

Intrahousehold Gender Relations in Sorghum and Millet Production Resources: Evidence from Male- and Female-Headed Households in Southern Malawi



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Abstract Sorghum and millet are important sources of food and nutrition security among smallholder farmers in Malawi. The majority of farmers engaged in sorghum and millet production in southern Malawi are women, and they are disadvantaged by inequalities in the form of access to, control over and entitlement to, production resources compared to their male counterparts. This chapter addresses intrahousehold gender relations in sorghum and millet production among adult males and adult females in male- and female-headed households in Chikwawa and Nsanje Districts of southern Malawi. The study employed mixed methods approach. A Harvard access and control matrix was employed to learn who had access to and control over production resources. To understand the gender relations dynamics, Chi-Square tabulations and content analysis were used to analyse the association between the gender of the household head and the gender of the adult household member with access to, control

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over, and entitlement to production resources. Our findings reveal that there were more adult male than female members in MHHs who had access to all production resources; on the other hand, there were more adult female than male members in FHHs who had access to the same resources. In MHHs, there were more adult male members than female members who controlled and were entitled to land, labour, seed, farm tools, manure, credit, extension services and transportation. Likewise, in FHHs more adult female members than male members controlled and were entitled to seed, credit, extension services and transport. In FHHs, more adult males than females controlled land. Adult male and female members in FHHs equally controlled and were entitled to labour, manure and farm tools. The chapter concludes that the pattern of access to, control over and entitlement to resources in sorghum and millet does not expedite equal outcomes for adult male and female members in MHHs and FHHs, except for the control of and entitlement to labour, manure and farm tools in FHHs. Agricultural development interventions promoting equitable access to institutional support services and productive resources in Sub Saharan Africa must be informed by intrahousehold dynamics affecting men and women to bridge gender gaps in context and reduce the structural disadvantages against women farmers.

Keywords Intrahousehold gender relations · Sorghum · Millet · Access · Control · Malawi

1 Introduction

Sorghum and millet are climate-resilient crops, important nutritious grains, especially in tropical and sub-tropical fragile regions (Chaturvedi et al. 2022). They are among traditional crop species which are often neglected and underutilized, rely on biological functioning of the ecosystem, require low input of synthetic fertilisers, pesticides and irrigation (Modi and Mabhaudhi 2013; Van Rensburg et al. 2007). These crops can substitute the other major staple cereals that are susceptible to drought and heat, while ensuring farm resilience and food diversification (Hadebe et al. 2017). These comparative advantages make sorghum and millet an obvious choice for farmers in an era of climate change and low input farming systems. Despite sorghum and millet being native to sub-Saharan Africa (SSA), their neglect and underuse is a matter of concern given their potential to improve food and nutritional security, coupled with socioeconomic conditions of farmers in this region (Motsi et al. 2022). In terms of production, these crops rank among the major six cereal crops, providing a staple food for approximately 250 million globally (Bhagavatula et al. 2013; Chaturvedi et al. 2022).

In Malawi, sorghum and millet are staple foods mainly grown in the southern region, and their production is dominated by female farmers who experience gender inequalities in agricultural inputs and resources relative to male farmers (Zimba et al. 2023). The extent of agricultural productivity between male and female farmers

varies across and within countries in sub-Saharan Africa (Rao et al. 2019). Gender-specific restrictions in access to farm inputs have been blamed for the differences in productivity between men and women, as they result in lower and unequal levels of access to fertiliser, labour, and land use (Chigbu et al. 2019; Khan et al. 2021), as well as to institutional support services, such as extension and advisory services, and credit facilities (Sell et al. 2018). Thus, women and female-headed agricultural households in SSA regularly face production constraints, major among which are discrepancies in access to resources such as land and agricultural inputs that are associated with higher rates of poverty and food insecurity among women farmers than men (Otieno et al. 2021). Differences in economic opportunities and access to productive resources also leave women more exposed to climate change impacts because they are usually poorer, less educated, and are excluded from political, community and household decision-making processes (Phiri et al. 2022). Recent evidence in selected African countries reveals that closing the gender gap will foster poverty reduction, gains in agricultural Gross Domestic Product (GDP), increases in women's agricultural productivity, and a reduction of global hunger (Gebre et al. 2021).

Neglected and underutilized species (NUS) are predominantly grown by small-holder farmers in local communities (Swetha and Muthukumar 2016; Mayes et al. 2011); and these communities have deep-seated gender roles and norms about who has the right to control and benefit (or not) from NUS cultivation and sale (Malkanthi 2016). Most NUS, including sorghum and millet, are closely associated with women (and thus considered women's crops), and can be an entry point for gender equality and empowerment (Conti et al. 2019). It is important to note that while the prevailing narratives around gender and NUS hold some truth, the reality is often much more complex. Gender roles, decision-making processes, power dynamics, and trade-offs can overlap and sometimes even contradict each other. While minor crops like sorghum and millet can be used to promote women's empowerment and improve households' well-being, there is limited research to support this claim. It remains unclear whether the conditions are ripe for women to benefit equally from the opportunities that these crops present.

A review of literature reveals that gender studies on access to, control over, and entitlement to resources arising from sorghum and millet production, and the power relations governing such distributions are not Malawi-specific. Most studies conducted in Malawi on sorghum and millet have focused on the agronomical, plant breeding (Chintu et al. 1996; Ngwira et al. 2019; Munkombwe et al. 2020; Nkongolo et al. 2008), agrobiodiversity and climate change resilience aspects of the crops (Kerr 2014; Vanya 2012). Recent work in the area focused on how gender and climate risk awareness influence sorghum and pearl millet farmers' varietal trait and cropping system choices in Malawi (Zimba et al. 2023), and not gender relations per se. A gender analysis study of sorghum and millet is therefore necessary for the generation of pertinent sex-disaggregated data on gender benefits, access to, control over, and entitlement to resources arising from sorghum and millet production, and the power relations governing such distributions. These would guide the formulation of interventions that would narrow down gender gaps by addressing the inequalities

uncovered and improve lives of women and men in the sorghum and millet farming communities.

In this chapter, we examine the intrahousehold gender differences in access to, control over and entitlement to resources among adult household members in male and female-headed households involved in sorghum and millet production in southern Malawi. The chapter addresses the following research question: What are the differences between adult male and adult female household members from male and female-headed households in their access to, control over and entitlement to resources in sorghum and millet production and why? An understanding of gender relations in sorghum and millet production is essential to build empowerment pathways within the household and close gender gaps between male and female farmers at society level.

1.1 Theoretical Framework

Quantitative and qualitative gender research is increasingly focusing on analysing detailed information from individuals within the household, rather than treating the household as a unified decision-making unit. Different intrahousehold models are being developed to better understand how the drivers and impacts of gender inequality considering the various preferences, needs, and abilities of different household members (Lambrecht 2016). Households can be both spaces of cooperation and conflict, and decision-making power is often influenced by the bargaining power of the individual household members (Sen 1990).

This study is informed by the Feminist Political Ecology (FPE). The integration of FPE within the realm of political ecology has been instrumental in unraveling the intricate relationships between humans and their natural environment, particularly in understanding access to, and control over, productive resources. FPE, pioneered by Rocheleau et al. (1996) introduced a gendered perspective to the political economy framework, emphasizing the significance of gender in assessing access to and control over resources. This lens does not solely focus on gender; it also recognizes its interplay with class, race, ethnicity, and culture, offering a more holistic understanding.

Luna (2018) and Elmhirst (2015) recommended FPE as a framework that scrutinizes intra-household dynamics, specifically the gendered politics influencing resource allocation and decision-making within households. Ribot and Peluso (2003) expanded on this, highlighting “access” to include gendered politics of resource control and distribution within households. Their theory described what they called “access” using social identity, which offered a deeper understanding into differential power (‘bundles of powers’). They expounded that in a household, differential power held by individuals essentially dictated access to, control over and mediation of, the access of others.

This chapter underscores access to, control over and entitlement to, productive resources in sorghum and millet production by farming households. FPE posits that

gender roles and family hierarchies grant men and women distinct rights to resources (Elmhirst 2015). It also views households as complex production and consumption units rather than simplistic cooperative entities, aligning with feminist post-structural viewpoints that acknowledge the nuanced nature of households (Gengenbach et al. 2018). Moreover, FPE considers women as a heterogeneous group with varied interests regarding resource access and control (Nyantakyi-Frimpong 2019). This framework critically examines existing inequalities between men and women within households from an intersectional perspective, recognizing that gender is not a binary concept but intersects with other dimensions like class, ethnicity, and others (Gengenbach et al. 2018).

‘Access’ in this study means user rights, and ‘control’ is defined as *power* over decision-making on resources, while ‘entitlement’ refers to ownership of resources. The ‘household’ in this study is conceived as an institution of decision making, an area of joint consumption, production and investment in which both labour and resource allocation decisions are made (Agarwal 2011). In this study a household is defined as female headed if it meets the following criteria: de jure female headed household (FHH) (if it is managed by a widowed, divorced, separated or single woman) and de facto FHH (where the woman is responsible for maintenance of the household because the husband is mostly or permanently not physically present on the farm (Takane 2009).

2 Methodology

2.1 Study Site

The study was carried out in Nyachirenda and Mikalango Extension Planning Areas (EPAs) in Nsanje and Chikwawa districts respectively. Nyachirenda EPA has 12 sections with a total of 16,277 farming households, while Mikalango EPA has 29 sections with a total of 26,531 farming households.

2.2 Sampling Technique

Mankhokwe and Ulalo Sections, and Madyadya and Thunyeneni Sections were purposively selected in Nyachirenda EPA and Mikalango EPA respectively, because most of sorghum and millet production take place in these sections. One village from each Section was randomly sampled, resulting in the selection of Bitirinyu Village in Ulalo Section, Kalumbi Village in Mankhokwe Section, Jasi 1 Village in Madyadya Section and Fodya Village in Thunyeneni Section. A list of households’ names from the selected villages was obtained from the Agricultural Extension Development Coordinator (AEDC). Proportionate random sampling was employed to select a sample

size of 152 households using Cochran's (1977) formula. With the help of the Agricultural Extension Development Officers who staff the sections, purposive sampling was done to select 44 FGD participants based on their knowledge of the subject matter.

2.3 Data Collection Methods

A mixed methods approach was used to collect qualitative and quantitative data. Quantitative data was collected in household surveys, using a semi-structured questionnaire and Harvard access and control kits. These interviews generated quantitative data concerning the socio-economic characteristics of the households, access to, control over and entitlement to resources in sorghum and millet production. Qualitative data was collected using participatory techniques: interviews with key informants (KII) and focus group discussions (FGDs) using a flexible checklist which enabled the collection of data on who has access to what resources and why, who has control over which resources and why, and who is entitled to what resources and why, in the production process of sorghum/ millet. A total of 44 participants were involved in focus group discussions (FGDs). In each EPA, two FGDs were conducted differentiated along gender lines, comprising of 10 participants per discussion group. The groups were divided based on gender because of the sensitive nature of some topics for discussion. In female participant groups, care was taken to balance the representation of married women and female household heads. The study deployed a mixture of these data collection tools to triangulate the information collected.

2.4 Data Analysis Methods

To assess the gender differences in access to, control over, entitlement to resources in sorghum and millet production, Chi-Square (χ^2) tests, Harvard access and control matrix and content analysis were used. Quantitative data was analysed using descriptive statistics. Pearson Chi-Square (χ^2) tests of independence were used to test for significant association between gender of the household head and gender of the household members (adult male, adult female, and both adult male and adult female) as regards access to, control over, entitlement to resources. In this study, the resources that farmers accessed, had control over, and were entitled to were grouped into natural and human resources, raw materials, and institutional resources. The Harvard analysis of access and control matrix was deployed to learn who had access to natural and human resources, raw materials, and institutional resources required for sorghum and millet production. Qualitative data were analyzed using thematic framework analysis (Ritchie and Spencer 1994). This involved analyzing the content of the transcribed interviews by examining the underlying themes in the text material that contain information related to the particular themes of the research.

3 Results and Discussion

3.1 Socio-economics and Demographic Characteristics of the Respondents

The sample size for the study was 152 households, comprising of 54% female respondents and 46% male respondents. Sixty two percent were male headed households (MHHs) while 38% were FHHs. The majority of the respondents were married (72%) while the rest were widowed (16%), divorced (7%), separated (4%) and single (1%). The majority of the respondents were primary school dropouts (55%). Also, most of them perceived sorghum (88%) and millet (82%) as their main staple crops, while 49% reported maize as their main crop. Out of 152 respondents only 30% belonged to a farming club. Out of those who belonged to a farming club, 52% were males while 48% were females. The mean age for the respondents was 44 years with 20 years and 88 years being minimum and maximum ages respectively. Average landholding size for the households was 1 ha which was supplemented by an average of 0.40 ha of rented land. Out of the available land, 0.4 ha was allocated to sorghum production, while 0.30 ha and 0.34 were allocated to millet and maize respectively. The respondents reported harvesting an average of 209 kg of sorghum, 132 kg of millet and 266 kg of maize in the cropping season that the study was carried out.

3.2 Access to, Control Over and Entitlement to Sorghum and Millet Production Resources Among Household Members

Gender inequalities exists in access to, control over and entitlement to, valuable production resources such as land, credit, seed, fertilisers and extension services that would enhance production capacity. Findings are presented in tables that show Chi-square tabulations, which test for significant association between the gender of the household head and the gender of a household member with access to, control over, and entitlement to resources. This was to understand gender dynamics in access to, control over, and entitlement to resources within households in relation to the gender of the household head. Those with significant P-values provide statistical evidence that the difference in the gender of a household member (adult male, adult female, and both adult male and adult female) with access to, control over, and entitlement to resources is significantly associated with the gender of the household head.

3.2.1 Gendered Access to, Control Over and Entitlement to Natural and Human Resources in Sorghum and Millet Production

The natural and human resources required for sorghum and millet production included land and labour. Tables 1 and 2 present findings on access to, control over and entitlement to natural and human resources in sorghum and millet production respectively.

Access to, control over and entitlement to land

The gender of a household member with access to land was significantly associated with gender of the household head among sorghum (p -value = 0.000) and millet (p -value = 0.002) producing households. Further, the gender of those who had access to land was influenced by the gender of the household head. Male headed sorghum- and millet-producing households had more adult males (sorghum 7%, millet 8.5%) than adult females (sorghum 1%, millet 1%) having access to land, and there were more adult females (sorghum 25%, millet 18.4%) than adult males (sorghum 1%, millet 5%) having access to land in FHHs. Even so, the proportions of adult female members in FHHs having access to land were way bigger than those of adult males having access to land for both crops.

In many households, land access and use are not determined by an individual acting alone, but rather in conjunction with other household members (Mishra and Sam 2016). For instance, Lambrecht (2016) found that in Ghana, men's responsibility as household heads affords them the grounds for implicit and explicit rules that favour male access to land and labour within the household. This helps to explain why more adult male members had access to land in MHHs and vice versa. Access to and use

Table 1 Access to, control over and entitlement to natural and human resources among household members in sorghum production

Resources and gender MHH(n)=94 FHH(n)=58	Sorghum								
	Access %			Control %			Entitlement %		
	MHH	FHH	P-value	MHH	FHH	P-Value	MHH	FHH	P-value
<i>Land</i>									
Adult male	7.0	1.4	0.000	52.3	50.0	0.000	54.7	48.6	0.000
Adult female	1.2	25.0		3.5	36.1		3.5	37.5	
Both	65.1	65.3		16.3	5.6		12.8	4.2	
None	26.7	8.3		27.9	8.3		29.1	9.7	
<i>Labour</i>									
Adult male	14.0	2.8	0.000	47.7	37.5	0.000	44.2	33.3	0.000
Adult female	9.3	25.0		9.3	34.7		9.3	36.1	
Both	46.5	61.1		14.0	16.7		17.4	20.8	
None	30.2	11.1		29.1	11.1		29.1	9.8	

Note p -values are based on the Chi statistic

Table 2 Access to, control over and entitlement to natural and human resources among household members in millet production

Resources and gender MHH(n)=94 FHH(n)=58	Millet								
	Access %			Control %			Entitlement %		
	MHH	FHH	P-value	MHH	FHH	P-value	MHH	FHH	P-value
<i>Land</i>									
Adult male	8.5	5.3	0.002	53.5	42.5	0.000	57.7	43.4	0.000
Adult female	1.4	18.4		7.1	39.0		7.0	36.8	
Both	66.2	65.8		15.5	5.3		9.9	5.3	
None	23.9	10.5		23.9	13.2		25.4	14.5	
<i>Labour</i>									
Adult male	16.9	4.0	0.009	46.5	38.9	0.002	44.3	32.9	0.008
Adult female	12.7	24.0		14.1	40.8		15.7	39.5	
Both	46.5	58.7		15.5	17.1		15.7	15.8	
None	23.9	13.3		23.9	13.2		24.3	11.8	

Note *p*-values are based on the Chi statistic

of land by one household member affects other members in terms of access to land, labour and other resources (Kevane and Gray 2010). As a result, male and female household members may need to negotiate with other household members to gain access to land within the household or seek approval from them to acquire land outside of it (Lambrecht 2016). In this study, it was noted that household land was supplemented by land rentals to improve household access to land (see Sect. 3.1). Despite that land rental markets have become increasingly active in SSA (Holden and Otsuka 2014), women are disadvantaged when it comes to participating in land markets transactions because they have less access to resources than men, and positive and negative gender biases stemming from cultural norms, legal frameworks and other societal factors may work against their ability to secure access to land (Deere and Leon 2003). Conversely, studies have found that women may experience positive bias in rental markets due to their credibility for paying rent or inability to claim ownership of the land (Giovarelli 2006). It is important to note that these biases are not universal and may vary depending on the specific context and cultural norms.

Regarding control over land, findings showed that the gender of a household member with control over land was significantly associated with the gender of the household head among sorghum (*p*-value = 0.000) and millet (*p*-value = 0.000) producing households. Findings showed that MHHs had more adult male members (sorghum 52%, millet 54%) controlling land for sorghum and millet production with very few adult female members (sorghum, 4%, millet 7%) having control. Similarly, FHHs had more adult male members (sorghum 52%, 43%) dominating control over land unlike adult female members (sorghum 36%, millet 39%). This demonstrates that regardless of the gender of the household head, adult male members had an upper hand on land control.

Similar findings were observed on entitlement to land where the gender of a household member with entitlement to land was significantly associated with the gender of the household head among sorghum (p -value = 0.000) and millet (p -value = 0.000) producing households. In MHHs, more adult male members (sorghum 55%, millet 58%) were entitled to land than their female counterparts (sorghum 4% millet 7%). Likewise, in FHHs more adult male members (sorghum 49%, millet 43%) controlled land than their female counterparts (sorghum 38%, millet 37%). This implies that adult male members from both household types owned the land. Control over resources is a precondition for distribution of resources to different farming enterprises (van Eerdewijk et al. 2017), and it is useful in predicting which household members are likely to benefit from a particular farming enterprise. Men and women have different kinds of control and ownership of resources happening both nationally and within communities and households (Hausmann et al. 2010). Although women may have substantial ownership of certain types of assets as compared to men, a growing collection of factual evidence below demonstrates that in different environments worldwide, women usually control fewer overall assets than men.

Under patrilineal traditions in Malawi, women traditionally do not own, control or inherit land and acquire access to land through male family members (Slavchevska et al. 2017). Paul (2018) and Yadav & Sharma (2017) also reported findings that women unlike men have lesser control over land as a result of restrictive patriarchal traditional rules that appoint men as decision-makers over land. Women, thus, have little say when it comes to controlling and making decisions on the usage of the household land. Control over land unlike access is important for decisions to do with land allocation such as allocating land for sorghum and millet production over other land uses (Kusakabe 2003; Ndanga et al. 2013). In SSA, men frequently obtain use and certain management rights over land through bequeathal or allocation by their family or descent, while, for women, marriage is the most customary means to secure access to land (Doss et al. 2015; Meinzen-Dick et al. 2014; World Bank 2009; FAO 2011).

Access to, control over and entitlement to labour

Just like access to land, the gender of a household member with access to labour was significantly associated with the gender of the household head among sorghum (p -value = 0.000) and millet (p -value = 0.009) producing households. Moreover, the gender of those who had access to labour was influenced by the gender of the household head, implying that male-headed sorghum and millet producing households had more adult males (sorghum 14%, millet 9%) than adult females (sorghum 17%, millet 13%) with access to labour. On the other hand, there were more adult females (sorghum 25%, millet 24%) than adult males (sorghum 3%, millet 4%) in FHHs having access to labour.

The gender of a household member with control over labour was significantly associated with the gender of the household head among sorghum (p -value = 0.000) and millet (p -value = 0.002) producing households. MHHs had more adult males (sorghum 48%, millet 47%) controlling labour for sorghum and millet production than adult females (sorghum 9%, millet 7%). In FHHs, there are slight differences

in the proportions of adult females (sorghum 35%, millet 42%) and adult males (sorghum 37% millet 40%) controlling labour, implying that both genders more or less controlled labour to produce the crops. The findings further show that the gender of a household member with entitlement to labour was significantly associated with the gender of the household head among sorghum (p -value = 0.000) and millet (p -value = 0.008) producing households. More adult males (sorghum 44%, millet 44%) were entitled to labour than their female counterparts (sorghum 9%, millet 16%) in MHHs, while in FHHs, as before, we see small differences in proportions of adult females (sorghum 36%, millet 39%) and adult males (sorghum 33%, millet 33%) reporting that they were entitled to labour. This implies that both genders were generally entitled to labour for production of the crops. In FHHs, there were slight disparities among adult males and adult females in their control of, and entitlement to, labour for the production of the crops. This indicated that women, just like men, had autonomy and power over household labour. A finding by Palacios-Lopez et al. (2017) indicated that women contribute 52% of the agricultural labour in Malawi. On the contrary, Kabeer (2003) explained that women have less control over family labor due to protracted differences regarding women's paid work. As a result, women tend to provide a lot of unpaid work on farms to maintain their marriages, with existing intra-household patriarchal bias restricting their decision-making regarding the use of family labour. Chant and Brickell (2013) attributed this phenomenon to unequal intra-household power relations, with men having greater authority over the use of household members on their farms. This may help to explain women's lack of power to control labour in MHH in this study.

In line with the findings of this study, Ankrah et al. (2020) noted that in households where women are the main breadwinners, they tend to have more autonomy and decision-making power when it comes to using family labour. This may be due to a shift in social dynamics and gender roles within the household. Other studies demonstrate that gender roles in many societies make it difficult for women to control labour within the household (Hargreaves 2010). However, in situations where agricultural labour is scarce and women can provide a significant amount of agricultural labour, their contribution to the household is widely recognized. This often brings higher decision-making power, higher wages for women and greater access to land (Yngstrom 2002).

3.2.2 Gendered Access to, Control Over and Entitlement to Raw Materials in Sorghum and Millet Production

Raw materials that were needed to produce sorghum and millet were seeds, fertilisers, farm tools and manure. Table 3 present findings on access to, control over and entitlement to raw materials among household members in sorghum production while Table 4 provide the same on millet production.

Access to, control over and entitlement to seeds

Table 3 Access to, control over and entitlement to raw materials among household members in sorghum production

Resources and gender MHH(n)=94 FHH(n)=58	Sorghum								
	Access %			Control %			Entitlement %		
	MHH	FHH	<i>P</i> -value	MHH	FHH	<i>P</i> -value	MHH	FHH	<i>P</i> -value
<i>Seed</i>									
Adult male	16.3	4.2	0.001	35.3	31.9	0.000	33.7	27.8	0.000
Adult female	3.5	32.4		16.5	45.8		12.8	44.4	
Both	53.5	54.9		21.5	13.9		26.7	18.1	
None	26.7	8.5		27.1	8.3		26.7	9.7	
<i>Fertiliser</i>									
Adult male	0.0	1.4	0.167	8.1	2.8	0.380	7.0	2.8	0.348
Adult female	0.0	2.8		1.2	2.8		1.2	4.2	
Both	9.3	4.2		1.2	2.8		1.2	2.8	
None	90.7	91.7		89.5	91.7		90.6	90.2	
<i>Farm tools</i>									
Adult male	17.4	2.8	0.000	43.5	31.9	0.000	43.0	30.6	0.000
Adult female	2.3	27.8		4.7	36.1		5.8	37.5	
Both	52.3	61.1		23.5	22.2		22.1	16.7	
None	27.9	8.3		28.2	9.7		29.1	15.3	
<i>Manure</i>									
Adult male	7.0	0.0	0.022	20.9	11.1	0.076	18.6	8.4	0.026
Adult female	1.2	8.3		3.5	12.5		3.5	11.1	
Both	23.3	22.2		7.0	9.7		8.1	12.7	
None	68.6	69.4		68.6	66.7		69.8	67.8	

Note *p*-values are based on the Chi statistic

Results show that the gender of a household member with access to sorghum and millet seed was significantly associated with the gender of the household head among sorghum (p -value = 0.001) and millet (p -value = 0.000) producing households. Findings reveal that MHHs had more adult male members (sorghum 16%, millet 16%) having access to the seed than adult female members (sorghum 3%, millet 4%). FHHs have more adult female members (sorghum 32%, millet 29%) having access to the seed than adult male members (sorghum 4%, millet 5%). MHHs had more members without access to seed, unlike FHHs who maintained very few members without access to seed. We see a similar pattern of results regarding seed control in that the gender of the household member with control over seed was significantly associated with the gender of the household head among sorghum (p -value = 0.000) and millet (p -value = 0.006) producing households. Yet again, more adult male members (sorghum 35%, millet 37%) had control over the seed than their female counterparts (sorghum 17%, millet 15%) in MHHs; on the other hand, more

Table 4 Access to, control over and entitlement to raw materials among household members in millet production

Resources and gender MHH(n)=94 FHH(n)=58	Millet								
	Access %			Control %			Entitlement %		
	MHH	FHH	P-value	MHH	FHH	P-value	MHH	FHH	P-value
<i>Seed</i>									
Adult male	15.5	5.3	0.000	37.1	32.9	0.006	36.6	23.7	0.002
Adult female	4.2	25.0		15.7	40.8		15.5	44.7	
Both	56.3	57.9		22.9	13.2		23.9	15.8	
None	23.9	11.8		24.3	13.2		23.9	15.8	
<i>Fertiliser</i>									
Adult male	1.4	0.0	0.141	8.5	1.3	0.060	7.0	1.3	0.065
Adult female	0.0	5.3		1.4	5.3		1.4	6.6	
Both	7.0	3.9		0.0	2.6		0.0	2.6	
None	91.5	90.8		90.1	90.8		91.5	89.5	
<i>Farm tools</i>									
Adult male	14.1	5.3	0.001	38.0	36.8	0.001	45.1	30.3	0.000
Adult female	2.8	19.7		11.3	38.2		7.0	38.2	
Both	57.7	63.2		25.4	13.2		22.5	10.5	
None	25.5	11.8		25.4	11.8		25.4	21.1	
<i>Manure</i>									
Adult male	5.6	0.0	0.057	14.1	7.9	0.404	15.5	5.3	0.125
Adult female	1.4	7.9		5.6	11.8		5.6	10.5	
Both	21.1	21.1		8.5	9.2		7.0	11.8	
None	71.8	71.1		71.8	71.1		71.8	72.4	

Note *p*-values are based on the Chi statistic

adult female members (sorghum 46%, millet 41%) had control over the seed than adult male members (sorghum 32%, millet 33%) in FHHs. FHHs had more female members control the seed unlike male members, but MHHs maintained the large number of adult male members controlling the type of seed to be grown compared to adult female members. Regarding entitlement to seed, the study shows that the gender of the household member with entitlement to sorghum and millet seed was significantly associated with the gender of the household head among sorghum (*p*-value = 0.000) and millet (*p*-value = 0.002) producing households. In MHHs there were more adult male members (sorghum 44%, millet 37%) who were entitled to the seed than adult female members (sorghum 13%, millet 15%). In FHHs, more adult female members (sorghum 44%, millet 45%) were entitled to the seed than their male counterparts (sorghum 28%, millet 24%). In our previous study in the same area, a significant association was observed between seed accessibility and gender, which influenced decision-making on the variety type to grow. Male farmers had a 62%

chance of accessing seeds from seed distributors or local markets, compared to only 37% of female farmers (Zimba et al. 2023). Unlike this study, Ankrah et al. (2020) found no significant relationship between gender and access to improved maize seeds or between gender and access to fertilizer. In their study, this finding was explained by a programme which advanced improved seeds and fertilizers to farmers.

Access to, control over and entitlement to inorganic fertilisers

Results show that there were no significant associations between the gender of the household member and the gender of the household head in access to (sorghum p -value = 0.167, millet p -value = 0.141), control over (sorghum p -value = 0.380, millet p -value = 0.060), and entitlement to (sorghum p -value = 0.348, millet p -value = 0.065) inorganic fertilisers in both sorghum and millet production. Neither adult male members nor adult female members in MHHs accessed inorganic fertiliser in sorghum production; and in millet production, 1% of adult male members and none of the adult female members accessed inorganic fertilisers. Similarly negligible proportions of adult females (sorghum 3%, millet 5%) and adult males (sorghum 1%, millet 0) in FHHs accessed the fertilizer. As far as inorganic fertilizers were concerned, there was equal control among adult male (3%) and adult female (3%) members in FHHs sorghum production, unlike in millet production where adult females (5%) had an upper hand than adult males (1%). In MHHs, more adult male members (sorghum 8%, millet 9%) had control of inorganic fertilisers than female members (sorghum 1%, millet 1%) in both sorghum and millet production. For both sorghum and millet, more adult male members (sorghum 7%, millet 7%) were entitled to inorganic fertilisers in MHHs than their female counterparts (sorghum 1%, millet 1%), while more adult female members (sorghum 4%, millet 7%) were more entitled to inorganic fertilisers than adult male members (sorghum 3%, millet 1%) in FHHs.

The lack of significance of the findings on inorganic fertilisers could be the result of the fact that most of sorghum and millet farmers do not usually use inorganic fertilisers in their fields, as evidenced by a narration from the discussions below:

Sorghum and millet are part of our traditional crops, and we choose to grow them because they are tolerant to heat, droughtand can grow in poor soil fertility without the need for fertilisers or pesticides as other cereals.

(Female participant no. 4 in women's FGD group, Thunyen Section, Mikalango EPA)

While Freeman and Omiti (2003) and Horrell and Krishnan (2007) found that household head gender had no significant effect on the household's access to inorganic fertilizer in Kenya and Zimbabwe, Chirwa (2005) in Malawi, reported that FHHs were less likely to access inorganic fertilizer. Even though this study has found that many adult female members generally had access to land for sorghum and millet production, Whitehead and Tsikata (2003) found that many women had to limit the size of their farmland because of poor access to the basic inputs needed to cultivate land such as labour and fertilisers, or to make investments to improve the land. The lack of the required inputs indirectly reduces women's access to land. Kang et al. (2020) also reported outstanding differences in inorganic fertilizer use across plot

ownership structures, with the amount of inorganic fertilizer used in female owned plots being smaller than in male owned and jointly owned farm plots.

Access to, control over and entitlement to farm tools

The study found that there was a significant association between the gender of the household member with access to farm tools and the gender of the household head in sorghum (p -value = 0.000) and millet (p -value = 0.001) producing households. MHHs had more adult male members (sorghum 17%, millet 14%) having access to farm tools than adult female members (sorghum 2%, millet 3%). We found that FHHs had more adult female members (sorghum 28%, millet 20%) that had access to the resource than adult male members (sorghum 2.8%, millet 5%). We see here that MHHs had more household members without access to farm tools, unlike FHHs who maintained very few members without access to farm tools. Just like access to seed, there was a significant association between the gender of the household member with control over farm tools and the gender of the household head in sorghum (p -value = 0.000) and millet (p -value = 0.001) producing households. In MHHs, adult male members (sorghum 44%, millet 38%) highly controlled use of farm tools, with very little control by adult female members (sorghum 5%, millet 11%). FHHs postulate almost equal chance on the control of tools having 32% adult males and 36% adult females (sorghum) and 38% adult males and 37% adult females (millet). Likewise, there was a significant association between the gender of the household members with entitlement to farm tools and the gender of the household head in sorghum (p -value = 0.000) and millet (p -value = 0.000). Findings similar to household members' control over farm tools were obtained in household members' entitlement to farm tools where more adult males (sorghum 43%, millet 45%) than adult females (sorghum 6%, millet 7%) were entitled to farm tools in MHHs. FHHs assume almost equal prospect of entitlement to farm tools having 31% adult males and 37% adult females (sorghum) and 30% adult males and 38% adult females (millet).

Access to, control over and entitlement to manure

Findings show insignificant association between the gender of a household member and the gender a household head regarding access to, control over and entitlement to manure in millet production. In sorghum production, however, there was significant association between the gender of a household member with the gender of household head with access to (p -value = 0.022) and entitlement (p -value = 0.026) to manure while there was insignificant association between the variables on control over manure. We note that more adult male members (7%) than adult female members (1%) accessed manure under MHHs, and only adult female members (8%) accessed the manure under FHHs. More adult males (19%) than adult females (3%) were entitled to manure under MHHs. Different from MHHs, FHHs present almost equal proportions of adult female members (11%) and adult male members (8%) who were entitled to manure. Control of manure was dominated by adult male members (21%) unlike adult female members (3%) in MHHs yet in FHH it is equally controlled by adult male members (11%) and adult female members (12%).

Various studies which assessed gender-based differences in access to and/or ownership of draft animals reported about the necessity of the animals for the functioning of manual plows and provision of manure, which are among the crucial factors for increasing agricultural productivity among the poor farming households (Smith 2008). Oladele and Monkhei (2008) and Oluka et al. (2005) observed significant variations in the populations of animals owned by men and women in Botswana and Uganda respectively, where men were significantly more likely to own cattle, donkeys, and horses, whereas women were significantly more likely to own small stocks such as goats and chickens. Freeman et al. (2008) reported that livestock farming was the second most important livelihood activity after crop production in Chikwawa and Nsanje districts of Malawi. Most of the livestock in the districts were owned by households that fell in food secure category dominated by MHH. The food insecure and extremely food insecure categories mostly comprised of FHH, who mostly kept goats and poultry, and poultry respectively (ibid). Diverse and larger herds of animals kept in MHHs may explain why more adult male members-controlled manure and were more entitled to manure than adult female members in this study, thereby indicating a further gender-based disadvantage in productive use of soil fertility inputs.

3.2.3 Gendered Access to, Control Over and Entitlement to Institutional Resources in Sorghum and Millet Production

The institutional services that the study considered for productive engagement in sorghum and millet farming included credit, extension services and transport. Tables 5 and 6 present findings on access to, control over and entitlement to institutional resources among household members in sorghum production and millet production respectively.

Access to, control over and entitlement to credit

The gender of the household member with access to credit was significantly associated with the gender of the household head in sorghum (p -value = 0.035) and millet (p -value = 0.026) producing households. Study results show that access to credit in MHHs was almost equal among adult male members (sorghum 2%, millet 3%) and their female counterparts (sorghum 1%, millet 3%). In FHHs access to credit was diverted towards the adult female members (7%) with adult male members not accessing any credit. The proportion of adult female members in FHHs having access to credit was way higher than the proportion of adult males having access to credit in MHHs. Generally, more adult females than adult males accessed credit for sorghum and millet production. There are two probable explanations for this. First, FGDs revealed that most female participants belonged to women's informal savings groupings called '*Banki nkhone*' from where they obtained their financial credit, which could have been used to support sorghum and millet production. Men participants stated that formal banks in the area do not have initiatives that target smallholder farmers, and they do not get credit from them because of high interest rates and lack

Table 5 Access to, control over and entitlement to institutional services among household members in sorghum production

Resources and gender MHH(n)=94 FHH(n)=58	Millet								
	Access %			Control %			Entitlement %		
	MHH	FHH	P-value	MHH	FHH	P-value	MHH	FHH	P-value
<i>Credit</i>									
Adult male	2.3	0.0	0.035	9.3	2.8	0.009	10.5	2.8	0.004
Adult female	1.2	6.9		1.2	8.3		1.2	8.3	
Both	15.1	5.6		5.8	0.0		7.0	0.0	
None	81.4	87.5		83.7	88.9		81.4	88.9	
<i>Extension</i>									
Adult male	25.6	14.1	0.000	41.9	23.6	0.000			
Adult female	7.0	43.7		4.7	43.1				
Both	30.2	18.1	0.000	15.1	6.9				
None	37.2	23.9		38.4	26.4				
<i>Transport</i>									
Adult male	26.7	5.6	0.000	44.2	23.6	0.000	43.0	23.6	0.000
Adult female	1.2	20.8		1.2	29.2		1.2	31.9	
Both	26.7	38.9		9.3	12.2		11.6	13.9	
None	45.3	34.7		45.3	34.7		44.2	30.6	

Note *p*-values are based on the Chi statistic

of collateral. Secondly, sorghum and millet are considered ‘women’s crops’ and any initiative that aims to provide farm inputs in support of the two crops is likely to target female farmers. Male participants narrated the following during FGDs when they were asked ‘Why is it that it is mostly women who grow millet and sorghum?’.

Hhhmmm.... You know... women are responsible for making sure that there is food in the house. Millet and sorghum are grown for household consumption- we do not sell these crops so it is their responsibility to grow food crops.

(Male participant no. 2 in men’s FDG group, Mankhokwe Section, Nyachirenda EPA)

In a household men and women jointly decide that they will grow millet and sorghum in any given year. But women take a leading role in deciding which variety of sorghum and millet to grow- this is so because it is their “department” since they are the ones who mostly grow the crops in this area.

(Male participant no. 3 in men’s FDG group, Mankhokwe Section, Nyachirenda EPA)

Yes... this is what happens. Women are responsible for growing sorghum and millet in the uplands while men go to the marshy land to grow crops like maize, beans, pumpkins, tomatoes.... we mainly grow these crops for sale.

(Male participant no. 4 in men’s FDG group, Mankhokwe Section, Nyachirenda EPA)

Findings showed that the gender of the household member with control over credit was significantly associated with the gender of the household head in sorghum (*p*-value = 0.009) and millet (*p*-value = 0.003) producing households. The gender of

Table 6 Access to, control over and entitlement to institutional services among household members in millet production

Resources and gender MHH(n)=94 FHH(n)=58	Millet								
	Access %			Control %			Entitlement %		
	MHH	FHH	P-value	MHH	FHH	P-value	MHH	FHH	P-value
<i>Credit</i>									
Adult male	2.8	1.3	0.026	11.3	1.3	0.003	14.1	1.3	0.002
Adult female	2.8	8.0		1.4	8.0		0.0	6.7	
Both	15.5	2.7		5.6	0.0		5.6	1.3	
None	78.9	88.0		81.7	90.7		80.3	90.7	
<i>Extension</i>									
Adult male	26.8	14.7	0.000	42.3	17.1	0.000			
Adult female	9.9	38.7		7.0	40.8				
Both	28.2	10.6		15.5	5.3				
None	35.2	36.0		35.2	36.8				
<i>Transport</i>									
Adult male	29.6	7.9	0.000	46.5	22.4	0.000	45.1	21.3	0.000
Adult female	2.8	18.4		4.2	28.9		4.2	30.7	
Both	26.8	34.2		7.0	10.5		9.9	13.3	
None	40.8	39.5		42.3	38.2		40.8	34.7	

Note *p*-values are based on the Chi statistic

the household member with entitlement to credit was significantly associated with the gender of the household head in sorghum (*p*-value = 0.004) and millet (*p*-value = 0.002) producing households. In this study, major control over and entitlement to credit was observed from adult male members as opposed to adult female members in MHH while in FHH, more adult female members exerted control over and entitlement to the same than their male counterparts. It is important to note that despite the fact that sorghum and millet are considered women's crop in the study area, and that more adult female members than adult male members accessed credit for the production of the crops, in MHHs, adult male members controlled and were entitled to the credit which was accessed by the adult females. This concurs with Ankrah et al. (2020) who reported that women's access to credit is blocked by traditional rules and norms, placing them in the background and granting men space to act as guarantors. As a result, in cases where women's credit application is approved, men tend to assert control over the obtained funds.

Access to, and demand driven extension services

Extension contact plays a critical role of availing information to farmers, which is expected to encourage adoption of technologies and hence enhance farm productivity (Danso-Abbeam et al. 2018). This study sought to find out if there were any disparities in access to and demand for (control) extension services among adult male and

female members in MHHs and FHHs in the production of sorghum and millet. It was found that the gender of the household member with access to extension services was significantly associated with the gender of the household head in sorghum (p -value = 0.000) and millet (p -value = 0.000) producing households. The study learnt that more adult male members (sorghum 26%, millet 27%) had access to extension services than adult female members (sorghum 7%, millet 10%) in MHHs while more adult female members (sorghum 44%, millet 39%) had access to extension services than adult male members (sorghum 14%, millet 15%) in FHHs. This demonstrates unequal access to extension services between the genders in both household types. Considering that sorghum and millet are generally grown by women in the study area, lack of or inadequate access to extension services by adult females in MHHs may result in poor farming practices affecting sorghum and millet yields. This in turn may affect the income and well-being of the households. With regard to demand for extension services, the study found that there was a significant association between the gender of the household member who demanded extension services and the gender of the household head in sorghum (p -value = 0.000) and millet (p -value = 0.001) producing households. Apart from the planned extension visits by the extension agents (typically once a month), more adult males (sorghum 42%, millet 42%) than adult females (sorghum 5%, millet 7%) in MHHs and more adult females (sorghum 40%, millet 43%) than adult males (sorghum 23.6%, millet 13%) in FHHs demanded extension services. KIIs revealed that generally, there were very few female extension agents working in the study area. During discussions, female participants expressed preference for agricultural extension agents of the same gender to deliver extension services. This is corroborated by Britwum and Akorsu (2016) who presented same sex preference in extension services. A married female participant in a women's group narrated that:

Our district has very few female extension workers... a male extension worker visits our farms and homes.... Having a male extension worker frequently visit you, in your home, when your husband is present can be inconvenient and uncomfortable.... sometimes our husbands are suspicious for no reason at all although they (husbands) know that they (male extension workers) come to deliver extension services. We would have loved if the government sent us more female extension workers to work with us (female farmers).

(Female participant no. 5 in women's FGD group, Thunyen Section, Mikalango EPA)

Most unmarried female participants, on the other hand, did not mind about male extension workers visiting their houses to deliver extension services. One unmarried female participant indicated that:

It does not matter whether a female or male extension worker visits me at home... what do I have to be afraid of? It is my house, anyone can visit me anytime... even if I want to visit the extension worker at his office, I am free to do so...

(Female participant no. 8 in women's FGD group, Thunyen Section, Mikalango EPA)

These FGD findings help to explain why more adult male members than adult female members in MHHs, and more adult females than male members in FHHs, accessed and demanded extension services. This may mean that the mere presence of a male extension worker discouraged adult females in MHHs from participating in

extension activities targeting sorghum and millet production. This implies that men in MHHs received extension services on behalf of women who are responsible for producing the crops. This is unlike unmarried women who, in addition to accessing the extension services at home or farm, can even take the initiative to visit the extension agent's office to demand for additional extension services. Gender inequalities undervalue women's roles and contributions, often leading to the perception that men have the right to make decisions over women's work and well-being without considering their needs. This highlights how men's decisions can hinder women's access to resources and opportunities.

Apart from the explanations of married women participants above, married men participants mostly assigned the blame to women, citing reasons that women were less self-confident, or not intelligent enough or not serious enough—to justify why men sometimes received extension training on behalf of women. This finding is supported by Mudege et al. (2017) in their study of the role of gender norms in accessing agricultural training in sweet potato production in Malawi, who reported that in certain households, the decision of who could attend training was based on the perceived ability to understand it. The authors observed that husbands, worried about their wives' lower levels of literacy, were apprehensive of women's struggle to comprehend the training. Furthermore, some men attending agricultural training still regarded it as their duty and prerogative to learn on behalf of their wives, even though the sweet potato was clearly regarded as a woman's crop (*ibid*).

Norms that designate men as household heads were identified as potential barriers to women's access to extension services in MHHs. During discussions, some men suggested that women may choose not to participate in extension training because they prefer men to take the lead, given their status as household heads. One married male participant mentioned that it was his responsibility to attend trainings while his wife managed household chores and took care of children. Little and Panelli (2003) suggested that traditional meanings of femininity that confine women to caregiving and motherhood may actually constrain women's opportunities. In Malawi, the prevailing perception in communities and among extension agents is that men are household heads and therefore represent the family (Mudege et al 2017). In both developing and developed countries, the perception that men are the primary managers of farms and agricultural organizations still prevails (Brandth and Haugen 2010). This can perpetuate gender-based power imbalances and hinder the implementation of progressive government policies aimed at promoting full women's participation in agricultural production.

Access to, control over and entitlement to transportation

Transportation in rural areas often involves walking or using intermediate means of transport, as noted by the World Bank in 2010 and Tamene and Megento in 2017. The most available traditional or local means of transport, including animal (cattle) drawn carts, bicycles, motorcycles or on foot through either head-loading or back-loading, play an important role in filling the transport gap as conventional motorised transport services are poor in the study area. Public transport is particularly difficult

due to poor road networks. This lack of infrastructure can have a negative impact on women, who face difficulty in accessing essential services such as markets.

The study sought to find out if there were any gender differences in access to, control over and entitlement to transport among adult household members in MHHs and FHHs. The gender of the household member with access to, control over and entitlement to transportation was significantly associated with the gender of the household head in sorghum and millet production at (p -value = 0.000). Findings showed that more adult male members (sorghum 27%, millet 30%) than adult female members (sorghum 1%, millet 3%) in MHHs had access to transportation while in FHHs more adult female members (sorghum 21%, millet 18%,) had access to transportation than their male counterparts (sorghum 6%, millet 8%). Control over transportation was very skewed towards adult male members (sorghum 44%, millet 47%) as opposed to adult female members (sorghum 1%, millet 4%) in MHHs while in FHHs, there were almost balanced proportions of adult females (sorghum 29%, 29% millet) and adult males (sorghum 24%, millet 22) controlling transport. The picture is similar with entitlement to transport, where more adult males (sorghum 43%, millet 45%) than their female counterparts (sorghum 1%, millet 4%) were entitled to transportation in MHHs. In FHHs, the differences in entitlement to transportation among adult females (sorghum 32%, millet 31%) and adult males (sorghum 24%, millet 21%) are minimal. Our results show that gendered differences in access to, control over and entitlement to transportation in sorghum and millet production are more pronounced in MHHs than in FHHs.

Discussions revealed that while most of sorghum and millet is consumed at a household level, some is kept for sale either at the farmgate or transported to the local or main district market. Women participants from both districts stated that the ownership and use of traditional or local means of transport is generally male dominated due to economic and/or socio-cultural factors. In Chikwawa women participants narrated several limitations that women face in accessing and using local transport means. These included the fact that women's income was limited, making them unable to buy local transport means such as bicycles, and that they could not access such means without the consent of their male counterparts. There was also the perception that women lack the physical strength to handle draught animals or push animal drawn carts. Most of the male participants stated that they owned bicycles, which they used to transport produce to the local market. Most female participants stated that they did not own bicycles, as such they either walked to the market carrying their load on head or paid bicycle owners to transport them to the local markets. Worst still, most women participants seemed to concur that their multiple reproductive roles tended to determine their mobility in terms of how far and how long they can travel from the home, while men constantly traveled to distant places using bicycles, cattle drawn carts or motorcycles. Even though most of the women participants did not have means of transport, they perceived that they had access to, control over and entitlement to through paying for the bicycles. It can be inferred that this is the premise for the finding in the household survey that adult female members in FHHs had access to, control over and entitlement to transportation.

4 Conclusion

The study established that in MHHs, there were more significant adult male than female members who had access to land, labour, seed, farm tools, manure, credit, extension services and transportation. In FHH, there were more adult female than male members who had access to the same resources. The study hence concludes that there were gender differences in favour of adult male members in MHHs in accessing land labour, seed, farm tools, manure, credit, extension services and transport in sorghum and millet production. The study further concludes that there were gender differences in favour of adult female members in FHHs in accessing land, labour, seed, farm tools, manure, credit and extension services and transportation in sorghum and millet production.

The study showed that in MHHs, more adult male than female members controlled and were entitled to land, labour, seed, farm tools, manure, credit, extension services and transportation. The study hence concludes that there were gender disparities in favour of adult male members in MHHs regarding control over and entitlement to land, labour, seed, farm tools, manure, credit, extension services and transportation in sorghum and millet production. The study revealed that in FHHs, more adult females than male members controlled and were entitled to seed, credit, extension services and transportation. It can therefore be concluded that there were gender differences in favour of adult female members in FHHs in the control over and entitlement to seed, credit, extension services, and transportation in sorghum and millet production. The study found that more adult males than female members controlled land in FHHs. The study hence determines there were gender differences in favour of adult male members in FHHs in the control of land for sorghum and millet production.

The study reported that adult male and female members in FHHs equally controlled and were entitled to labour, manure and farm tools. The study thus concludes that there was gender equality in the control over and entitlement to labour, manure and farm tools in FHHs in sorghum and millet production. The chapter thus advances that the pattern of access to, control over and entitlement to resources in sorghum and millet does not expedite equal outcomes for adult male and female members in MHHs and FHHs except for the control of and entitlement to labour, manure and farm tools in FHHs. Even though sorghum and millet production are the domain of women, their lack of control over natural and human resources, other key resources, and institutions place them in a disadvantaged position to equally benefit from sorghum and millet production. On the other hand, men appear to have more control due to cultural norms that position them over women. This therefore implies that males have greater chances to invest, expand and benefit from sorghum and millet as opposed to females. Agricultural development interventions promoting equitable access to institutional support services and productive resources in Sub Saharan Africa must be informed by intrahousehold dynamics affecting men and women to bridge gender gaps in context and achieve desirable outcomes.

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