Gondola District

“When he included more women as sales assistants in his input business, it grew more rapidly. Women are more focused. Now men accept women to be shop assistants in input shops and give advice. But, before they didn't used to.”

—Agro-dealer in Sussundenga District

It is difficult for companies and the government agricultural service to hire and retain female agro-agents and extension workers. This is largely due to fewer women (relative to men) pursuing an education in agriculture (although this appears to be changing), women relocating when they get married, and/or leaving work once their children are born. To increase the retention rate of female workers, the Provincial Director of Agriculture and Food Security encourages human resources departments to allocate female extension workers to nearby cities or in less remote areas.

Women are perceived as more trustworthy, dedicated workers who are more patient dealing with customers. A number of input distributors noted that even though there are fewer female agro-dealers/VBAs, they are more active and trustworthy than men, especially when they are given inputs on credit. However, there are certain constraints that employers perceive when hiring women. Women might struggle to travel to the field due to household responsibilities, they might have to leave work early occasionally due to childcare responsibilities, and they might move away when they marry, all resulting in the employer losing a worker they have invested in and trained. Another challenge for female agro-retailers/agro-agents is security, especially when their shops are in very remote areas. A number have had their shops robbed, although it is unclear if they were targeted because they were female.

Agro-dealers and agro-agents recognize women as an untapped market. Women are more engaged in agricultural production than men and participate in most decision-making processes regarding the purchase and use of inputs, and therefore have an influence over potential sales. Extension services also recognize this, and believe that engaging more women in the use of inputs and new farm technologies will increase productivity on farms. However, agro-dealers and agro-agents also recognize that in most households, the man is the final decision maker. As such, they prefer dealing with men, because decisions can be made quicker, while a woman will always need to consult her husband.

Distributors in cities/headquarters (HQ) do not seem to recognize women as a potential market segment (with the exception of K2 and Lutarei). Perhaps this is because they see more male than female customers visiting their retail shops in town. Data sharing between agro-dealers/agro-agents and HQ is a challenge, and most data are not gender disaggregated. The customer relationship management (CRM) systems that some companies are currently putting in place with the support of FTF Inova will help mitigate some of these issues with the flow of information. CRM systems will also enable retailers to make a distinction between the shop visitor and the decision maker. FTF Inova will have to work with market actors to find creative ways to address this.

Seed multiplication is mostly done by men. This is because it requires a larger plot size, technical knowledge to ensure quality, and travel to and from the seed processing plant. However, a few respondents noted that although the husband might be seen at the front of the business and the one bringing the seeds to the processor, women are actually doing most of the work with respect to seed multiplication. In addition, a number of seed multipliers/processors hire women particularly for sorting and grading seeds, because they are more dexterous and patient.

Businesses and business networks in Mozambique are male-dominated. Even in businesses that are co-managed by a man and a woman, the man will tend to deal with logistics, procurement, negotiations, and

engaging clients in the field, because it is easier for the man to deal with suppliers and customers who are predominantly male and to travel to remote areas.

Mini Case Studies: Market Actors' Views on Gender Norms

Klein Karoo (K2)

K2 Seed Marketing Mozambique is a branch of K2 Seed Marketing South Africa, a company that also operates in Zimbabwe and Zambia. K2 produces cereal seeds as part of an out-grower program where they provide inputs to farmers and then deduct them at harvest time. Most of K2's seed multipliers are men. Their vegetable seeds, as well as any shortfall in cereal seeds, are imported from their sister company in Zimbabwe. K2 is expanding rapidly in Mozambique, with increasing sales and a growing staff; 60 percent of K2's sales are through VBAs and agro-dealers. Under the VBA model, the agents are given inputs on credit at discounted prices (20 percent), which they must pay back to K2 based on what they sell; however, they get to keep the 20 percent mark-up they charge to customers. K2 proactively recruits women as VBAs, because they perceive them as more patient, hard-working, and trustworthy. They have had bad experiences with male VBAs in the past, where many did not pay back credit. While the majority of agro-dealers are men, K2 hopes to help some of their female VBAs graduate to agro-dealers. One challenge K2 has perceived when working with female VBAs is that they tend to be busy due to their home responsibilities, and have less time for organizing marketing activities and meetings with farmers. K2 expects, however, that as VBAs start making more money from selling inputs, they will start prioritizing this work and opt to hire someone to help them with childcare. K2 also hires agronomists, the majority of whom are women. K2 largely selects agronomists based on skills, but they also try to attract female applicants, because they believe female agronomists can speak more effectively to women. According to K2, getting sufficient female applicants for such positions is not an issue.

As part of its marketing strategy, K2 focuses on women, because they believe women have considerable influence on input sales. While the man may have the buying power, he consults the woman, because she is the one working in the field and interacting more with the community and is therefore knowledgeable about what grows well and what others are planting. Men do not have as much knowledge of what is happening in the field, but because they go into town for other business, they will purchase seeds on their wife's behalf. Because of their household and childcare responsibilities, women cannot travel into town to purchase seeds. According to K2's Sales and Marketing Manager for Manica Province, "Women are the ones who work in the field mainly—they are the ones using the inputs. The happier they are, the more they will ask the husband to buy inputs." As part of their marketing strategy, K2 features women rather than men in their marketing and promotional materials. They also distribute samples of hybrid seeds at demo plots and fairs, and organize demo plots and roadshows that, in their view, are particularly effective for reaching women. K2 is planning other activities such as radio shows and giving out branded promotional materials (e.g., *capulanas*, dishware) targeted at women. They are also hoping that their new CRM system will help reinforce their strategy for reaching more women, because they will have geo-tagged and gender-disaggregated data for all their customers.

Westfalia

Westfalia is a grower and supplier of subtropical fruit (lychees and avocados) to international markets. Westfalia has approximately 170 employees in their commercial farming and packaging business in Mozambique. In Manica, they have approximately 50 SHFs in their supply chain who produce lychees. Westfalia's corporate culture puts a strong emphasis on making sure that their policies, including recruitment, are gender inclusive. This is partly because they received a loan from World Bank, which has pushed for the adoption of this culture. Many of their SHFs are women, but this does not determine their recruitment policy—they work with any SHF who has lychees and wants to sell them. Westfalia does not feel that working with women SHFs brings any particular benefits to their business, and they do not have the impression that women are better producers or are better at repaying debt. They are indifferent on working with men or women. The business case for Westfalia working with women is uncertain from a contract farming point of view. The key to women's empowerment according to Westfalia is twofold: education and role models. Westfalia does not believe that women's empowerment can happen to the scale desired within this generation. Currently, girls' aspirations are to be wives and mothers, and they do not even consider playing a more active role in commercial farming, because they do not know what that could look like. However, there are a few woman-led households that Westfalia works with that they feel are inspirational, and they hope they will inspire young girls in the future to take a more active role in management of the farm.

Female SHFs as Buyers and Users of Inputs

Research Questions:

- What are the preferences, key relationships, and flows of information that are affecting household decisions around the purchase and use of inputs? Who are the key influencers?

Key Findings

Women are sensitive to distance. Due to constraints women face around mobility and access to affordable and safe transport options, the main determinant of where women buy their inputs is distance.¹² Marketing and distribution practices that address issues of distance, such as VBAs and mobile input shops, will be most effective in reaching women.

“Women are more sensitive to distance—they like his shop because of the close distance as it saves them time and transport costs.”

—VBA in Sussundenga District

Women are hungry for knowledge. Women value marketing and distribution approaches that offer them an opportunity to acquire practical knowledge relating to agricultural practices and input use. Such examples include demo plots, field days, and FFSs.

SHFs have limited sources of agricultural information. The geographical spread of farms means that farmers are relatively isolated and have few reliable influencers for agricultural information. Farmers predominantly consult extension workers and VBAs for information on the purchase and use of inputs, although they occasionally obtain recommendations for specific input brands/varieties/vendors from other farmers, especially those they meet at the market. Women are perceived as more embedded within the local community and therefore more informed on what others are planting, which inputs work well, etc. They are also the ones predominantly selling the produce in the market, and therefore engaging with other farmers and traders. Few farmers consult their neighbors or even fellow association members. All farmers (both male and female) consult their spouses on any decisions relating to the farm, including the purchase and use of inputs, with the exception of female-headed households where a husband is not present.

SHFs have limited access to marketing information. SHFs, both women and men, do not have sufficient marketing information on the prices of goods. They mostly consult others in the market, although some have contacts with brokers and traders in larger towns, whom they call to check on prices. None of the farmers interviewed receive short messaging service (SMS) information on prices from the government/Cooperative League of the United States of America (CLUSA) market information service, however, a few have occasionally received messages from the government telling them not to sell their goods until prices increase. Awareness of the government/CLUSA market information service is low among extension agents.

Women are an untapped opportunity. The input retailers interviewed, particularly VBAs and agro-dealers, recognize that women are an untapped business opportunity and that women do participate in most decision making regarding production. As such, they consider women to have an influence over potential sales of inputs.

¹² According to a review of empirical literature conducted by Peterman, Behrman, and Quisumbing (2010), women are less likely to have access to agricultural inputs than men, despite a similar propensity for adopting new technologies such as fertilizers and improved seed varieties.

Marketing Channels

Marketing channels shaded in dark green are the ones most appropriate for reaching women.

Marketing Channel		Smallholder Farmer (SHF) Preference	Female Preference
Radio	<i>Casa do Agricultor</i> (CdA), Klein Karoo (K2), <i>Insumos Agrícolas e Veterinários</i> (IAV), and a male agro-dealer in Sussundenga District use radio to engage farmers; however, they do not currently have data on the effectiveness of radio programs for reaching SHFs, including women.	Radio does not appear to be a very popular source of information for SHFs. Many SHFs interviewed did not own a radio, or if they owned one, could not name any specific agricultural programs. Early in the morning is likely the best time to reach SHFs. Community and provincial stations, as well as those broadcasting in local dialects, seem more popular with SHFs.	Women seem less likely to listen to radio—confirmed by the Feed the Future Mozambique Resilient Agricultural Markets Activity – Beira Corridor (FTF RAMA-BC) study, which found that more men than women listen to radio in Manica Province. ¹³ This seems a unique situation for Mozambique, because in other countries, such as Malawi, radio usage is especially high among women.
Television	K2 is planning to run television ads, featuring male and female farmers. They are, however, concerned about costs.	None of the SHFs we spoke to own a television. One female farmer mentioned “ <i>Escola do Agricultor</i> ” as a programme she sporadically watches. Television channels are likely a more effective way for reaching medium or large commercial farmers.	
Social media/email	CdA uses email and social media to reach commercial farmers.	None of the SHFs we spoke to own a computer. A few own a smartphone, but the services they used were unknown. Social media/email is a more effective way for reaching medium or large commercial farmers.	
Short messaging service (SMS)/ telephone	This approach is fairly under-utilized by firms. A few have informal customer helplines where they give out telephone numbers of staff to customers. K2 has been trying to establish a call center with Vodacom and is also planning to use SMS to engage farmers once their CRM system is operational.	All SHFs have basic telephones and use them mostly to consult other farmers/traders on market prices. Few SHFs seem to receive any agricultural information through their telephones.	Women seem to have more limited access to telephones, often sharing one with their spouse. However, the few companies that run helplines noted that it is usually women who call with complaints or to ask for advice.
Flyers, posters, billboards	K2, IAV, and CdA are currently utilizing these. K2 proactively features women in all of their marketing materials.	A number of SHFs mentioned finding out about a product by seeing it on a poster or billboard in town.	Because women are less likely to leave the farm and visit town where such materials might be displayed/ distributed, these might be slightly less likely to reach them. However, these materials play an important role in challenging negative stereotypes around women using inputs.
Referrals	A number of SHFs said that they heard about a particular input brand or vendor through a recommendation by another farmer and/or extension agent. However, none of the companies interviewed have a formal customer referral system where, for example, the referee receives a discount/points for every customer he/she brings in. This is something to explore as part of the CRM system that FTF Inova is funding.		
Coupons	CdA was the only company using coupons, and uptake was higher among men than women.		
Selling on credit/	Retailers/agents that allow customers to buy on credit	SHFs prefer to use agents/retailers that accept e-vouchers	A number of women mentioned the e-voucher system to researchers and

¹³ ICC FTF RAMA-BC Gender Analysis.

Marketing Channel		Smallholder Farmer (SHF) Preference	Female Preference
accepting government e-vouchers	are rare. A number of retailers/ agents accept government e-vouchers as partial payment for inputs.	as co-payment or agents/retailers that allow them to buy on credit.	how it has enabled them to access inputs. According to the Food and Agriculture Organization, women make up 32 percent of all e-voucher beneficiaries in Manica Province. ¹⁴
Demo plots	A number of agro-dealers/input distributors use demo plots to engage farmers. One noted that when demo plots are managed by women, they do a much better job.	Demo plots are popular among SHFs as a way of finding out about available inputs, their use, and new technologies.	Demo plots are a particularly effective way to reach women. Being more risk averse due to limited disposable income, women like to see the products in use before committing. Demo plots also provide women with a learning opportunity on input use and good farming practices.
Distributing samples of inputs	A few agro-dealers/input distributors expressed interest in trying this approach. Only K2 currently uses samples as a marketing strategy, but a female agro-dealer in Sussundenga District has plans to do the same.	Testing is a common technique used by SHFs before committing to a purchase. For example, SHFs will subdivide the plot and try different varieties of seeds or a small amount of herbicide before making a larger purchase. Farmers therefore prefer to purchase smaller volumes/ quantities before committing.	Women have more limited disposable income than men and often smaller farm sizes (once the farm has been subdivided), and are also more risk averse. Mini-packs are therefore an effective way of reaching women, allowing them to test inputs before committing to a larger purchase.
Engaging farmer groups/ associations	Only a few market actors are engaging farmer associations/groups as a way to reach SHFs, but a number of them recognize it as a good way to reach women.		Associations are an effective way to reach women, but associations focused specifically on female farmers are still scarce. In general, farmers' associations are dominated by men.
Field days, market fairs, roadshows	These events are popular with both input distributors and agro-dealers. One agro-agent runs an annual field day where he presents prizes to the best clients.	Field days are popular among SHFs as a way of finding out about available inputs, their use, and new technologies.	Field days are particularly effective for reaching women, because they allow them to source inputs closer to home and learn about input use. Holding field days on market days when women are more likely to be in town/at the village center could help target more women.
Distributing promotional merchandise	Input distributors and agro-dealers often hand out promotional merchandise such as branded t-shirts and hats at field days, market fairs, and other events.		Distributing merchandise, which might appeal to women, has been identified as an effective strategy by K2. They intend to distribute <i>capulanas</i> , headscarves, and branded dishware at their market fairs.
Mobile input shops	IAV had, at one point, used mobile input shops to distribute seeds to SHFs, which proved to be popular. K2 plans to run mobile input shops to reinforce their presence at field days, market days, and roadshows.		Although rarely used (IAV was the only firm to have engaged this method), mobile input shops are a particularly effective way for reaching women due to women's lack of mobility and access to transport.
Village-based agents (VBAs)	VBAs are currently being utilized by K2, which actively hires women for these roles, and Luteari.	It does not matter to male farmers if they buy from a male or a female agro-agent.	This is the most effective way for reaching female farmers due to women's lack of mobility and access to transport. While the notion that women prefer dealing with female

¹⁴ Retrieved from <https://www.ictworks.org/electronic-vouchers-agriculture-mozambique/#.WzZCX9gzY0o>.

Marketing Channel		Smallholder Farmer (SHF) Preference	Female Preference
			VBA has yet to be verified, K2 believes that they do.
Farmer field schools (FFSs)	It is unclear to what extent FFSs are currently being used by input firms to market inputs to SHFs. However, they could be an effective way of reaching farmers; for example, a brand could donate inputs to the extension service to be used as a demonstration tool in FFSs, providing a branding opportunity.		According to the government extension service, FFSs are particularly popular among women, because anyone is free to participate and engage in the activities.

Women’s Preferences and Characteristics as Customers

For women, the most important determinant of where they buy inputs is distance, due to household responsibilities and constraints on mobility. They are much more reliant on village-based agro-agents and shops than men who can travel into Chimoio. The few women who have seen mobile input shops decidedly like the approach.

We were unable to verify whether women prefer to engage with female agro-agents/agro-dealers/ input vendors. While women are more comfortable engaging with female extension workers than their male counterparts, they did not express such a preference for VBAs/input vendors. K2, however, has expressed that they focus on recruiting female VBAs and agronomists, because they are more effective at engaging female farmers.

“The marketing techniques that are related to agricultural production attract more women, because the man isn’t there to do agriculture. For example, when they explain how to apply fertilizer or do irrigation, the women are more responsive.”

—Agro-dealer in Sussundenga District

Marketing or distribution practices that provide opportunities to learn about good agricultural practices and input use are particularly attractive to women, who face disadvantages in terms of knowledge access. These include demo plots, field days, and FFSs. By providing better product-use education to VBAs, input distributors can also help cascade this knowledge to their female customers.

Due to their limited mobility, women are more loyal to input vendors. For them, convenience and trust in the vendor matters most, and they are also much more reliant on the vendor for advice on brand selection and application. Men, on the other hand, are more likely to shop around and place greater emphasis on their own perception of product quality.

There is some brand awareness among SHFs, but quality is the most important variable. Farmers do not appear to be particularly loyal to brands; they make decisions based on yields from the previous harvest, advice from the extension agent or agro-agent/vendor, and by consulting other farmers selling in the market (based on their perceived quality of other farmers’ crops).

Testing is a common technique used by SHFs before committing to a purchase. SHFs subdivide their plots to try different varieties of seeds or a small amount of herbicide, therefore farmers prefer to purchase smaller volumes/quantities of products before fully committing. Similarly, women have smaller plot sizes since the farm has been subdivided between husband and wife, as well as less disposable income, therefore they are risk averse and prefer testing out products before committing to a larger purchase. Selling micro-packs of inputs can address this behavior, improve affordability for women farmers, and improve access through community-based distribution networks.

Women like herbicides, because it helps significantly with weeding. This is one of the most time-intensive tasks on the farm.

Recommendations

The findings from this study have highlighted a number of **opportunities** for FTF Inova¹⁵ and its private sector partners to ensure greater inclusion of women within the input distribution market system:

- Women are an **integral part of decisions around input purchase and use**, and have significant influence over potential sales, especially for seeds.
- **Women are more informed about the needs of the farm.** Women spend the most time in the field, and lead most harvesting and processing activities. They are therefore more aware of the type of inputs that work better, what leads to better quality and yields, and what the crops need.
- A surprising proportion of **women own land**. Even though the women's plot sizes are much smaller (1–2 ha), women's land ownership suggests that they are potential customers in their own right.
- There are increasingly more **women entering the input distribution market system as agro-dealers, retailers, agents, and extension workers**. They are generally recognized by the industry as being more trustworthy, hard-working, and better at dealing with clients.

However, a number of **gender-based constraints** are preventing women from accessing and using inputs:

- Due to constraints women face around **mobility and access to affordable and safe transport** options, distance is a key barrier to the purchase and use of inputs for female farmers.
- **A lack of knowledge and technical skills** is a key constraint preventing women from playing a more active role in input purchase and use and from having more decision-making power within the farm and household.
- **Gender norms persist around women purchasing and using agro-chemicals, especially pesticides.** However, these norms are changing, presenting an opportunity for input distributors to play a role in behavior change communication that can help address these negative norms.

Business models that help address these constraints can be a **win-win opportunity**. While helping input firms access a new market segment and increase sales, these business models also have the potential to empower female SHFs and female market actors within the input distribution market system. Below are two concept ideas that FTF Inova can pilot as part of existing or new Deal Notes with input distribution firms. The concept ideas present the opportunity to test some of the study's research findings and to refine the business case proposition that can then be shared and replicated with other market actors.

Concept Idea #1: Woman-Focused Input Marketing and Distribution

Business constraint:

Input distributors are struggling to penetrate the SHF market and to develop innovative marketing techniques that increase their customer base. There is little brand awareness and loyalty within the market, meaning that farmers often switch between brands, posing a risk to input suppliers' customer base. Input distributors also struggle to access women as a market segment, due to their mobility constraints, as well as gender norms around women purchasing and using agro-chemicals.

Opportunities identified from the Gender Norms Study:

¹⁵ Improved gender mainstreaming across FTF Inova's market systems interventions will help the program achieve its performance indicators for gender integration: 1) number of FTF Inova partners that adopt or improve practices that enable women to enter more beneficial roles; and 2) percentage of female participants in U.S. Government-assisted programs designed to increase access to productive economic resources.

- Flow of information to farmers is minimal. While farmers receive some information and recommendations from agro-dealers, agro-agents, and extension workers on what inputs are best, most of their decisions about planting and the choice of inputs are made within the household with no external consultation. Although men make the final decision on the purchase of inputs and the type of crop to plant, **they always seek the opinion of the woman, who is an integral part of the decision-making process.**
- Women spend the most time in the field and lead most harvesting and processing activities. **They are therefore more aware of the type of inputs that work better, what leads to better quality and yields, and what the crops need.**
- Women are hungry to learn and are **looking for opportunities to improve their knowledge of best farming practices and choosing and using inputs.**
- Due to constraints women face around mobility and access to **affordable and safe transport options, distance is a key barrier to the use and purchase of inputs for female farmers.** Improved last-mile distribution systems can help reach a large number of potential customers closer to farms.
- A surprising proportion of women own land. They primarily use their land for the farming of crops for domestic consumption, but also sell some of the surplus and therefore have some disposable income. **Women can therefore be customers in their own right.**

Business case argument:

- Input distributors can increase sales by leveraging the influence that women have on men's choice of inputs and crops. By developing marketing and distribution strategies that target women more directly, input distributors can also help develop women's product awareness, their knowledge on the application of inputs, and their brand loyalty.

Potential for women's empowerment:

- During fieldwork interviews, a lack of knowledge and technical skills has often been referred to as a key constraint preventing women from playing a more active role and having more decision-making power within the farm and household. More targeted marketing efforts would improve women's knowledge of input products and their application, improving their ability to contribute to key farming decisions.
- Input suppliers have a role to play in changing attitudes toward women in farming by showcasing them in promotional materials and educating farmers on the proper use of agro-chemicals. This is a win-win situation, because it is an effective way for reaching female farmers while also addressing negative attitudes and norms toward women buying and using inputs.
- As women receive attention from input distributors and see that businesses are reaching out to them more directly, this can have a positive impact on their own confidence and voice.

Concept Idea #2: Female Agro-Dealer Model

Business constraint:

- Input distributors struggle with cost-effective approaches to last-mile distribution. They therefore rely heavily on agro-dealers and VBAs to reach SHFs. Agro-dealers and VBAs, most of whom are currently men, tend to be unreliable and to not repay credit.

Opportunities identified from the Gender Norms Study:

- Women are perceived as more trustworthy and more likely to repay credit; and as **dedicated workers who are more patient dealing with customers.**
- **It does not matter to male farmers if they buy from a male or a female agro-agent,** and they are equally happy to receive planting and input advice from men and women extension workers.

- **Women are more comfortable engaging with female extension workers than male ones.** Whether this preference extends to agro-agents needs to be further validated, however it is supported by evidence from other market systems development (MSD) programs.¹⁶
- Women are directly involved in some input purchases, especially seeds, but mainly through local agro-dealers and VBAs.

Business case argument:

- Hiring more female village-based agro-dealers and agro-agents can improve the reliability and credit worthiness of the agents that input distributors work with, as well as improve their potential outreach by opening more opportunities to sell to women directly. Adopting gender-sensitive practices can help with hiring, retention, and promotion of female agro-dealers and agro-agents.

Potential for women's empowerment:

- Creating opportunities for more women to have access to jobs as agro-dealers and agro-agents will help make the industry less male-dominated.
- Increasing the number of female agro-dealers will improve women farmers' access to knowledge and information, because women are more comfortable asking for advice from women than men. Increased knowledge ultimately affects women's ability to voice their opinions on matters related to farming and to contribute to business decisions within households.

Best Practice: Facilitating More Gender-Inclusive Input Distribution Market Systems

A 2015 Leveraging Economic Opportunities (LEO) study titled *Extending Input Delivery to Smallholder Farmers at Scale* found that gender equity receives limited attention by market systems facilitation projects focused on input distribution. This gap means that very little evidence exists on the extent to which these projects have reached and benefited women. This presents an opportunity for FTF Inova to test some innovative approaches in this area and generate evidence and learning that can be shared with other MSD projects. Below are case studies from two MSD projects, Katalyst and Propcom Mai-karfi, which have also been working to test more gender-inclusive approaches to input distribution.

Katalyst, Bangladesh

Katalyst worked with Syngenta to develop and deliver a module on how to develop women farmers as potential customers in the existing retailer training on customer service implemented by the firm. Syngenta also established a female-led distribution network. These women distributors were responsible for promoting Syngenta's seasonal products (agro-seeds and pesticides) by meeting their farmer groups once a week. In these courtyard meetings, women farmer groups were trained on seasonal crop varieties, correct procedures for planting seeds, methods for safe use of pesticides, and pest and disease identification in their crops, among other information. The women farmers could then purchase the company's products directly from women distributors, or send their male counterparts to purchase the products from the local market. When the project phased out, the company continued to grow the distribution network among homestead women farmers. A total of 22,140 farmers were accessed through the intervention, making on average an additional profit of Bangladeshi Taka 6,000 per season.

¹⁶ Katalyst: <https://beamexchange.org/community/blogs/2017/4/3/working-women-led-distribution-networks-katalysts-experience/>; Propcom Mai-karfi: https://beamexchange.org/uploads/filer_public/b5/a9/b5a9374f-4106-474f-b86f-d3aeda13035a/evidence_fertilisersmallholders.pdf.

Propcom Mai-karfi, Nigeria

A study conducted by the project found that women in socially conservative households and communities in northern Nigeria struggle to access affordable inputs. Propcom worked with a major fertilizer supplier, Natore, to improve the availability and accessibility of inputs for female SHFs. They used a two-pronged strategy: 1) hired female rural promoters to establish a last-mile sales and distribution network; and 2) developed small packs of fertilizer that were more affordable for women who often own smaller farms and want to experiment before committing to a larger purchase. The rural promoters also provided some information on good agronomic practices to farmers purchasing fertilizers to increase their yield and incomes. As a result, the company increased small pack sales by 22 percent, reaching an estimated 1.7 million farmers. The farmer education program has also been effective both in teaching and creating new customers. A Propcom study found that 57 percent of farmers who attended demonstrations adopted at least two of the good agricultural practices and bought 42 percent more Natore small pack fertilizers than those who did not.

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