

# Female Farmers Voiced Their Contribution to Household's Food Security: A Case of Kazgail Village, North Kordofan

Rawia Alfadil Sharif Mahmoud, Shadia Abdelrahim Daoud

Northern Kordofan, Sudan

Email: rawiaelfadil@gmail.com

**How to cite this paper:** Mahmoud, R. A. S., & Daoud, S. A. (2024). Female Farmers Voiced Their Contribution to Household's Food Security: A Case of Kazgail Village, North Kordofan. *Advances in Applied Sociology*, 14, 247-254.

<https://doi.org/10.4236/aasoci.2024.145017>

**Received:** December 5, 2023

**Accepted:** May 26, 2024

**Published:** May 29, 2024

Copyright © 2024 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

## Abstract

The study aims to explore the contribution of female farmers to household food security. The qualitative method was used, to gather in-depth reactions and responses that focused on the information needed to analyze the attitudes, perceptions, and experience of female farmers towards their contribution to household food security. *A sample of 18 female farmers was purposively selected. Group discussion with female farmers was used as method of data collection.* A total of three group discussions were held over two weeks. During group discussions, female farmers voiced clearly their experiences to decide the types of food items to achieve household food security, and sort out the status of food security of their households. The narrated stories explained clearly and deeply systematically the experiences of female farmers as food producers. They voiced the challenges limited their contribution to household food security and with the limited opportunities available to them. The study concluded that female farmers in the study areas played major roles in their households' food security from production to consumption. It is worth mentioning that they are the backbone of small-scale agriculture, farm labor, and day-to-day family subsistence. So, yet their contribution is uncountable, because of the subsistence nature of their work, which is considered as invisible family production. In order to enhance women smallholder farmers' efforts to achieve food security and sustainability, governments, farmers' organizations, financial services providers, civil society organizations and other relevant bodies should work in collaboration to ensure the empowerment of female farmers.

## Keywords

Household Food Security, Female Farmers

## 1. Background and Methodology

Sudanese women have an effective role in food security, data on women's contributions to agricultural production is increasing; however, there is still a lack of data on Sudanese women's contribution to household food security in Sudan. One reason for underreported women's contribution to food security could be that the data do not account for many of women's productive activities. Unaccounted women's contributions to food security include activities such as home gardening (known locally as Juburaka), livestock rearing, and post-harvest activities of agriculture and animal products (processing and preservation). Additionally, while women usually perform field cultural activities, these roles may be counted under "helpers", unpaid family laborers, rather than as actual contributors to household's economy (Ibnouf & Ibnouf, 2016). Women's productive work in the Sudan, such as agricultural labor, tends to be perceived as an extension of their household duties (Ibnouf, 2012: p. 24). Development policies affect women and men differently, and influence gender relationships, regarding women as beneficiaries and as such, they do not enjoy an equal position with their male counterparts. Nature and extent of women's involvement in agricultural sector vary widely across different ecological zones and farming systems and from region to region in the country. Women's contributions involved all farm production activities, but were much higher in traditional farming areas. Participation of females in the traditional rain-fed agricultural areas reaches 78 percent in North and South Kordofan (FAO, 2011). In addition, women play a major role in backyard plots, a finding that is consistent with what is reported in the literature across developing countries (Mukadasi & Nabalegwa, 2007). Although rural women share similar problems with men in many respects, women identify constraints and opportunities that differ from men and attribute them to gender within their culture. Rural women's work in the food production sector continues to be underrated and unrevealed in national food security policies. It is difficult to know how many households or even individuals are food insecure, given the multiple dimensions, the analysis of female contributions shed the light on the some past studies on food security situation of Sudan, focused mainly on the macro level issues, determinants and dimensions of food insecurity at household level. The use of qualitative technique, as one of the methods of data collection and analysis, will present actual perceptions and voices of female farmers on their existing situations that determine their contribution to securing food at the household level (Ibnouf & Ibnouf, 2016).

## 2. Methods

The qualitative method was used, to gather in-depth reactions and responses that focused on the information needed to analyze the attitudes, perceptions, and experiences of female farmers towards their contribution to household food security. *A sample of 18 female farmers was purposively selected. Group discussion with female farmers was used as method of data collection.* A total of three group dis-

cussions were held over two weeks. The following points were discussed with female farmers to examine their attitudes and perceptions toward their contribution to household food security:

- Food consumption at the household.
- The status of Household food security in the last two years.
- Challenges.

Content analysis was used to analyze data collected from group discussions as follows. All the group discussions transcripts were coded. Comment of respondents that simplify points to be discussed was highlighted. Outline of the report based on themes was arranged.

The rest of the paper is divided into three parts. Part one presents the results. Part two includes discussion. Part three is for conclusion and recommendations.

The analysis of the group discussions is organized into four themes:

- Food consumption at the household.
- The status of household food security in the last two years.
- Challenges.
- Access to resources and opportunities.

### 3. Results

#### Profile of female farmers

The study targeted females of different age groups as a majority were less than 45 years of age. While most of the respondents were currently married, the majority of their husbands migrated and left behind to head their household. In addition to some widows, majority were illiterate, only a few completed primary education, majority of female farmers in their houses had 6 - 10 members. Subsistence farming was only source of leaving for all of female farmers.

#### Food consumption at the household (Kazgail village)

Cereal crops (maize and millet) are the staple food of North Kordofan, in addition to some other commodities. Like all the villages in North Kordofan **Kazgail** village depend on cereal crops maize. Households rely mainly on grain flour to produce food.

However, households rely mainly on grain flour for food consumption where some families have the privilege of having vegetables, meat and other foodstuffs that are available only when needed.

The products of millet is stored to be used as daily consumption and sometimes used as cash liquidity, where a portion is sold to buy other food items, as women said “*we depend mainly on millet as main staple food stored throughout the year until the start of the new agricultural season*”.

Women also have stated that some other food items were used as cash generators or food supplements to secure food at household level,

“*We sell other items like vegetables and meet when we need them... We usually use some processed food as a supplement to the main food to enrich our meals... We practice food processing only for domestic use as we process peanut to*

*make Dakowa (Peanut Butter) ...“ We process the sesame to eat as an additional meal or add it to other food” ...“ We keep animals to secure food for our families, as we all have the right of grazing” ...“ Animal products are for domestic consumption” ...“ Milk and eggs are the most important products as supplement food for our families...”*

#### **Food consumption at the household (Kazgail village): 22/4/2018**

Cereal crops (maize and millet) are the staple food of North Kordofan, in addition to some other commodities. Like all the villages in North Kordofan **Kazgail** village depend on cereal crops but instead of maize they have corn. Households rely mainly on grain flour to produce food.

However, households rely mainly on grain flour for food consumption where some families have the privilege of having vegetables, meat and other foodstuffs that are available only when needed.

The products of millet is stored to be used as daily consumption and sometimes used as cash liquidity, where a portion is sold to buy other food items, as women said *“ we depend mainly on millet as main staple food stored throughout the year until the start of the new agricultural season”*.

Women also have stated that some other food items were used as cash generators or food supplements to secure food at household level,

*“ We sell other items like vegetables and meet when we need them... We usually use some processed food as a supplement to the main food to enrich our meals...” “ We practice food processing only for domestic use as we process peanut to make Dakowa (Peanut Butter)” ...“ We process the sesame to eat as an additional meal or add it to other food” ...“ We keep animals to secure food for our families, as we all have the right of grazing” ...“ Animal products are for domestic consumption” ...“ Milk and eggs are the most important products as supplement food for our families...”*

#### **The status of household food security in the last two years**

In addition, women during group discussion have compared between the present year and last year status of food security, they quoted:

*“... This year is better than last year, we managed to secure food for our household while last year our households experienced food insecurity...”*

All women agreed that good rainy seasons contribute to food security, hence, in this year they managed to grow cash crops. However, some women described a good year as follows:

*“... This year’s season was rich rainy season, we planted all kinds of crops for food and cash” ...“ I got money from Sesame and Karkadi that grew this year” ...“ This year was a good rainy season, we planted all kinds of agricultural crops for food and cash” ...“ After the harvest period adequate food is available for all members of the household” ...“ Currently, the food is available after the harvest period, but the food shortage occurs during autumn when starting agricultural activates (August to October)...”*

Unlike last year, the season was not good enough to secure food, different women quoted that:

*“The rain was not available last year, so production and productivity were not good, and we suffered a lot last year from the lack of food. A some of us sold cattle to buy food, work in the city, reduced amount of meals during the day this, the nutritional value of meals for the whole family”...“ We have scarce financial resources that we were forced to spend less money on food”...“ We were forced to compromise the quality and/or quantity of food due to that...”*

Knowing the above as it may, women have adopted various strategies to overcome last year season, some of which are, reducing the number of meals during the day, changing food items for children, seeking help from relatives or neighbors, sell some of their assets and animals or work on other farms as paid workers.

#### **The contribution of non-farm activities to household food security**

Household income is the major determinant of access to food. Income activities have a substantial positive effect on the improvement and sustainability of the household food security. Most women, especially smallholders, derive some income from activities outside primary agriculture (non-farm activities), away from their farms (off-farm activities), income generated from these activities enabled them to buy high nutrient food and to afford food during food shortage, as what some of the women have said:

*“...Despite the agricultural production and animal production we do additional work to buy food for our r families”...“ We do some of the off-farm activities as manual work such as broaches, chocolates, boxes and other activities for domestic use or sale in markets when needed...”*

According to what women said, in the context of failing rain seasons, non-farm activities contribute to provide and improve household food security.

#### **Challenges**

Increasing the productivity of women, farmers and entrepreneurs, means removing the obstacles they face in doing their work, and improving their access to resources and information so that they can help themselves.

The researcher found, through the group discussions, that women are marginalized from production resources and share in decision making, yet they are loaded with the responsibility of providing food and taking care of the family. Moreover, the unavailability of men in the villages increases the burden on women who became the main providers of food in the household. And according to women tales, they quoted: “...Our men left the village for better income and left us alone to feed and take care of the household...”

#### **Challenges**

*“Our tribe (Barno) is a long-time migrant in Sudan and they practice northern Kordofan and practice traditional agriculture, we did not own land this our main challenge”...“ Increased input costs (mechanisms) and Lack of improved seeds”.*

*“High costs of agricultural operations (The process of ploughing and cleaning the land)” “Lack of agricultural extension office”...“ Land production and rainfall have declined in recent years”...“Cutting off treesand spread of desert in the northern regions”...“We are concerned about agricultural finance procedures and the emergence of some lesions (locusts graves) in different parts of the state*

*and was controlled” ...“ We have no land for grazing or agricultural land for the tribe of the Barno in the village of Shoshai and around” ...“ Male is not responsible for whole family, a large number of men travel to Khartoum and Alobaied from work and increase income” ...“ We face high competition between us (female and male).*

*Most of men have more than one wife that makes anew burden on women, sometime they be head of household” ...*

Women have concluded the challenges they face which are:

- Increased input costs (mechanisms) and Lack of improved seeds.
- High costs of agricultural operations (The process of ploughing and cleaning the land) besides Lack of agricultural extension.
- Cutting off trees and spread of desert in the northern state reduce fertility of land
- Lack of improved seeds.
- Farmers are concerned about agricultural finance procedures and the emergence of some lesions (locusts graves) in different parts of the state and was controlled.
- The production of land decreased and the rainfall fluctuated in recent years. Unused of agricultural machinery and animal draft during the previous period caused in reduction of crop production.
- Reduction of the amount of land production annually.
- Challenges that range from persistent worry about running out.
- Of food to skipping meals to eating nothing for a day or longer.
- Food shortage period.
- Three month before the beginning of agricultural season.

#### **4. Discussion**

The participation of women as food producers indicates to increase in the role of women in agriculture due to the migration of male counterparts. A study by [Ahmed, Imam, and Siddig \(2012\)](#) found women in North Kordofan as a key to agriculture and food security in Sudan. This result goes in line with result of study by [Ibnouf \(2011\)](#) found that In Western Sudan Region, there has been a growing number of female-headed households (FHH) resulting from conflicts and the male outmigration from rural areas of the Region. This has caused females in women-headed households to become responsible for farming.

The study found households rely mainly on grain flour for food consumption where some families have the privilege of having vegetables, meat and other foodstuffs that are available only when needed.

The discussion with female framers indicated Household income is the determinant of access to food at household level Most women, specially smallholders, derive some income from activities outside primary agriculture (non-farm activities) to purchase food [FAO \(2006\)](#) study found Women’s purchasing power may not only be used to buy food and other basic assets for themselves and their fam-

ilies, but also to pay for the inputs used in food production.

This outcome is supported by the **World Bank (2001)**, despite the significant roles women play in agriculture and food security, they continue to have a poorer command over a range of productive resources, including education, land, information, and financial resources.

## 5. Conclusion and Recommendations

### 5.1. Conclusion

The results have demonstrated that women play a major role in producing and providing food for their households in this high-risk climate area, while men are more likely to migrate seasonally and even permanently. In addition, women are responsible for food preparation, processing, and food preservation and are wholly responsible for attending to household garden plots. They, therefore, contribute more to household food security than men, though this contribution is not recognized in the official statistics. Finally, it can be concluded that lack of access to productive assets, inputs and services is still a major constraint that challenges the effective contribution of female farmers to securing household food.

### 5.2. Recommendations

In order to enhance women smallholder farmers' efforts to achieve food security and sustainability, governments, farmers' organizations, financial services providers, civil society organizations and other relevant bodies should work in collaboration to ensure the following is done:

- Provision of good quality seeds and planting materials.

Appropriate arrangements should be put in place to enable organized female farmers' groups to access the agro-processing funds designated for small-scale farmers.

All these interventions need concerted efforts with the different stakeholders involved, especially governments, female farmers' or farmers' organizations and civil society organizations.

### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

### References

- Ahmed, A. E., Imam, N. A., & Siddig, K. H. A. (2012). Women as a Key to Agriculture and Food Security in Sudan: The Case Study of Northern Kordofan State. *Journal of Agricultural Science and Technology B*, 2, 614-620.  
[https://www.researchgate.net/publication/235662782\\_Women\\_as\\_a\\_Key\\_to\\_Agriculture\\_and\\_Food\\_Security\\_in\\_Sudan\\_The\\_Case\\_Study\\_of\\_Northern\\_Kordofan\\_State](https://www.researchgate.net/publication/235662782_Women_as_a_Key_to_Agriculture_and_Food_Security_in_Sudan_The_Case_Study_of_Northern_Kordofan_State)
- FAO (2006). *Women and Sustainable Food Security*.  
<https://www.fao.org/4/x0171e/x0171e02.htm>

- FAO (2011). *The State of Food and Agriculture 2010-11: Women in Agriculture—Closing the Gender Gap for Development*. <http://www.fao.org/docrep/013/i2050e/i2050e.pdf>
- Ibnouf, F. O. (2011). Challenges and Possibilities for Achieving Household Food Security in the Western Sudan Region: The Role of Female Farmers. *Food Security*, 3, 215-231. <https://doi.org/10.1007/s12571-011-0118-3>
- Ibnouf, F. O. (2012). The Value of Women's Indigenous Knowledge in Food Processing and Preservation for Achieving Household Food Security in Rural Sudan. *Journal of Food Research*, 1, 238-253. <https://doi.org/10.5539/jfr.v1n1p238>
- Ibnouf, M. A. O., & Ibnouf, F. O. (2016). Role of Rural Women in Sustaining Household Food Supplies in Western Sudan. *International Journal of Advanced Research*, 4, 455-469. <https://doi.org/10.21474/IJAR01/385>  
[https://www.journalijar.com/uploads/131\\_IJAR-10040.pdf](https://www.journalijar.com/uploads/131_IJAR-10040.pdf)
- Mukadasi, B., & Nabalegwa, M. (2007). Gender Mainstreaming and Community Participation in Plant Resource Conservation in Buzaya County, Kamuli District, Uganda. *African Journal of Ecology*, 45, 7-12. <https://doi.org/10.1111/j.1365-2028.2007.00730.x>
- World Bank (2001). *Engendering Development through Gender Equality in Rights, Resources and Voice*. World Bank and Oxford University Press.