#### Research Article



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# Socio-economic benefits of women empowerment in small-scale farming in Raffingora, Zimbabwe

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## **Abstract**

When land was redistributed in Zimbabwe at the turn of the millennium, women were also beneficiaries, despite there being a gender dimension in land redistribution. This study examines the socio-economic benefits of women empowerment in small-scale farming (A1 farming) among female farmers in Raffingora, Zimbabwe. The study employed a qualitative approach through an exploratory case study design. Semi-structured interviews were conducted with 24 participants and 5 key informants. From the data analysed through thematic analysis, the participants reflected that they benefitted from women empowerment programmes in farming through asset accumulation, independence in decision-making, improved nutrition, improved housing conditions, and improved agricultural practices, despite a plethora of challenges. The researchers then suggest a need to include women in agricultural decision-making processes by removing gender barriers if sustainable agriculture and women's empowerment are to be fully achieved.

**Keywords:** women's economic empowerment, small-scale farming, agriculture, Zimbabwe

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## Introduction

Research indicates that empowering women in agriculture can lead to sustainable socio-economic benefits for women, their households and communities at large (Duflo, 2012; Gates, 2014; Kabeer, 2018; World Bank, 2021). However, the 2016 Africa Human Development Report estimates that gender inequality costs sub-Saharan Africa approximately US\$95 billion per year, and that US\$12 to 28 trillion could be added to the global economy if women achieved parity with men in economic outcomes. Less work, however, focuses specifically on the potential and sustainable impacts of women's empowerment in agricultural settings. Globally, there have been growing efforts in the form of government-initiated programs such as contract farming for smallholder and rural farmers to realize sustainable benefits or agricultural development (World Bank, 2008). Africa has not been an exception as indicated by the African Development Bank (AfDB) that more than fifty per cent of agricultural programs are state-led in Sub-Saharan countries including Zimbabwe and they are tailored towards positive social change for vulnerable groups or communities such as women (AfDB, 2015). Such an approach is developmental as it is in line with social protection and livelihoods support for vulnerable and disadvantaged communities or households in farming areas including women who are usually victims of social injustice or social exclusion (Kurevakwesu, 2017; Kurevakwesu, 2021; Kurevakwesu et al., 2022; Kurevakwesu et al., 2023; World Bank, 2021). Thus, agricultural growth, poverty reduction, food security at household and national levels, and the inclusion and integration of vulnerable groups like women in the value chain are key drivers behind the institutionalization of agricultural support for the vulnerable (Prowse, 2012).

According to the World Bank (2021:5), agricultural support is crucial for overall economic growth. In 2018, it accounted for 4% of global GDP and 25% in developing countries (World Bank, 2021). In Zimbabwe, the contribution stands at about 15 to 20% and it is the main source of livelihoods for about 70% of the population especially women (Kwaramba et al., 2020:2). It is projected to feed 9.7 billion people by 2050 and it is four times better in raising the income of the poor than other sectors (World Bank, 2018:3). On

the other hand, women empowerment in agriculture is a global agenda, as per the Sustainable Development Goals (SDGs) since women play fundamental roles as household heads, caregivers, farmers, workers, and entrepreneurs in agricultural processes (Mkodzongi & Lawrence, 2019). The World Bank (2018:1) indicates that women are responsible for 60% to 80% of food production in developing countries. Therefore, to realize sustainable food sufficiency (at household, community and national levels), and address food insecurity and poverty, women's involvement is ideal (Kurevakwesu & Mabeza, 2023). However, the gender gap which stands at 20-30%, continues to cost agriculture globally threatening sustainability and closing the gender gap would increase agricultural output in developing countries by 2.5 to 4% thus reducing food poor population from 925 million to 100-150 (Raney, 2011:3). Ugwu (2019) indicates that there is a strong link between women empowerment and agrarian program success. However, despite global agendas like the Sustainable Development Goals for women's empowerment in agriculture, women in agriculture still face systematic and gender-specific constraints that reduce their productivity (Huyer, 2016).

Female household headship is now a demographic phenomenon globally with a drastic increase in developing countries (Doss et al., 2012). According to Yoosefi-Lebni et al. (2020:4), in Namibia in 2013 the rate was 43.90% and in 2015 in Zimbabwe, 40.6 % of households had female heads. FAO (2017:2) indicated that in Zimbabwe, these constitute a 30-35% proportion of rural households. This might be due to divorce, the death of the husband, or migration for paid work. Yoosefi-Lebni et al. (2020) further indicated that these women are more socially and economically vulnerable than men because of higher poverty rates along with fewer job opportunities. Therefore, female-headed households have become an easily identifiable group on which to target poverty alleviation policy measures and agricultural programs for sustainable socio-economic change (Horrel and Krishanan, 2007). They share some defining characteristics which aggravate low agricultural productivity like poor access to land (only 18% of A1 farmers in Zimbabwe), credit, knowledge for decision-making and technological

innovations, and failure to participate in agricultural policy making (Zimbabwe National Statistics Agency, 2019: 16; Villarreal, 2013).

Given the complex socio-economic circumstances surrounding women in agriculture, this study, therefore, seeks to analyse the diverse perspectives on the benefits of women empowerment in A1 female-headed farming households through governmental support such as contract farming, under the resettlement program in Raffingora, Zimbabwe. There might be compound troubles for female-headed households in agriculture because of the political environment that intermingles the agriculture sector, the continuing deterioration of Zimbabwean economy and the patriarchal gender values or norms that disproportionally affect women and men in agriculture (Nelson et al., 2012). Women are key in agricultural productivity at household and national level hence agrarian programs should be scrutinized through gender lenses to determine their effectiveness (Murungani, 2016). Mutopo (2012) identified the continued feminization of poverty among farmers despite the institutionalization of agricultural programs with ramifications on their dependents. Development workers are possibly concerned with the lives of females living as single mothers or household heads and also their dependents especially children who suffer from the effects of poverty in their households despite the institutionalization of government-led livelihood support programs. Hence there might be a need to evaluate or analyze the socio-economic benefits of women empowerment in agriculture by tapping evidence from A1 female-headed farming households in resettlement areas of Zimbabwe.

# The concept of women empowerment

This study relies on the sustainable livelihoods approach which provides a comprehensive and complex approach to understanding how people make a living. It was adapted in this study as a guide to the analysis of how the dimensions of women's empowerment in agriculture affect their households' vulnerability status. According to this framework, livelihood assets are the resources on which people draw to carry out their livelihood strategies (Chambers and Conway, 1992; Ellis and Allison, 2004). In terms of women's

empowerment, this study argues that in addition to livelihood assets, people need a sense of agency to achieve their livelihood outcomes. Therefore, households use their empowerment capabilities (i.e. resources and agency), not only capital assets, to pursue activities that will enable them to achieve the best possible livelihood for themselves. This study argues that women's ability to reduce their households' vulnerability to food insecurity depends their empowerment capabilities. Therefore, each household's vulnerability status can be expressed as a function of these capabilities, reflecting women's agricultural and economic empowerment plus other household factors. It is hypothesised, in this study, that women with higher levels of empowerment in agriculture are less vulnerable to food insecurity. Moyo and Sukume (2004) point out that livelihood is a means of making a living. It encompasses people's competencies, assets, income, and undertakings required to obtain the provisions of life. A livelihood is sustainable when it empowers individuals to manage and recuperate from shocks and stresses. McBride (2014) notes that key elements of sustainable livelihoods include five important types of capital assets which are human, natural, financial, social, and physical. From these elements, it is clear that only effective economic empowerment can bring about sustainable livelihoods. However, before reaching sustainable livelihoods, the poor or marginalized live a life of poverty with limited capital assets.

The concept of women empowerment is multidimensional and complex and subject to various interpretations. The dimension varies from financial, human capital, material/physical, socio-cultural, familial/interpersonal, legal, political, psychological and agricultural (Kabeer, 2005; Mayoux, 2006). Other scholars have argued that 'women's empowerment' occurs at a number of levels, covers a range of different dimensions and materialises through a variety of different processes (Alsop, 2006). Other studies define empowerment according to the different processes/domains which make up the definition of empowerment, for example, agency and achievements (Kabeer, 2001); control over resources and agency (Malhotra, et al., 2002); agency and opportunity structure (Alsop et al., 2006). The three different processes or domains through which women's empowerment occurs are

resources, agency and outcomes (Alsop et al., 2006; Kabeer, 2005). Despite several definitions of empowerment in literature, this study adopts the definition by Sen (1989) and the World Bank (2001) who regard it as the expansion of assets and capabilities that enable vulnerable people to participate in, negotiate with, influence, control and hold accountable institutions that affect their lives. It incorporates the multidimensional approach, the resource-agency-outcome approach (Alsop et al., 2005; Kabeer, 2005) at the individual and household levels (Alsop et al., 2005) to conceptualise women's empowerment. It uses the capabilities (i.e. resources and agency) to identify and measure women's agricultural and economic empowerment. Women's 'empowerment in agriculture' is one of the most important dimensions of empowerment for rural women as rural households are largely dependent on agriculture for their livelihoods which, in turn, is crucial for reducing household vulnerability to food insecurity (IFAD, 2011).

Empowerment in the broadest sense refers to "the expansion of freedom of choice and actions" (Malholtra & Schuler, 2005:71). These choices are expressed as increased ability to: hold and express opinions; learn, analyse and act; organize own time; obtain and control resources (Mosedale, 2014). Empowerment can also be defined as the process of enhancing an individual's or a group's capacity to make choices; and having the ability to transform these choices into desired actions and outcomes (Kabeer, 2001; World Bank 2002). A similar definition is proposed by Alsop et al. (2006:10), but the authors emphasize the process of enhancing an individual's or group's capacity to make "effective choices". The adjective "effective" is used to describe the choices and is critical because it relates to producing desired and successful results which is fundamental to achieving empowerment. Thus, empowerment can be viewed as a process and not a goal (Al-Dajani & Marlow, 2013)

In a similar vein, Kabeer (2005:13) defines empowerment as "the process which entails the expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them". Here the author adds three critical dimensions to the definition of empowerment. She points out the issues of (1) "process", (2) "strategic life choices" and (3)

"context where this ability was previously denied to them". Regarding "process," Kabeer (1999) argues that empowerment is generally conceptualized as a process where, over time, an individual move from a lesser state to a higher one. This process entails change in peoples' lives (Kabeer, 2005). Malholtra & Schuler (2005) concur that these "processes" are the methods used to achieve greater freedom of choice and equality. Strategic life choices refer to those choices that influence an individual's long-term goals or plans, and having the ability to plan your life is fundamental to achieving empowerment. These strategic life choices according to Kabeer (2005:14) include among others, the choice of "where to live, whether and whom to marry, whether to have children, how many children to have, who has custody over children, freedom of movement and association". Thus, "empowerment include an element of people making decisions on matters which are important in their lives and being able to carry them out" (Mosedale, 2014: 244). Lastly, for one to be empowered, s/he has to be disempowered. According to Kabeer (2005:13), empowerment is the "process" of enabling those who have been denied the ability to make choices to acquire such ability". She further mentions that to "be disempowered means that an individual has been denied choice" (Kabeer, 2005:13).

Kabeer (2005) views empowerment as the process of enhancing people's ability to make their "own" decisions, rather than being passive objects of choices made on their behalf. The word "own" emphasises the notion that empowerment is self-driven and it emanates from within. For the process of empowerment to take place, self-motivation, self-determination, and self-confidence are central for an individual to be empowered. While women's struggles for empowerment have tended to be collective efforts; empowerment-orientated development interventions often focus more on an individual level (Mosedale, 2005: 244). This is because empowerment is experienced at an individual level and it emanates from within. Hence, Mosedale (2005: 244) argues that "empowerment cannot be bestowed on a third party...... those who would like to be empowered must claim it".

According to Mosedale (2005), the process of empowerment begins with women recognising the ideology that legitimises male domination and

understanding how it (male domination) perpetuates women's oppression. Mosedale (2014: 1119) further argues that:

Experiencing oppression has the potential to produce valuable knowledge; different experiences of oppression produce different knowledge; not all knowledge is equal; through exploring differently situated knowledge, we can better understand and so challenge our own and others' subordination; developing such knowledge is a collective activity and is not painless.

From the quote above, it can be argued that only oppressed people can understand what it means to be oppressed and marginalised. It is through these experiences that oppressed people can create knowledge about oppression depending on their unique experiences of challenging their own as well as other's situations as a group. The authors also acknowledge that this process of challenging oppression is not without pain. This could also be interpreted as that the oppressed must be at the forefront of challenging oppression, and not the unoppressed because they have experienced the difficult life. More often than not, oppressed individuals (especially women) are led by the unoppressed in the process of fighting against oppression, which is not correct.

Golla et al. (2011) suggest that several conditions must be in place to ensure the successful economic empowerment of women. For example, for women to be empowered, they must be able to make their own independent decisions about how to use land as well as making other economic decisions. Women need to have the necessary skills and resources for them to advance and improve their livelihoods as part of economic empowerment. Oxfam (2014) asserts that the indicators of improved livelihoods include the adoption of improved agricultural techniques, increased revenue generated from sales of products, improved household income and nutrition, increased asset wealth, and improved self-confidence and community participation. It is important to note that there is a symbiotic relationship between economic empowerment and improved livelihoods through land ownership. However, the marginalisation of women cannot be eliminated by only providing assets such as land to women because this is a limited approach (Cornwall & Rivas,

2015). Cornwall and Rivas (2015) call for the use of a human rights framework as a powerful set of entry points around which to refocus that engagement and through which to build alliances with others to ensure authentic empowerment. In the end, if women are allocated more land, in addition to receiving more farming inputs, agricultural production would increase. This is assuming that there are favourable climatic conditions and might, therefore, improve people's livelihoods as well as ensure food security.

This study deliberately focused not only on the acquisition of land by women but also on a comprehensive notion of women's economic empowerment embedded in sustainable livelihoods. Integrating women's economic empowerment with the notion of sustainable livelihoods is important because the former works to help women generate incomes, which in turn leads to gains across social, political, economic, and other dimensions of human development. When women's abilities to generate an income, gain skills and knowledge, increase their access to resources (such as land and water) and take decisions are increased, livelihood systems can improve due to their vital role in the household. If the whole household is empowered through better livelihoods, the household will then move closer to empowerment that addresses accountability, inclusion, non-discrimination and human rights for all as advocated by Cornwall & Rivas (2015). Empowerment can also be regarded as a course of increasing individual, interpersonal, or political power so that people can act to improve their situations (Golla et al., 2011). Mosedale (2014) states that empowerment endeavours to help individuals have the power to decide and act over their own lives. Women's empowerment, therefore, means building the capacity of women so that they can have social, economic, and political power so that they can effectively participate in development as equals with men.

Eyben et al. (2008) say that, essentially, there are three types of empowerment, namely social, economic, and political empowerment. With respect to social empowerment, Eyben et al (2008) contend that it means finding strategies or means to achieve one's goals in life or finding ways to reach one's desired pinnacle in life. The goals one wants to achieve are not

imposed but are freely selected by the individual. With respect to farming, it means that a woman should be able to decide independently what she wants to achieve by using the acquired land. It does not mean that the sole agency lies with the individual woman because merely giving a woman agricultural land would not translate to social empowerment if the structural causes for her subjugation remain unaddressed. For years, male farmers in Africa have dominated farm decision-making, even — or especially — in regions where women make up the majority of farm workers. Men also tend to have better access to productivity-enhancing resources such as fertiliser and extension services (Enete et al., 2004).

Another form of empowerment identified by Eyben et al. (2008) is political empowerment. A woman is politically empowered when she can actively participate in political activities and institutions such as being a councillor or Member of Parliament. In this dimension of empowerment, subjectivities such as gender and race intersect to structure participation in domestic, community, and national decision-making processes. Individuals who can freely participate are often able to air their views as equals in decision-making processes that affect their lives. Concerning the land reform, political empowerment will mean that land is allocated equally between men and women. Again, women will have power and voice to make decisions related to land and other related resources, such as how the household budget will be spent and who may participate in labour and share any profits.

The third form of empowerment delineated by Eyben et al. (2008) is economic empowerment. They contend that economic empowerment means that women and men are actively involved in development processes and their efforts are recognised and equally rewarded. For this to happen, the poor must have assets such as land and be assisted through social protection programmes, credit, and extension services. The empowered people also have a say in their work and the work they do is decent. Concerning the land reform, it would, therefore, mean that women should get a fair share of the land and then be assisted through the provision of agricultural inputs. In addition, the work they do on the farms should be decent and fair. Gendered differences in agricultural livelihoods also include access to credit, markets

(to sell produce not consumed by the household), training, and the ability to hire labour to assist in farm work (Fletschner, 2009).

## Methods

The study employed a qualitative approach through an exploratory case study design. The qualitative approach allowed the participants to air their feelings, perceptions, and attitudes about the socio-economic benefits of women empowerment in Zimbabwe, without being restricted on what to say by researchers. As indicated by Flick (2009), it gave the authors an extensive and in-depth appreciation of the issues under study. Thus, the design and the approach provided an in-depth comprehension of the benefits of empowering women in small-scale farming. According to Creswell (2014), it is critical to shed more light on the study area or setting to contextualise the research problem. Raffingora is an agro-based communal area largely and currently inhabited by small and large-scale farmers against the backdrop of the land redistribution program. The area is in Mashonaland West province of northeast of Chinhoyi in Zimbabwe, 45 km one of Zimbabwe's leading tobacco growing districts. The area was heavy with agricultural activities before the land reform program. However, a lot of farms are not producing well due to poor agricultural and structural practices that perhaps disproportionately affect female farmers. In the area, most farms are owned by men who were at the forefront of the fast-track land reform program. It is key to note that the area suffered from the takeover of white-owned commercial farms in the controversial land reform program that began in 2000 which also affected the critical farming infrastructure. Currently, some farmers grapple with climate change which is associated with varied rainfall patterns though some still make fortunes out of rain-fed subsistence farming. Weather Atlas (2024) indicates that Raffingora during the entire year 2024, the rain falls for 136.7 days and collects up to 636 mm of precipitation. However, in the past few years, the amount of rainfall has drastically reduced due to the El-Nino-induced drought.

We chose the Raffingora area because government institutions such as Agritex and several private players including CBZ Agroyield operate in the area, supporting farmers to maintain and boost agricultural productivity since the area falls under the best-performing agricultural region in terms of productivity yet there is no account of how women in the area are performing given the new trends in agricultural productivity against the backdrop of climate change. The area has seen programs such as 'Maguta', command agriculture, and Agri-for-She initiatives to help boost agricultural practices. Women are disproportionally represented in agriculture yet they constitute the largest number of players in agriculture (FAO, 2018). Thus, the study seeks to interrogate the benefits of empowering women in Rafingora through several state and private-led initiatives in the study area.

Using an exploratory case study design, convenience sampling was used to select a sample from the population of small-scale farmers around Rafingora. We resolved to interview any 24 female household heads nearby to reduce travelling costs since households in the small-scale farming area were scattered. Female household heads' ages ranged from 39 years to 59 years, and on average, each household had 3 individuals. Participants were interviewed using semi-structured interview guides that asked questions related to the objectives of the study. These interviews were adopted since they allowed us to appreciate the world as seen by the female small-scale farmers (Patton, 2002) and this was our main thrust. We purposively selected 5 Key informants and were two Agritex Officers, a male and a female, a female CBZ agro-yield officer, and 2 male local councillors. Key informant interview guides were used to collect data from them.

Data collected from both primary participants and key informants were transcribed and then translated from Shona, the local native language, into English. We then used thematic data analysis according to Braun and Clark (2006). We then used the themes that emerged from the analysis to present the findings as shown in the following subsection. The study received approval from the government of Zimbabwe's Ministry of Lands, Agriculture, Fisheries, Water and Rural Development (27 September 2021). Written and oral informed consent was obtained from all study participants and we upheld all ethical considerations (informed consent, confidentiality, least harm, and anonymity, among others). We also worked with the Agritex

officers and local councillors (political leadership) of the Rafingora farming area.

## Results

This section presents the study findings. The research established that women's empowerment in agriculture resulted in nutritional improvement at the household level, independence, asset accumulation, improved shelter and accommodation, better education for dependants, and improved agricultural know-how and productivity. These are expanded below.

## Improved household welfare

Information from women in agriculture indicated that women's empowerment through governmental support in agriculture has improved the general welfare of households under the headship of women. This was about the nutritional status of their households. The participants however indicated that their nutritional betterment is dependent on women's knowledge of crop diversification and the amount of rainfall received for the growing season. They indicated that with the increased maize and cereal production by female household heads, participants indicated that they are no longer lacking basic food. Participants confirmed their admiration of communities' improved food supply and availability amongst households in farming due to better agricultural practices. Participants testified food availability in households under female headship receiving agricultural support even during bad seasons even though it was conditional on the amount of rainfall received. Some participants had this to say:

Now I no longer lack basic food, I produce enough cereal, and haa starvation is no longer an issue for me and my family, my family is healthy and fit as you can see (Female Household Head (FHH) 4).

Even if it's a difficult year with little rainfall, command agriculture farmers won't struggle with a lack of food like we do because their crops have both basal and top dressing, so even if they fail to pay back, they have something to eat (FHH 17).

I think during good years; A1 farmers have enough produced to feed their families. Malnutrition is no longer an issue in my ward, but if we receive below-normal rainfall, the situation might be different, but haaa they will not struggle like non-beneficiaries, they have basic food (Key Informant (KI) 3).

The women involved in agricultural programs such as command agriculture indicated that they are now able to pay for school fees for their children in better schools. This was also supported by the key informants who indicated that women empowerment through input support was improving the human resources in various households due to increased level of education amongst dependants of women in agriculture. Some of the participants had this to say:

I managed to send all my sons to boarding schools, the other one graduated from university, and he is now working, even the second born. They are now supporting with ideas. The last one is in form four. Without the command program, I wasn't going to make it you see (FHH 1).

Yeah, I think we can all agree here command agriculture has changed some families. Look at Mai Alie (pseudonym) all her children went to good schools, despite that she is a widow; all the children went to school (FHH 22).

I think with the empowerment of the female heads, we can now notice the improved welfare of children. Issues like education in female-headed farming households which I know and interact with are no longer a challenge. They can now afford better education for their children. So, I think it changed their lives. Above all it feeds back to skilled human resources with ideas vital for present and future programs (KI 5).

# Independence in decision-making

Interviews of women in agriculture unearthed that supporting women in agricultural activities has made female household heads independent in making decisions about their households and agricultural processes. They emphasised that they have freedom in their in-house activities not in the community to influence policy since most policies are dictated by the

government and powerful people. They indicated that they now have power and control over what to buy and use their income for. The study participants indicated that some households were now liberated from relying on extended families for the welfare of their families but further argued that independence was based on the capacity of the female household head to manage and set priorities. This was also confirmed by key informants who confirmed independence in the purchase of assets amongst women in agriculture. Some participants had this to say;

Now I can manage my things, I don't rely on my late husband's relatives like before. I have power and control over what to do, what to buy or do with my income. I used to consult them because they were partially supporting me, but now command agriculture has lifted me (FHH 6).

With command agriculture, especially if you know what you are doing like what Mai W (pseudo) is doing, she no longer relies on her husband's brothers to take care of the family because she now has the capacity (FHH 16).

This is an empowering program, despite that it has some gaps, yeah, but I think with the income gotten, female heads benefiting from command agriculture are doing their things. From our verification records, some have properties in their name, they purchased them independently, with no input from the extended family. This is an indicator of women's empowerment. Assets show empowerment rights (KI 4).

### Assets Accumulation

The study participants underscored that agricultural involvement and empowerment of women has led to farming asset ownership amongst female household heads which signifies empowerment amongst female A1 farmers and this had prospects of irrigation projects. However, some participants indicated that asset ownership amongst female farmers is determined by the individual's knowledge of investments in sustainable livelihood assets which is still lacking in most female farmers. They indicated that some farmers were accumulating and some failing to do so. However, key informant information

clarified that asset ownership was perhaps a balance in number with regards to farmers accumulating assets some farmers need support or education on agricultural investments and they do not know what to use the money hence they continue to live in poverty and even dropped out of the program without purchasing any asset. Hence, as indicated by the key informants, the issue of asset accumulation differs from person to person.

If you work properly, it's profitable, I managed to drill a borehole, it's a solar-powered one. I am targeting irrigated horticultural practice. I now have a tractor for my agricultural practice. I have a trailer for my tractor. What I can say is if you don't misuse the inputs, or sell them to the black market it's profitable (FHH 1).

Well, it depends on one's mindset because some produce well and don't know what to do with their income. I know people like (Mai N; pseudo), this other year she managed to buy a lorry, and she now has a borehole at her homestead (FHH 23).

Yeah, it's 50-50, some individuals now have assets, they have grinding meals, and recently Mai O (Pseudo) bought a two (2) tone lorry so I can say it's profitable to farmers. However, some don't know how to use or invest their income, and some drop out without anything so it differs from one individual to another (KI 1).

# Improved agricultural knowhow and productivity

All participants indicated that farmers now have better or slightly better knowledge about agricultural practices and this has consequently improved their yields. In this case, beneficiaries attributed the increase in agricultural productivity to the use of technology or herbicides and farm implements as supported by command agriculture programs although education sessions are not done regularly. Participants specifically mentioned that education on fertiliser application and plant spacing had increased productivity. They indicated also that the use of adequate inputs like fertilisers has greatly improved their yields and was also augmented by the education sessions conducted by the AEOs. The key informants also indicated that despite the infrequent teaching sessions with farmers, it is on record that beneficiaries of

command agriculture are producing more than the non-beneficiaries. This was attributed to the use of inputs vital for agricultural practice by beneficiaries.

With inputs available, sporadic AEO supervision, and using a tractor in my field, the yields have improved so much. Technology is just good; herbicides make farming easier and increase yields (FHH 19).

Honestly, some focused farmers are doing well, their crops look good and well-fed with both basal and top dressing.... and well I now know how to space when planting. So, it's changing lives (FHH 3).

According to my record and field visits and assessments, command agriculture beneficiaries produce more than non-beneficiaries. However, some are not doing well, supervision is infrequent in this area (KI 1).

## Discussion

The participants indicated that empowering small-scale female farmers significantly enhances household welfare, chiefly in terms of nutrition and food security. Studies have highlighted that women's empowerment in agricultural initiatives, can improve food production and diversify crops, resulting in better household nutritional outcomes (Quisumbing et al., 2014). This is principally relevant in situations where women are the primary decision-makers regarding food consumption and caregivers of the households (Doss et al., 2018). Additionally, empowered women are likely to invest more in their children's education, which is critical for breaking the cycle of poverty. Agarwal's (2018) research shows that empowering women economically leads to increased spending on health and education for their children. This echoes the sentiments that women who are involved in agricultural programs stated being able to pay for school tuition fees and send their children to better schools, hence enhancing human capital development within their communities (World Bank, 2019).

We also found that small-scale female farmers' empowerment fosters independence in decision-making. Female farmers who partake in agricultural programs advance their control over household financial resources and decisions, limiting over-reliance on extended family members. This shift is crucial for enhancing women's agency within their communities and households (Kabeer, 2016). Doss (2013) supports the idea that when women gain control over resources, they are more likely to make beneficial decisions for their families and improve general household welfare. The capacity to make independent decisions implies a transformative change in power dynamics within households, advancing and promoting gender equality for improved family well-being (Meinzen-Dick et al., 2017).

The participants indicated that women's involvement in agricultural programs enables asset accumulation among women. Ownership of land and farming equipment is a significant indicator of economic stability and empowerment. Doss et al. (2018) underscores that asset ownership aids women to leverage resources key for further investment, enhancing their economic resilience. However, we noted disparities in asset accumulation based on individual knowledge and investment strategies. Some women successfully managed to acquire significant assets whereas others struggled due to a lack of much-needed financial literacy and credit access (Peterman et al., 2010). This shows the significance of targeted training and support programs that prepare and acquaint women with the necessary skills to invest wisely and manage their assets effectively.

The study also established improvements in agricultural knowledge and productivity as a result of empowerment initiatives. Access to training and resources encourages women to adopt better farming practices, resulting in increased farming yields. This resonates with FAO, IFAD, and WFP (2015) who indicated possible and significant improvement in women's agricultural productivity when receiving training on best practices such as effective crop management and sustainable farming techniques. Moreover, studies have revealed that women's participation in agriculture contributes to overall community food security (Alene et al., 2008). The findings show that

improved agricultural practices not only advance individual productivity but also contribute to broader economic stability within farming communities.

The study provides critical insights from a social development perspective. Empowering female small-scale farmers not only advances household welfare through improved nutrition and education for the households or dependents but also advances broader community development. Women's control over agricultural and household resources contributes to food security, which is indispensable for social and community stability and better health outcomes in their communities (Quisumbing et al., 2014). Women's ability to produce adequate food for their households reduces reliance on other external food sources, thereby enhancing family resilience against economic and environmental shocks. Also, women's investments in their children's education, not only improve individual family circumstances but also contribute to the development of an educated workforce, which is critical for sustained economic and social progress (Agarwal, 2018). This cycle of empowerment results in a more equitable society where female farmers' contributions are valued and recognized.

From a social development perspective, the female household heads' independence in decision-making processes is highly transformative. Women's ability to manage household finances and make autonomous or personal choices for their families fosters a sense of agency that outspreads beyond the household level. As women become more involved in agricultural programs, they can start influencing local agricultural practices and policies notwithstanding that they are still facing challenges from deep-rooted gender norms (Kabeer, 2016). This shift is central to the promotion of gender equality and addressing systemic and structural barriers that have marginalized women's voices in agricultural development historically. In addition, asset accumulation among female small-scale farmers not only signifies economic empowerment but also augments their social status within communities (Doss et al., 2018). However, disparities in sustainable investment knowledge call for the need for targeted educational interventions and initiatives that can equip female farmers with the skills essential to leverage their assets effectively. Investing in women's empowerment through support and education programs, stakeholders, both public and private, can facilitate a more inclusive approach to agricultural advancement that benefits entire communities while advancing social equity (Meinzen-Dick et al., 2017).

## Recommendations

Based on the findings regarding women's empowerment in agriculture, we proffer several recommendations to various stakeholders involved in agricultural development and gender empowerment initiatives as follows:

- 1. The government and private players should Enhance Training and Education Programs for Women Farmers through targeted Skill Development for women in Agriculture. Thus, there is a need for public-private partnerships in the implementation of comprehensive skills development or training programs earmarked for sustainable investment strategies, farming practices, and financial literacy. This should include practical workshops on effective crop diversification, effectual use of fertilizers, and technology adoption to better agricultural productivity (Doss et al., 2018; FAO & IFAD & WFP, 2015). Equipping women in agriculture, especially, small-scale, with the necessary skills and knowledge, there can be maximization of their agricultural output and making of informed decisions concerning asset accumulation and resource management.
- 2. The government should also strengthen access to financial resources and assets by advancing microfinance and credit access for small-scale female farmers. Thus, financial institutions through the government institutional framework should develop tailored microfinance services that cater specifically to women in agriculture. This enables them to invest in essential agricultural inputs, technologies, and tools that enhance productivity (Peterman et al., 2010). This form of financial support can be coupled with robust training in financial management to guarantee women's effective utilization of these resources.
- 3. The Government and civil society organizations should craft policies with measures that promote women's asset accumulation and land ownership.

This can include legal reforms that safeguard women's land ownership rights and inheritance (Agarwal, 2018). Furthermore, support programs aimed at facilitating women's access to subsidized agricultural equipment or cooperative purchasing models can help female farmers build their asset base.

- 4. Advocacy groups should work towards forming gender-inclusive agricultural policies that recognize women's contributions to agriculture. These policies should integrate women's voices in decision-making processes at both governmental and community levels (Kabeer, 2016). Engaging women in policy discussions ensures consideration of women's perspectives and needs, leading to more effective agricultural programs.
- 5. Local communities should be engaged by both civil society organizations and government departments through awareness campaigns that highlight the benefits of empowering women in agriculture. These campaigns can help lift cultural norms and attitudes toward women's roles in farming, promoting a helpful environment for female farmers (Quisumbing et al., 2014). Encouraging community support for womenled initiatives can further augment their independence and decision-making power.

## Conclusion

The study revealed that the empowerment of small-scale farmers has led to significant improvements in household welfare, independence, asset accumulation, and agricultural productivity in the Raffingora area. Empowered female household heads testified enhanced nutritional status within their households, which they attributed to increased production of staple crops such as maize and cereals, which alleviated food scarcities even during adverse weather conditions. This empowerment has also allowed small-scale farmers to invest in their children's education, aiding them to afford better education and contributing to enhanced human capital within their communities. Also, the study highlights that small-scale female farmers have gained independence in household decision-making, permitting them to

manage their household finances and resources without reliance on extended family support. This newfound autonomy is vital for promoting gender equality and improving the overall welfare of families. Additionally, the findings revealed asset accumulation, although disparities exist based on individual knowledge and investment strategies. Generally, the study underscores the transformative effects of women's empowerment in agriculture, highlighting the need for sustained support and targeted interventions to maximize benefits for female farmers and their households.

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## Data availability statement

Research data are not shared.

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## Conflict of interest statement

The authors declare that they have no conflict of interest.

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