



THE REPUBLIC OF UGANDA



MAKERERE UNIVERSITY

## Policy Brief

December 2020

*Farming  
Techniques and  
livelihood  
Sustainability of  
Rural Women.*

# Influences of farming techniques on the livelihood outcomes of Rural Women in Eastern Uganda

### Summary

The capability of rural women to invest more meaningfully in agriculture so as to attain livelihood outcomes is resolute to their ability to utilise different farming techniques. The policy brief outlines policy recommendations on how to enhance the livelihood outcomes of rural women through modern and indigenous techniques of farming.

### Context of the study

- The majority of female farmers depend on farming to access food, fuel, water, clothing, shelter, education and medical care for themselves and their families.
- For rural women to attain positive livelihood outcomes such as more income, more food security, increased wellbeing, more resilience to stress and shocks and sustainable use of land, agricultural production should be high.
- The study sought to understand the contributions of farming techniques to the livelihood outcomes of rural women.

### Summary of Findings

- The majority of rural women predominantly use the traditional techniques of farming.
- High annual income from farming is significantly correlated with the use of modern farming techniques at 10%.
- The traditional methods of farming have not adequately mitigated the risks of climate change, infertile soil and pests and diseases to enhance agricultural outputs.

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## Introduction

There is an interplay between farming techniques and livelihood outcomes. High agricultural outputs results to positive livelihood outcomes. This linkage authenticates why the use of different farming techniques that boost agricultural returns is fundamental in the attainment of livelihood outcomes. The livelihood outcomes stated in this policy brief are the aspirations that people seek to fulfil through the various livelihood strategies such as farming (DFID, 2000; Serrat, 2017). They are also referred to as the ‘the inverse of poverty’ (DFID, 2000, p. 4 -13). These outcomes entail more income, increased wellbeing, reduced vulnerability, improved food security and sustainable use of natural resources like land.<sup>1</sup> They are generic in nature as stated in the sustainable livelihood framework but, may differ under unique circumstances such as place, time, context and the characteristics of individual farmers. The majority of rural women in the global south predominantly rely on farming to achieve livelihood outcomes (FAO et al., 2019, FAO et al., 2018; Li et al., 2020; Ugwu, 2019). Through farming, they provide food, fuel, water, clothing, shelter, education and medical care for their families although they face numerous setbacks (FAO et. al., 2018; Mugege, 2013; Ugwu, 2019). Reports by the African Union Commission [AUC], (2015) and Food and Agricultural Organization [FAO] et al. (2019) indicate that women suffer more social and economic constraints than their male counterparts. They lack the same access to seeds, credit, extension services and technology and, regrettably most of them do not (FAO et al., 2018; Ugwu, 2019). All these setbacks severely affect agricultural output as many are unable to manage the risks of climate change and improve soil fertility (Balya, 2010 & Uganda Poverty Assessment Report, 2016). For that reason, income levels, food security, wellbeing, resilience to shocks and stress and the sustainable use of land remain low among most female farmers (AUC 2015; FAO et al., 2019; Li et al., 2020).

It’s worth noting that there has been limited focus among researchers on the contributions the farming techniques that female farmers use on livelihood outcomes in Eastern Uganda and yet, the topic raises pertinent policy planning and development issues that pertain sustainable livelihoods of rural women. Studies mainly sought to understand the contributions of farming and rural livelihoods more generally (AfDB, 2016; AUC, 2015; FAO, 2019; Gebru et al., 2018; Global Hunger Index, 2018; Kassie, 2017; Serrat, 2017; Ssempija, 2017; Tal, 2018; Willer & Lernoud, 2017). There is limited attention on what specific methods of farming rural women employ and how those techniques enhance or impede livelihood outcomes vital to the study.

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<sup>1</sup> Department for International Development (DFID), 2002.



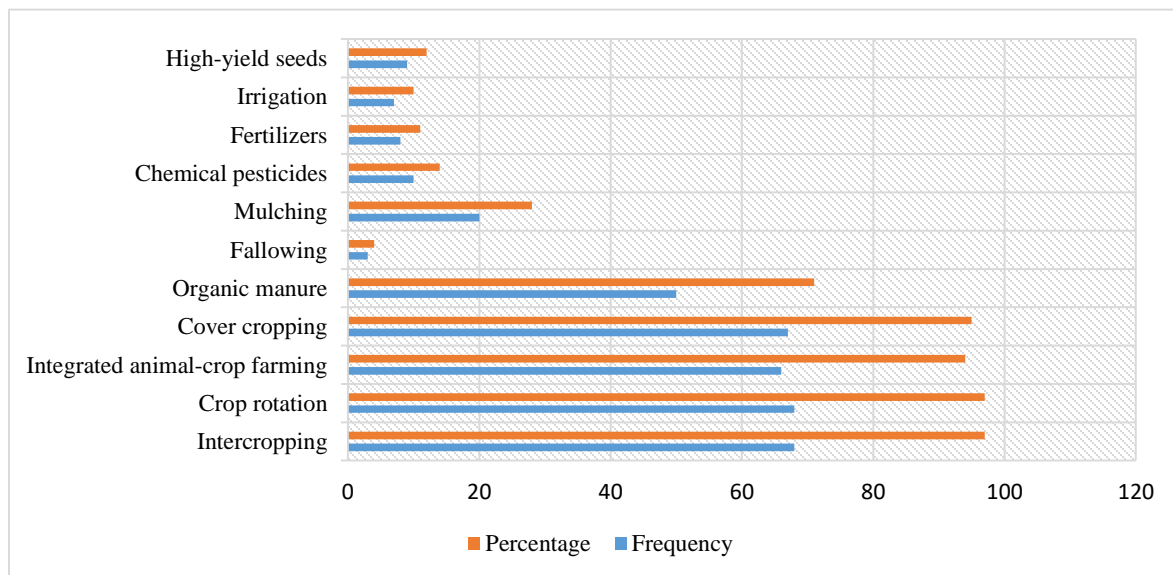
### Summary of Research

The study was conducted in 04 sub-counties of Tadameri, Kachomo, Munarya and Chema in Budaka and Kapchorwa districts, Eastern Uganda. Methods such as focus group discussions, key informant interviews, household interviews and questionnaire were used to collect data from male and female farmers and other study participants in March and June, 2020.

### Study Results

The study revealed that the majority of rural women predominantly use the traditional techniques of farming while very few use the modern techniques of farming as shown in figure 1.

**Figure 1: The types of farming techniques that rural women employ**



Source: Household interviews, 2020

Results show that 97% of rural women practise intercropping and crop rotation respectively while 95% of rural women practise cover cropping (see figure 1).

A female farmer explained why a few female farmers these methods, “The main challenge that most of us face in our village is the lack of money use other methods like fertilizers, irrigation and pesticides.” (Focus group discussion 08, female)

The multivariate Probit (MVP) model revealed that, high annual income from farming is significantly correlated with the use of modern farming techniques at 10% as shown in Table 1.



**Table 1: Annual income of female farmers by farming technique**

Variable name	Mean (Traditional techniques)		Mean Difference	Pooled (N=68)
	Users (n=65)	Non-users (n=3)		
Annual income	1.3(1.3e06)	1.4(1.4e06)	97369.2(9.7e04)	1305537.0(1.7e05)
Variable name	Mean (Modern techniques)		Mean Difference	Pooled (N=68)
	Users (n=34)	Non-users (n=34)		
Annual income	1.5e06(2.5e05)	1.1e06(2.4e05)	-4.6e05(3.5e05)**	1.3e06(1.7e05)

\*, \*\*, and \*\*\* indicate statistical significance at 10, 5, and 1 percent level of significance

The annual income of rural women who made use of modern farming techniques was found to be significantly higher than that of the female farmers who did not make use of these techniques. This difference was found to be significant at a 1% level of significance as shown in Table 1. Interviews with most key informants also revealed that the traditional methods farming that most women rely are not exclusively effective in increasing crop yields. This infers that most rural women have low income levels. Furthermore, the household interviews disclosed that female household heads had lower incomes compared to the female farmers in male-headed households. This result postulates that the females in male-headed households could be receiving financial and technical support from their male counterparts to use modern ways of farming unlike the ones in female household heads. It's crucial to support females financially and technically to utilise modern and indigenous methods of farming that enhance agricultural proceeds.

Results from the focus group discussions and household interviews also revealed that most female farmers wished to apply the modern methods of farming like the use of chemical pesticides.

A female participant in one village in Budaka narrated that she wishes to use chemical pesticides to spray her crops, "I normally use a concoction of ash from wood and urine to spray my crops against pests and diseases but, it's not very effective. Some pests die while others do not. This makes me desire to use the modern pesticides which are more effective in killing pests. But, I don't have money." (Household interview 28)

Likewise, a key informant noted that contemporarily farmers face various risks, "Currently, there are several risks and challenges in farming. Many farmers are complaining of low crop yields, infertile soil, climate change and pests and diseases. All these can be mitigated



through irrigation, fertilizers, organic manure agroforestry and pesticides.” (Key informant 11, Agricultural Officer)

The low levels of income worsen the inability of rural women to make use of different farming techniques that enhance agricultural outputs and livelihood outcomes. This explains why agricultural programmes should be geared towards addressing the unique needs of women so that they can also invest more profitably in agriculture through improved ways of farming.

### **Food security**

Through the focus group discussions and household interviews, the study learnt that in Kapchorwa and Budaka the methods of farming that rural women use has not adequately mitigated the risks of infertile soil, low crop yields and pests and diseases thus affecting food production. This signifies that women need to make use of strategies of farming that can mitigate the aforementioned challenges in order to attain food security.

A key informant explained what has affected the availability of food, “Most farmers harvest very little nowadays because of soil infertility. Whenever the harvest is poor, the availability of food is negatively affected.” (Key informant 08, Community Development Officer)

Coupled to that, a female participant in Kabore village also observed it a ‘night mare’ to have adequate food throughout the year, “A woman has to scratch her head thoroughly if the children are to eat every day.” (Household interview 43)

Also, in Kapchorwa a woman narrated how they used to have plenty of food in the past decades, “In the 1980s and 1990’s, we used to have plenty of food and every one was generous with food. Now, all this has changed. People are so many, crop yields are low, land has become small, the climate has changed and people have also become selfish.” (Household interview 53)

Results from most focus group discussions and household interviews further disclosed that from January - May there is usually scarcity of food and most households have only one meal a day.

A participant explained the strategies that most women do to ensure that the family has food, “Although most women store cereals during the harvest to ensure food availability, its normally not adequate to sustain the family until the next harvesting season. As a result, those with birds and goats resort to selling them while the majority skip meals. Most



households have one meal in a day during these months.” (Focus group discussion 03, Chengwet village)

The study findings allude that the majority of women are food insecure and that, this situation has been escalated by inability to make use modern and traditional of methods like irrigation, organic manure, fertilizers, pesticides and high-yield seeds. So, there is need to encourage the application of those methods that can effectively increase agricultural production.

### **Wellbeing**

Investigations through household interviews in Budaka and Kapchorwa revealed that the general wellbeing of rural women which resonates around good health, self-esteem, happiness, prosperity and a sense of contentment is poor. It was discovered through most focus group discussions and household interviews that most women are unable to access adequate medical care. This situation was found similar in both male-headed and female headed households.<sup>2</sup> Although farming has the potential to better wellbeing, most female farmers are still unable to pay medical bills. This denotes that their earnings from agriculture are not adequate to warrant happiness and a sense of worth.

The household interviews further made known that many female farmers feel insignificant whenever they are unable to provide scholastic materials, school fees and other necessities of life for their children.

A female participant in Bugade village explained how she feels when she is unable to provide for her children, “I have always struggled to provide food, clothes and scholastic materials for my children. But, sometimes I fail. This makes me feel worthless as a mother.” (Household interview 64)

Most key informants noted that in rural areas the wellbeing of the majority of women is poor although they work strenuously in agriculture.

A key informant observed why the wellbeing of most female farmers is poor, “Women are very hardworking but their wellbeing has been adversely affected by the low crop yields occasioned by poor farming practices.” (Key informant 12, District Gender Officer)

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<sup>2</sup> Household interview 58, 2020



This infers that the manner in which females practice farming does not support improved wellbeing. Therefore, female farmers need to be encouraged and supported to revisit their methods of farming and apply those that are more responsive to the contemporary challenges that farmers face.

### **Sustainable land use and Vulnerability**

Key informants in Kapchorwa and Budaka informed the study that continuous cultivation of land has occasioned low crop yields. Inadequate use of fallowing, irrigation, mulching and agroforestry has affected soil fertility thus dwindling crop yields. Furthermore, the study learnt through the focus group discussions and household interviews with participants in Chema sub-county that in 2019 rain washed away crops in Kapchorwa. By the time of this study, most women were finding trouble providing food and other essentials for their families.<sup>3</sup> This has been attributed to the poor land use practices such as over cultivation without mitigating the loss of soil organic matter.

Seasonality, trends, shocks and the way land is used expressively impacts the livelihood of rural women. The study established through most participants during the household interviews that the majority of rural women did not have assets such as land, cows, goats, birds and sheep to support them in case of unprecedented events.

A female farmer explained what women own, “Most women in my village own birds (chicken) while cows and goats were majorly owned by the men. Apparently, I have no birds because they all died due to coccidiosis.” (Household interview 36).

The study discovered through the household interviews that some male-headed households had a few birds surviving while most female-headed households had no birds at all. On the contrary, some key informants noted that the challenge of losing birds is faced by all farmers irrespective of their gender.

A key informant explained why most female farmers lose birds, “Some women lack knowledge on how to treat or even prevent coccidiosis. Others find it difficult to access veterinary services but for the majority, it’s because of negligence.” (Key informant 11, Agricultural Officer)

These results indicate that the agricultural output upon which most rural women rely to acquire assets to strengthen their resilience to stress and shocks has not adequately permitted the attainment of assets. This can be linked to the traditional methods of farming that the majority use. Equipping female farmers to put to use farming techniques that promote agricultural production will positively

<sup>3</sup> Focus group discussion with female farmers in Kabore village, 2020.



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result into the attainment productive assets which are very crucial in reducing all forms of vulnerability.

### Policy Recommendations

The government policy should enhance the ability of rural women use to the modern and indigenous knowledge based techniques of farming to enhance agricultural outputs. This can be achieved through;

- Designing a clear process that guides women's access to cheap agricultural micro credit.
- Provision of extension services that target equipping female farmers with knowledge and skills on modern and traditional methods of farming.
- Establish gender-responsive actions such as community dialogues for the men and women to debate gender relations issues that directly impact wellbeing.

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