

The Extent of Participation of Rural Women in Agricultural Production: A means of Livelihood in Rajaf Payam, South Sudan

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Abstract- Rural women play integral role in food production, development and stability of rural areas in South Sudan. However, the role of rural women in South Sudan's economic sector has been neglected. This study aims to document the extent of involvement of rural women in agriculture in Rajaf Payam. Purposive and random sampling techniques were used to select 120 sample size. A structured questionnaire was used, followed by frequency and descriptive analysis of the results. The results showed that 87.5% of rural women were within 18 – 60 years age bracket, 41.6% mostly married, 87.5% had yearly extension contacts and 54.2% were members of social organization. More than half of the women 51.6% lacked formal education and 82.5% had 11-40 years of farming experience. A significant 62.5% had farm sizes less than one hectare, with 58.3% of the farmers borrowing informally. Their level of income was found to be low. Cowpea, jute mellow (*Kudura*), groundnut, cassava, maize, okra, egg plant, and sorghum constituted predominant crops grown by the farmers while they also reared goats and sheep and kept chickens. It was also found that the farmers participated in land clearing, sowing, weeding, harvesting, transportation of produce/products, processing, storage and marketing. High cost of agricultural inputs (improved seeds and fertilizers) and high cost of farm labor were the highest ranked constraints faced by the rural women. The research recommends the provision of rural women farmers with relevant agricultural technologies, appropriate resources and training to enhance their production. Access to gender-sensitive technologies can alleviate the burden of agricultural tasks, processing, and storage activities, thereby enabling individuals to engage in other income-generating activities.

Index Terms- Rural Women, Involvement, Agriculture, Constraints

I. INTRODUCTION

Agriculture is a crucial component of rural development, serving as the primary source of the rural economy in South Sudan. Rural women serve as the backbone of global agrifood systems, playing vital role in agricultural labour and food security particularly in under-developed African countries [1]. In African countries, including South Sudan, the majority of farmers engage in subsistence smallholder farming, with little practices of intensive agriculture [2]. Women constitute 70% of agricultural workers, 80% of food producers and they are exclusively primary actors across the agricultural value chain-from planting to processing and manage between 60% and 90% of marketing activities [3]. Hence, rural women participate comprehensively in farming activities, including digging, planting, weeding, applying manure and inorganic fertiliser, harvesting, threshing, grinding, and are the sole participants in other household choruses such as cooking, fetching water, and marketing of agricultural products[4].

Women at the present time, are active participants in economic landscape of South Sudan, particularly in farming operations, producing the main food crops such as sorghum, cowpea, okra, groundnut, maize, and cassava. In addition, they are involved in fisheries, poultry, and the rearing of sheep and goats [7] It is therefore evident that the role of rural women farmers in food production and food security is unquestionable.

Despite the important roles women play in agriculture in the country, they are often ignored ownership of agricultural land and acquisition of inputs, and services[8].

In addition, [9] noted that women lack access to agricultural information and innovation in comparison to men, thus exacerbating the existing disparities in agricultural productivity and resource management. The gender gap in access to and control of resources continues to be a major issue, not only sustaining women's cycle of low productivity in agriculture, but also prompting enquiry about the inclusive and sustainable growth of this sector[10]. Such inequality contributes to the underperformance of agriculture in many African countries, including South Sudan, where women, who frequently play crucial role in the rural economy, encounter obstacles that reduce their involvement and productivity[11]. Gender inequality is prevalent in the agricultural sector, and this serves as a barrier to development, necessitating reassessment of government policies regarding agriculture and all factors that challenge rural women farmers[12].

In order to reduce the problems facing poor rural women farmers, various studies have been conducted on possible solutions. For example,[6] carried out a study on the role of women in agricultural production. [13] focused on roles of rural women in farm management decision making process. [14] conducted a study on role of women in agricultural development and their constraints. However, in South Sudan, no research has ever been carried out on the extent of women participation in agriculture, despite the fact that the role of women in agricultural production is well known. As a result, this study was designed with the aims to (i) describe the socio-economic characteristics of women farmers; (ii) identify the crops and vegetables produced by rural women farmers; (iii) determine the livestock reared by rural women farmers; (iv) determine the involvement of rural women in agricultural production activities; and (v) identity the major constraints affecting rural women involvement in agricultural activities in Rajaf Payam, Juba County, Central Equatoria State, South Sudan.

II. MATERIALS AND METHODS

A. Study Area

This research was conducted in Rajaf Payam in Juba County located in Central Equatoria State. The area occupies central southern region of South Sudan, along the White Nile River. The payam is located 14.5 kilometers west of the capital city of Juba (Fig.1).

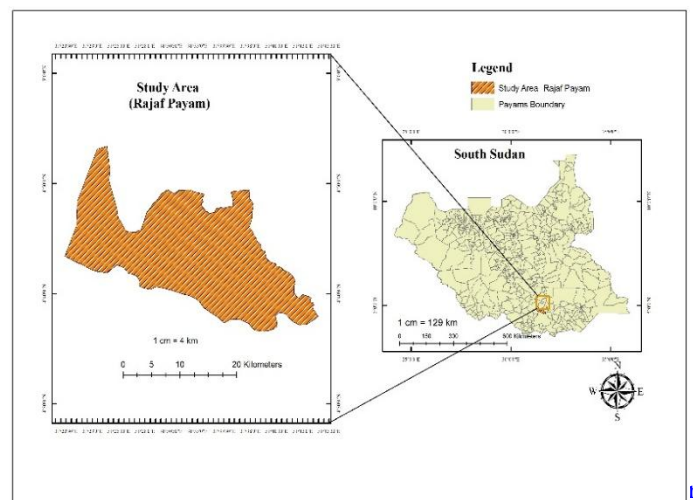


Figure 1: Location of Rajaf Payam

A. Sampling Techniques and Sample Size

Purposive sampling method was used to select the respondents in the study area. Simple random sampling technique was then employed in selecting twenty women farmers from six villages that engage in agriculture to give a total of 120 women respondents who were used for the study. The villages were Logo west, Logo east, Mugoro, Gumbo, Kansuk, and Tokiman.

A. Data Collection

The data required for this study were collected using a well-structured questionnaire on socio economic characteristic of the respondents (age, marital status, educational qualification, farm size, farming experience, extension contacts, membership of social organization, source of farm credits and annual farm income in SSP), crops and vegetables produced, livestock reared and farming constraints affecting involvement of rural women in agricultural activities.

A. Data Analysis

The data were analyzed using statistical package for social sciences (SPSS 25) and MS Excel. Descriptive statistics using frequency and percentage to satisfy objectives (i, ii, iii, iv and v).

III. RESULTS AND DISCUSSION

Socio-economic Characteristic of the Respondents

Table 1 indicates that the age of the majority of the respondents (87.5%) falls within the age range of 18 to 60 years. A small percentage of respondents (3.3%) were less than 18 years old, while 9.1% were over 60 years. This age distribution suggests that the sample was largely comprised of adults, that might have implications for decision making at the household level[15]. The study showed that 41.6% of the adult respondents were married, while 19.2% were widowed, 28.3% were divorced, and only 10.8% were not married. A previous study by [16] reported that early marriage is promoted amongst the community living in this area.

Regarding the educational background of the women farmers, a significant majority of 51.6%, did not attain formal education while 11.6% reached the standard of tertiary education. The low level of education might hinder their readiness to embrace innovations easily for improving their farming techniques to increase the level of agricultural production[16].

Regarding farming experience, 82.5% had 11 to 40 years of experience, whereas 17.5% had 1 to 10 years. In the case of access to extension services, significant majority of 87.5%, of farmers received visits from extension agents once a year, while approximately 6.6% experienced monthly visits, and 5.8% reported receiving visits on a weekly basis. The limited number of female extension agents readily available in the community to cover the study area may be responsible for the limited access to extension advice. The outcome is also consistent with [17] who indicated that scarcity of female extension agents could restrict women's access to and utilization of timely and appropriate technologies for enhancing agricultural production and productivity for their overall agricultural success and economic empowerment.

The data presented in Table 1 indicates that 54.2% of the women farmers were affiliated with a social organization, whereas 45.8% were not members of any social organization. Similarly,[18] noted that women's participation in groups improved their access to decision-making authority and agricultural resources. In this study, approximately 31.6% of the participants realized annual farm income ranging from 51,000 to 75,000 SSP, whereas 22.5% earned below 25,000 SSP. It is therefore reasonable to conclude that the income level of all the farmers in this community is low. The limited financial resources have hindered farmers from expanding their cultivation area, as they may lack the necessary capital for investment. However, the little income the farmers obtain does not reflect the value of their annual yield from the farms. Since these farmers are subsistence producers, the bulk of the produce must be kept for household maintenance; only a little surplus is marketed.

Table 1: Socio-economic Characteristic of the Respondents

Sample Size		120
Age of the respondent	Frequency	Percentage (%)
Less than 18	4	3.3
between 18 - 60	105	87.5
More than 60	11	9.1
Marital status		
Single	13	10.8
Married	50	41.6
Divorced	34	28.3
Widowed	23	19.2
Educational qualification		
No formal education	62	51.6
Primary level	10	8.3
Secondary level	34	28.3
Tertiary	14	11.6
Farming experience (Years)		
1-10	21	17.5
11-40	99	82.5
Farm Size (Ha)		
<1	75	62.5
1 – 2	30	25.0
3– 4	15	12.5
Extension contacts		
Weekly	7	5.8
Monthly	8	6.6
Yearly	105	87.5
Membership of social organization		
Yes	55	45.8
No	65	54.2
Sources of farm credit		
Informal borrowing	70	58.3
Personal savings	50	41.6
Annual farm income (SSP)		
<25,000	27	22.5
26,000-50,000	33	27.5
51,000-75,000	38	31.6
Above 75,000	22	18.3

Crops cultivated and livestock reared by rural farmers.

Varieties of crops are grown by the farmers in Rajaf Payam (Fig.2). Cowpea and Jute (Jew's) mellow were the crops predominantly cultivated by all of the farmers. They were also found to cultivate various other crops, such as groundnut (75.0%), cassava (80.0%), maize (57.5%), okra (91.6%), eggplant (60.0%), and sorghum (62.5%). This is consistent with previous research which showed that rural women in this community cultivated food crops consisting primarily of cereals (maize and sorghum) and vegetables, such as okra and leafy greens[19]

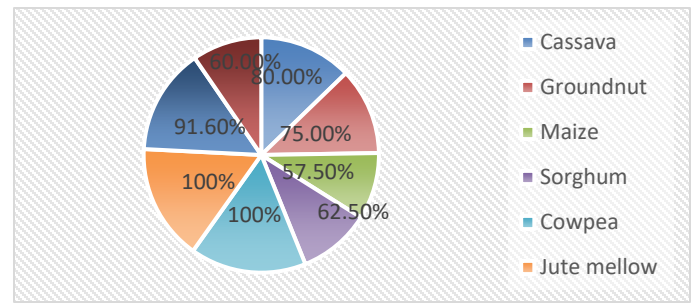


Figure 2. Common crops and vegetables produced in Rajaf Payam

Figure 3 displays that the women farmers in Rajaf Payam rear small ruminants, goats and sheep and keep chickens. The study showed that 71.6% of them had goats and 33.3% possessed sheep, while 58.3% kept chickens. Previous findings indicated that rural women in this study area raised poultry and small ruminants, utilising them as a means to generate funds for essential and pressing needs, including children's school fees and healthcare [17]

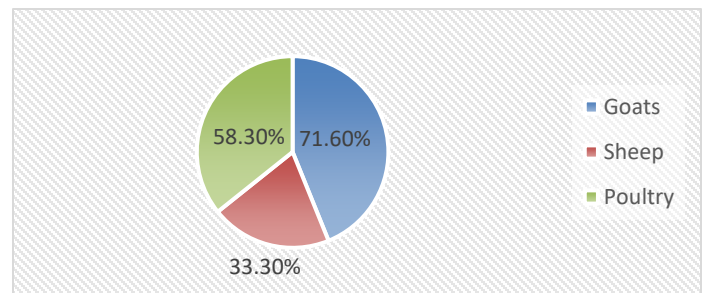


Figure 3. Common livestock reared by rural women farmers in Rajaf Payam

The extent of rural women involvement in various agricultural Activities

The result of the socioeconomic characteristics of the respondents is depicted in Figure 4. It shows that rural women of Rajaf Payam played significant role in all agricultural production activities. It was found that 41.6% of the women were involved in land clearing, 54.2% in sowing, 91.6% in weeding, 89.1% in harvesting, 85.0% in transportation of produce/products, 81.6% in processing, 75.0% in storage and 100% in marketing respectively. This indicates that the labour contribution of rural Rajaf Payam women in agricultural activities ranged from 42% to 100%, which is notably high. However, In comparison, this involvement is lower than that reported by [20] but within the range between 60 and 90% reported by [13] for participation of women in farm tasks.

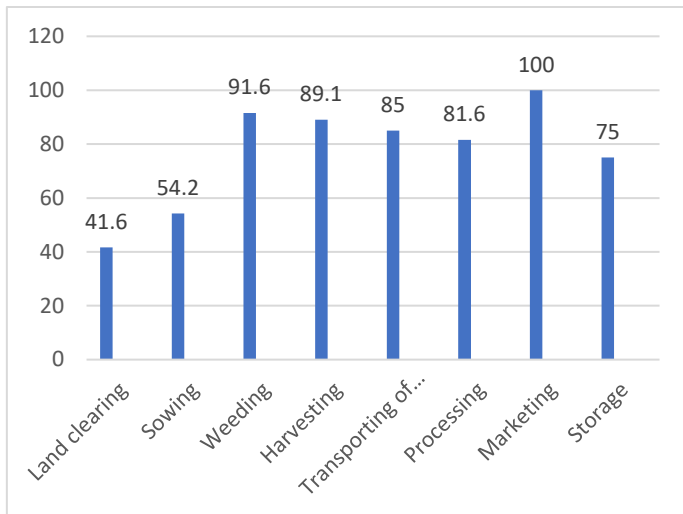


Figure 4. Rural women involvement in various agricultural Activities

Constraints affecting involvement of rural women in agricultural activities

Figure 5 highlights several key barriers that women recognised to their participation in agricultural production. These include the high cost of agricultural inputs (improved seeds and fertilisers), the high cost of farm labour, a lack of credit facilities, poor access to agricultural extension services, and a lack of appropriate agricultural technologies as the primary barriers to their participation in agricultural production, among other factors. This corresponds with the previous research of [21], who indicated that the primary challenges faced by women farmers included the prevalence of pest and diseases, the high cost of pesticides and fertilizer, inadequate finance, high cost of labour, high cost of farm inputs ,inadequate land and poor storage facilities.

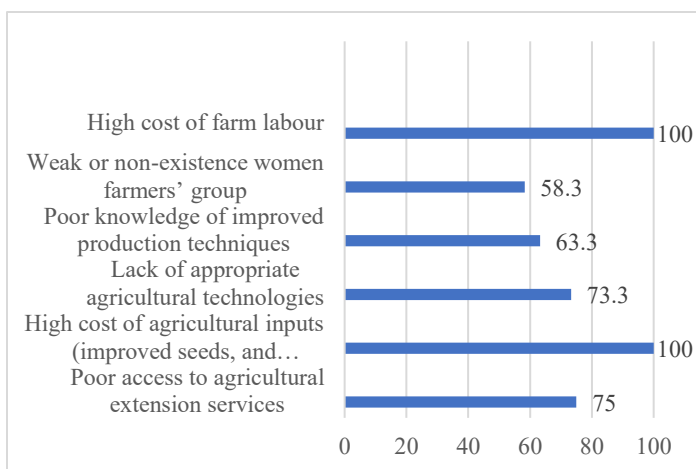


Figure 5. Constraints affecting rural women involvement in agricultural production

IV. CONCLUSION

The study concludes that rural women farmers in Rajaf Payam of Central Equatoria State are small-scale producers engaging in the cultivation of subsistence food crops, poultry keeping, and rearing small ruminants, contributing a significant proportion of their labour to farming activities. They, however, faced challenges due to the high cost of agricultural inputs (improved seeds, fertilizers), high cost of farm labour, lack of credit facilities, poor access to agricultural extension services and lack of appropriate agricultural technologies, resulting in low income and living standards. Based on the findings of the study, the following recommendations may be suggested:

- [1] Equipping rural women farmers with relevant training and technologies is essential for enhancing their production techniques and improving their income and standard of living.
- [2] Researchers should develop gender-sensitive subsidised technologies and provide them to women to reduce the burden of agricultural tasks and release them to do other income-generating activities.
- [3] Extension agents must prioritise timely dissemination of relevant information regarding women's crops and livestock to enhance production, to improve household food security.

V. ACKNOWLEDGMENT

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