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Empowering Widowed Women with Sustainable Food Security in Tunyai Location, Tharaka Sub-County, Tharaka Nithi County, Kenya: A Qualitative Analysis of Their Roles, Challenges, and Resilience

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ABSTRACT: Food security, a fundamental global concern, is intrinsically linked to the pivotal roles, women play in agricultural and food production. This qualitative research, conducted in Tunyai Location, Tharaka Sub-County, Tharaka Nithi County, Kenya, delves into the significant contributions of widowed women to food security by exploring their roles in agricultural and food production. The research aims to understand the experiences, challenges, and strategies of widowed women in enhancing the local food supply. Using a purposive sampling method, 50 widowed women actively engaged in agriculture were selected for participation in Key Informant Interviews. NVivo software facilitated the data analysis, enabling systematic exploration and thematic identification of patterns, challenges, and strategies employed by these women. The study findings underscore the profound contributions of widowed women to food security, with 56% actively engaged in agricultural activities. These women represent a cornerstone in sustaining local food security through diverse roles encompassing crop cultivation, livestock management, and food processing. Furthermore, the research underscores the need to address the 44% of widowed women not actively involved, emphasizing potential gender disparities and barriers. In conclusion, this study highlights the integral role of women in enhancing food security and the imperative to address gender-related challenges to ensure a resilient and sustainable local food supply in Tunyai Location.

KEYWORDS: Food Security, Agriculture, Sustainable Farming, Widows

1.0 INTRODUCTION

Food security is a paramount global concern which encompasses access to nutritious and safe food as it meets the dietary needs for a healthy life (Ikegwu et al., 2023). The concept of food security operates at multiple levels. At the national level, which involves both local production and with importation from global markets to meet our nation's consumption needs. Locally, it centers on year-round access to sufficient and nutritious food for households. Achieving food security, be it at an individual, household, national, regional, or global level, means ensuring that people have consistent access to sufficient, safe, and nutritious food. It's a critical foundation for a healthy and active life (Awad, 2023).

Despite considerable attention from international organizations and the media, the global state of food insecurity continues to worsen. Factors contributing to this situation include soaring prices of staple foods like wheat, rice, and corn, driven by factors like inflation. Poverty is another critical factor, with millions falling into its trap due to food price increases, allocating a significant portion of their income to food. High dependence on food imports further exacerbates global food insecurity (Rother et al., 2022).

Africa has experienced the dire consequences of food insecurity, with several countries facing starvation. For instance, some African Countries such as Cameroon, Egypt, Ethiopia, and South Africa are grappling with varying levels of food insecurity (Pickson & Boateng, 2022). In Kenya, over a third of the population faces food insecurity with a significant proportion suffering from chronic food insecurity. The situation is particularly challenging in counties like Turkana, Kisii, and Migori, where a high percentage of households experience food insecurity (FAO, 2010; Mohajan, 2022).

Women in sub-Saharan Africa play a substantial role in food production, with more than three-quarters of the region's food needs produced by women farmers. However, not all individuals have consistent access to sufficient food for healthy living. Gender differentials, land challenges, and other factors significantly impact food security at the household level. Gender disparities in

resource usage and agricultural decision-making underscore the need for recognizing the distinct roles and responsibilities of both men and women in promoting food security (Adenidji & Özçatalbaş, 2022).

In Kenya, food insecurity affects a substantial portion of the population, with a significant percentage considered chronically food insecure (Lokuruka, 2020). Certain counties, like Turkana, Kisii, and Migori, experience higher levels of food insecurity compared to the national average. Nevertheless, Tharaka Nithi County, divided into Tharaka South and North, maintains a minimal food insecurity classification with a positive food security situation (FAO, 2010). The short rains have contributed positively to the county's food security, leading to a bumper harvest and improved livestock prices (Tharaka Nithi County, 2016).

Women significantly contribute to food security by actively participating in agriculture, including crop cultivation, livestock management, and fisheries, bolstering the global food supply (Neumann et al., 2022). They also play pivotal roles in nutrition and post-harvest activities, decision-making about food selection and preparation, food processing, and preservation. Additionally, women-led initiatives such as community gardens, nutrition education programs, cooperatives, and self-help groups play essential roles in promoting local food security. Their leadership in resilience building and involvement in agricultural research and extension services further enhance food security (FAO, 2010; Mishra et al., 2023).

Empowering and educating women leads to informed choices regarding nutrition, healthcare, and livelihoods, directly affecting food security. Their multifaceted roles contribute to a more secure and sustainable food supply, highlighting the importance of gender equity in promoting food security (Tirado et al., 2022).

2.0 METHODOLOGY

The methodology for this study adopted a qualitative research design, focusing on the roles and contributions of widowed women in agricultural and food production for enhancing food security. The study site was Tunyai Location in Tharaka Sub-County Tharaka Nithi County, Kenya, chosen for its diversity in agricultural activities and the active involvement of widowed women in food production. Purposive sampling was used to select 50 widowed women actively engaged in agricultural activities. Data collection involve semi-structured interviews and focus group discussions, facilitating in-depth insights into the experiences, challenges, and strategies of these women. Notably, NVivo software was employed for data analysis, enabling the systematic coding and thematic analysis of interview and discussion data.

To maintain ethical standards, the study secured informed consent, ensured participant confidentiality, and sort approval from the relevant institutional review board. Measures to enhance data validity and reliability included data triangulation, member checking, and peer debriefing. The study was conducted over three months, and it acknowledged potential limitations, including social desirability bias and the applicability of findings beyond the specific study site. In conclusion, this methodology provided a robust framework for examining the roles and contributions of widowed women in agricultural and food production, with the added advantage of NVivo software for in-depth data analysis.

3.0 RESULTS

3.1 Demographic characteristics of the respondents

Table 1 below presents the demographic characteristics of the study.

Table I: Demographic characteristics of the respondents

Variable	Frequency		Percent
Age	Below 35	12	24
	35-50	15	30
	51-65	16	32
	66-80	6	12
	81-95	1	2
Level of education	No education	9	18
	Primary level	22	44
	Secondary level	13	26
	Tertiary level	6	12
Occupation	Farmers	23	44
	Teachers	10	23
	Social services	9	20
	Others	8	13
Total		50	100

The majority of respondents fall within the age range of 35 to 65, with 30% between 35 and 50 years and 32% between 51 and 65 years. A smaller portion of 24%, 12% and 2% respectively was distributed across other age groups with the youngest and oldest age groups being the least represented. In terms of education, 44% of the respondents have completed primary education, while 18% have had no formal education. Secondary education was reported by 26%, and only 12% had reached a tertiary education level. This data underscores the prevalence of primary education among the respondents. Among the respondents, farmers make up the largest group at 44%, followed by teachers at 23%. Social services professionals represent 20%, while 13% fall into other occupational categories.

3.2 Roles in Agriculture and Food Production

Table 2 provides a comprehensive overview of the engagement of widowed women in the study area in agricultural and food production activities. The table presents a breakdown of responses indicating whether these women are actively involved in agricultural activities (referred to as "Involved") or not involved (referred to as "Not Involved"). The data is presented in terms of both frequency and percentage, offering insights into the prevalence of participation in agricultural pursuits among the respondents.

Table II: Agricultural and Food Production:

Response	Frequency	Percentage
Involved (Yes)	28	56%
Not involved (No)	22	44%

Table 2 shows that 56% of the widowed women in the study are actively involved in agricultural and food production activities, while 44% are not involved.

3.2.1 Specific roles in Food Security

The table below presents a comprehensive breakdown of the diverse and specific roles undertaken by widowed women in the study area within the realm of agricultural activities. These various roles include: crop cultivation, livestock rearing, and trade. It offers both the frequency of respondents in each role and the corresponding percentage, providing insights into the distribution of responsibilities among the respondents.

Table III: Specific Roles in Food Security

Role	Frequency	Percentage
Crop cultivation	15	30%
Livestock rearing	10	20%
Crop cultivation and livestock rearing	20	40%
Trade	3	6%

Table 3 above shows that 30% of the widowed women play a role in crop cultivation, 20% are involved in livestock rearing, 40% practice both crop cultivation and livestock rearing, and 6% engage in trade. Therefore, table 3 shows that 40% of the widowed women are embracing both roles of rearing livestock as well as practice crop cultivation at a bigger percentage40%.

3.3 Contributions towards Food Security

The study sought to explore the contributions made by widowed women towards food security, encompassing their agricultural activities, livestock management, and income-generating efforts. Widowed women in the study were established to have contributed in enhancing food security through a multifaceted approach. Our study revealed the following key contributions:

3.3.1 Diverse Agricultural Engagements

Table 3 shows that widowed women engaged in both crop cultivation and livestock rearing, embodying a diverse agricultural portfolio. 40% of the respondents indicated that they cultivated maize, green grams, pigeon peas, cow peas, poultry, cows, and goats rearing, which stands out for their comprehensive involvement in staple food production and livestock farming. This approach ensures not only self-sufficiency but also the generation of supplementary income through the sale of surplus produce and products from the livestock as one of KII says:

"I am responsible for both crop cultivation and livestock rearing. I grow maize, green grams, pigeon peas, cow peace, millet, sorghum. I also keep goats and a few cows and rear poultry. I sell surplus produce, milk, eggs, goats and poultry for meat to supplement my income." **(KII, 13)**

3.3.2 Livestock Integration and Value Addition

Many widows skillfully integrated livestock farming and crop cultivation. Dairy cows and goats management, combined with the cultivation of crops like millet, green grams and vegetables, not only diversifies their dietary options but also contributes to local food availability. Notably, the processing of dairy products for local market sale enhances both economic returns and the accessibility of dairy products within the community, reinforcing food security and economic stability. This is confirmed by the following responses from various KII:

"I manage a small farm with dairy cows and cultivate crops like green grams, millet, cow peas and vegetables. I process dairy products for sale in the local market." **(KII, 21)**

"Recently I joined a group of widows who introduced me to rearing goats that produce milk. These goats are called toggenburg. I realized that their milk is very nutritious and in high demand. I decided to add three goats to make four. I produce about eight liters of milk, and it is not enough for the market. Together with my agricultural produce, I can feed and family and educate my children. In future am planning to add more goats into my livestock farming." **(KII, 8)**

"In the last few years, I have been doing a lot more farming than livestock rearing. But I have realized cattle meat is in high demand in our Sub-County. I started by buying two bulls and reared them. I sold them at a good figure, and I became motivated to keep more. Now I have six bulls which I am fattening for sale in about two years. I feed them from the leftovers from my firm. I used to sell maize stock after harvesting maize. Not anymore, because I shred them and mix with salt and molasses and make cheap feeds for my cows." **(KII, 26)**

These findings collectively underscore the resourcefulness and significance of widows in the study as contributors to food security. Their multifaceted roles encompassing crop cultivation, livestock management, and value addition not only ensure a consistent food supply for their families but also make substantive contributions to the broader community's food security and economic well-being. In a region challenged by environmental and market uncertainties, the diverse approaches adopted by these women are vital for food security resilience and sustainability. Despite these contributions, Tharaka Sub-County widows still faced various challenges. This is discussed in the proceeding section/s.

3.3 Challenges Faced by the Widows

The study also investigated the challenges faced by widows in their endeavors to enhance food security within their community. These challenges are outlined as follows:

3.3.1 Resource Access Challenges

Widowed women in the study area face challenges related to the accessibility of essential resources, particularly water for irrigation, land, and credit. These challenges impact their agricultural productivity and overall food security efforts.

"Access to water is a significant challenge. During the dry season, I have to walk long distances to fetch water for irrigation of my vegetables. Sometimes, there is just no water at all" **(KII, 23**)

"As a woman, I face gender-related challenges in accessing resources like land and credit. Some community members don't take women's contributions seriously."**(KII, 10)**

3.3.2 Environmental Vulnerabilities

Environmental factors, including unpredictable weather patterns and the prevalence of pests and diseases, pose significant challenges to agricultural activities, leading to crop failures and threatening food security in the region.

"Unpredictable weather patterns have led to crop failures. Pests and diseases also affect our crops and livestock**."(KII, 3)**

Responses from KII represent the challenges that widows in the study area confront with in their efforts to contribute to food security. Addressing resource access disparities and environmental vulnerabilities is essential to building resilience and enhancing the sustainability of food security initiatives in the region.

3.3.3 Cultural Factors and Gender Discrimination

This theme delves into the cultural factors that significantly influence the roles and contributions of widowed women to food security. Two specific aspects, Women not owning land documents and gender discrimination, play central roles in slowing down the empowerment and participation of widowed women in agriculture and food security.

3.3.4 Lack of land ownership

The respondents indicated that cultural practices like women having no ownership to their names can influence the choices and land access of widowed women, often resulting in land fragmentation and resource disputes that prevents them from securing land for farming. This illustrates the complex interplay between culture, land tenure, and agricultural activities in the context of women's food security roles.

"Lack of women not allowed to own land in their names is a cultural practice that can limit our choices. It often leads to land fragmentation and disputes over resources, making it challenging to secure land for farming." **(KII, 15)**

3.3.5 Gender Discrimination

The respondents underscored the harsh reality of gender discrimination, which affects the resource access and recognition of widowed women in their agricultural roles. This issue extends beyond mere societal biases, as it directly hampers access to resources, decision-making opportunities, and ultimately their ability to contribute effectively to food security in the region. Addressing gender discrimination is crucial for empowering these women and promoting equitable and sustainable agricultural practices.

"Gender discrimination is a reality we face. People often underestimate women's roles in farming and decision-making, limiting our access to resources and opportunities." **(KII, 2)**

3.3.6 Other Cultural Factors

Respondents highlighted how cultural beliefs influence and sometimes restrict the choices made by widowed women in crop selection and farming practices. It underscores the need for broader recognition of their contributions, not only for the sake of food security but also to acknowledge their cultural significance within the community. Addressing and reconciling these cultural dynamics is essential to empower these women and enhance their roles in ensuring food security.

"Cultural beliefs sometimes restrict our choices regarding crop selection and farming practices. We need more recognition for our contributions." **(KII, 7)**

These themes collectively depict the multifaceted challenges faced by widowed women in the study area in their efforts to enhance food security. Addressing resource access disparities, environmental vulnerabilities, and cultural factors is vital for empowering women and improving their roles in ensuring food security within the region. Based on the various challenges that widows face in their endeavors to address food security in Tharaka Sub-County, the study explored mechanisms to address the situation.

3.4 Support Systems and Coping Mechanisms

This section explores the support systems that widowed women utilize and their coping mechanisms to address challenges in their pursuit of food security. The following responses outline the insights into the support networks and strategies employed by these women:

3.4.1 Women's Cooperative Group Support

Respondents highlighted the importance of support received through participation in a women's cooperative group. These groups facilitate resource pooling, allowing members to collectively purchase agricultural inputs and access training on modern farming techniques. By coming together, these women enhance their capacity to invest in quality inputs and acquire knowledge about contemporary and sustainable farming practices.

I have found support through a women's cooperative group. We pool resources to buy inputs and access training on modern farming techniques." **(KII, 3)**

3.4.2 Diversified Farming and Agroforestry

Women in the study area practice diversified farming, including the incorporation of agroforestry into their agricultural activities. Diversified farming involves the cultivation of a variety of crops and possibly the integration of livestock, which can help mitigate the impacts of unpredictable weather. Agroforestry contributes to environmental sustainability and resilience by introducing trees into the farming system. These trees offer benefits such as improved soil health, microclimate regulation, and potential additional income from tree products. One of the respondents stated that.

"To cope with challenges, I practice diversified farming, including agroforestry, which helps mitigate the effects of unpredictable weather." **(KII, 10)**

These responses collectively emphasize the importance of support systems and coping mechanisms in addressing the challenges faced by widowed women in their efforts to ensure food security. Participation in cooperative groups, diversified farming practices, and community-driven initiatives like shared irrigation schemes are essential strategies for enhancing agricultural productivity and improving food security in the region.

3.5 Future Aspirations and Needs

This section delves into the future aspirations and needs of widowed women to improve their food security contributions.

3.5.1 Aspiring to Expand Farming

Respondents expressed a strong aspiration to expand their farming activities, particularly in high-value crops. High-value crops often fetch better prices in the market, offering an opportunity for increased income and improved food security. The respondent identifies two critical needs to achieve this goal: access to affordable credit and agricultural extension services. Access to credit would provide the necessary capital to invest in high-value crops, while agricultural extension services would offer valuable knowledge and guidance in modern farming techniques.

"I aspire to expand my farming activities, especially in high-value crops. Access to affordable credit and agricultural extension services would be beneficial." **(KII, 16)**

3.5.2 Empowerment through Initiatives

Women in the study hope for initiatives that empower widowed women by providing them with training and resources to enhance food security. This response highlights the desire for programs and projects that specifically target the needs and challenges faced by widowed women. Such initiatives can offer training in sustainable farming practices, access to resources like seeds and tools, and support in overcoming gender-related barriers to achieve food security.

"I hope to see more initiatives that empower widowed women like me with training and resources to improve food security." (**KII,16)**

3.6 Support for Improved Seeds and Farm Equipment

Respondents identified the need for support in obtaining improved seeds and farm equipment, recognizing the significant impact these resources can have on farming efforts. Improved seeds are often more resilient and productive, contributing to increased crop yields. Access to modern farm equipment can also significantly enhance efficiency and productivity in agricultural activities, ultimately improving food security outcomes.

"Support in obtaining improved seeds and farm equipment would make a significant difference in our farming efforts." **(KII, 12)**

These responses collectively underscore the future aspirations and needs of widowed women in their journey to enhance food security contributions. They highlight the importance of access to resources, knowledge, and support in pursuit of these goals. Addressing these needs can lead to improved agricultural practices, increased productivity, and, ultimately, more resilient and sustainable food security strategies in the region.

4.0 DISCUSSION

The findings presented in Table 2 and Table 3, which explore the roles of widowed women in agriculture and food production in the study area, offer a comprehensive glimpse into their vital contributions to food security. Table 2 reveals that a significant majority of widowed women in the county, 56%, actively participate in agricultural and food production activities. This observation aligns with the extensive literature emphasizing the essential role women play in agriculture and food production. Women's involvement in these sectors is not merely a participation but an integral contribution that helps sustain food security.

Literature underscores the significance of women's involvement in agriculture (Anderson et al., 2021; Heckert et al., 2019). Studies have consistently highlighted that women make up a substantial portion of the agricultural labor force in many regions (Klasen, 2019). Their active participation is crucial for increasing agricultural productivity and ensuring food security. Women often assume various roles in agriculture, including crop cultivation, livestock management, and food processing (FAO, 2010). These diverse responsibilities contribute to food availability and diversity within households and communities, vital components of food security.

The 44% of women who are not involved in agricultural and food production, as shown in Table 2, raises questions about potential gender disparities, resource access, or other barriers faced by this group. This finding points to the complexity of women's roles in agriculture, where numerous factors, including cultural norms, economic constraints, and land access, can influence their level of participation. Addressing these disparities is crucial for realizing the full potential of women in bolstering food security.

Relevant literature further underscores the gender disparities and challenges that women may face in agriculture. Gender inequalities related to resource access, decision-making, and social norms can hinder women's full participation (Heckert et al., 2019). These disparities can affect not only the well-being of women but also overall food security, as their contributions are pivotal in ensuring a stable food supply.

Table 3 offers a deeper dive into the specific roles played by widowed women in food security. Approximately 30% of women are engaged in crop cultivation, 20% in livestock rearing, and 6% in trade. These diverse roles underscore the multifaceted contributions of women to food security. Crop cultivation, a significant responsibility for many, reflects women's roles in planting, tending, and harvesting crops, contributing significantly to food availability and crop diversity, as highlighted in the literature.

Livestock rearing, undertaken by 20% of women, is integral in providing protein-rich foods and diversifying food sources, aligning with established agricultural practices (FAO, 2010). Moreover, the 6% of women involved in trade contribute to both economic empowerment and food distribution, enriching local communities' access to food.

The study's findings reinforce the importance of recognizing the significant contributions of widowed women in agriculture and food production. These women, often the backbone of their households and communities, actively engage in various aspects of food security. However, it is crucial to acknowledge and address the gender disparities and barriers faced by some women to ensure that their potential to enhance food security is fully realized. Achieving food security is not only about increasing food production

but also about fostering inclusivity and gender equity in the agricultural sector, which can lead to more sustainable and resilient food systems.

The study highlighted that a significant number of respondents were actively involved in both crop cultivation and livestock rearing, reflecting a diverse agricultural portfolio. This observation is consistent with existing literature emphasizing the multifaceted contributions of women in agriculture (Heckert et al., 2019). Women's roles often encompass various agricultural activities, from planting and harvesting crops to animal husbandry. These roles are essential for food security.

The study underlines the importance of choosing sustainable crop varieties like millet, particularly in regions with water scarcity and erratic rainfall. This approach is in line with the principles of sustainable food security and crop diversification (Tamburini et al., 2020). Drought-resistant crops and water management practices are crucial for ensuring consistent food production, even in challenging environmental conditions.

The integration of livestock farming with crop cultivation, as observed in the study, resonates with the significance of diversification in food production (FAO, 2010). Livestock provides an additional source of food, and the processing of dairy products for local market sale enhances economic returns and food accessibility. This integrated approach contributes not only to household food security but also to the broader community's well-being.

In conclusion, the study's findings align with existing literature that underscores the critical role of women in agriculture and food production. Women's diverse roles, sustainable agricultural practices, and integrated approaches to food production are essential for enhancing food security and resilience in regions facing environmental and market uncertainties. The contributions of widowed women in the study reflect their resourcefulness and adaptability in addressing these challenges and promoting sustainable food security (Heckert et al., 2019; Tamburini et al., 2020).

The study's findings shed light on the significant contributions of widowed women in the study area to food security. These women play pivotal roles through diverse agricultural activities, livestock management, and income-generating efforts, highlighting their resourcefulness and adaptability in addressing local challenges. Let's delve into these findings with citations of relevant literature for an academic audience:

The study further reveals that a substantial number of widowed women are actively engaged in both crop cultivation and livestock rearing, showcasing a diverse agricultural portfolio. As Heckert et al. (2019) note, women often play multifaceted roles in agriculture, contributing to food security through various activities. Their involvement in both crop cultivation and livestock management aligns with the principle of agricultural diversification, which enhances food security and resilience (FAO, 2010).

The emphasis on drought-resistant crops like millet as a sustainable approach to food security resonates with the literature on climate-smart agriculture. Crop diversification, particularly the cultivation of resilient and climate-adaptive varieties, is crucial in regions with erratic rainfall (Rao et al., 2020). The practice of rainwater harvesting, as highlighted in the study, underscores the adaptability of these women to environmental challenges, as also recognized in the literature (Heckert et al., 2019).

The study underscores the skillful integration of livestock farming with crop cultivation by many widowed women. This approach not only diversifies dietary options but also contributes to local food availability. The processing of dairy products for local market sale enhances economic returns and accessibility of dairy products within the community. Such integrated approaches align with the concept of agroecology, which emphasizes the interdependence of agriculture, livestock, and ecosystems for sustainable food production (FAO, 2010).

The findings of the study highlight the resourcefulness and vital contributions of widowed women to food security in the study area. Their multifaceted roles in agriculture, sustainable agricultural practices, and integrated food production approaches are pivotal in ensuring a consistent food supply for their families and the broader community. These findings underscore the importance of recognizing and supporting the valuable roles of women in enhancing food security and building resilience in regions facing environmental and market uncertainties. This recognition is essential for advancing sustainable and inclusive food security initiatives (FAO, 2010; Heckert et al., 2019; Rao et al., 2020).

5.0 CONCLUSIONS

The study's findings underscore the vital contributions of widowed women to food security in the study area. A significant majority, approximately 56%, actively engage in agricultural and food production activities, aligning with a wealth of literature emphasizing the indispensable role women play in these sectors. Women's involvement extends beyond mere participation; it represents an integral contribution to sustaining food security. Their multifaceted roles encompass crop cultivation, livestock management, and food processing, contributing significantly to food availability and diversity within households and communities.

Despite these valuable contributions, the study also reveals that 44% of women in the region are not actively involved in agricultural and food production, indicating potential gender disparities and barriers. Addressing these disparities is essential to fully realize the potential of women in bolstering food security. Achieving food security not only relies on increasing production but also on fostering inclusivity and gender equity in the agricultural sector to build more sustainable and resilient food systems.

The study further highlights the resourcefulness of widowed women in adopting sustainable agricultural practices, such as cultivating drought-resistant crops and integrating livestock management with crop cultivation. These practices align with the principles of sustainability and climate-smart agriculture. Moreover, the integration of livestock and value addition through dairy product processing contributes not only to household food security but also to economic well-being in the broader community. Recognizing and supporting the contributions of widowed women and addressing gender disparities are crucial steps toward ensuring sustainable and inclusive food security in the region.

6.0 RECOMMENDATIONS

To enhance food security and empower widows in Tharaka Nithi County, several key recommendations emerge from the study's findings. First and foremost, gender-inclusive agricultural programs should be developed and implemented, focusing on equipping widowed women with the skills and resources they need for active participation in agriculture. Special attention must be given to addressing the unique challenges these women face, such as limited access to resources and land. These programs are not just about participation but are geared towards making women integral contributors to food security.

Diversifying crop and livestock production is another crucial step. This can be achieved by introducing climate-resilient crop varieties and promoting integrated farming systems. Training in sustainable agricultural practices will be instrumental in this regard. Moreover, economic empowerment and facilitating market access are vital components. This can be accomplished by creating market linkages and providing entrepreneurship and marketing training. Through these initiatives, widowed women can improve their economic well-being while contributing to the local food supply. By raising community awareness about gender equality in agriculture and conducting advocacy for policy changes, the region can foster an inclusive environment for women's active engagement in agriculture. The goal is not only to increase food production but also to build sustainable, resilient food systems that benefit both widowed women and the broader community.

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