INNOVATIONS

Women Participation in Agricultural Production in Lofepaco in Beni-Lubero, Republic Democratic of Congo

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Abstract

This study aimed to determine the level of women's participation in agricultural production through farming organizations. The purposive sampling procedure was employed to identify 367 active participants from farmer organizations. A survey was used to collect data, and the analysis was facilitated by descriptive statistics, correlation analysis, and multiple regression analysis. The results indicated that the majority of respondents were between bracket ages of 31 and 50 years old. The result shows that the majority of the respondents were married, The mean household size was seven people per household. All the respondents were female, The mean average of years spent in the farming organization was 10, with a standard deviation of 8.7. The first three reasons claimed by respondents that led women to join agricultural organizations were consecutive: input access, credit access, and market access.

The correlation between socio-demographic profiles variables and participation in crop production showed that there is a negative correlation between the level of education and crop planting as well as harvesting. The results show a negative correlation between household size and land preparation. While, there is a significant positive correlation between respondent marital status and land preparation, crop planting, weeding, harvesting, threshing, storage of the harvest, sales of harvest. On the other hand, there is a significant positive relationship between the length of membership and crops planting, weeding, storage of the harvest, sales of harvest.

The finding reveals the highly ranked participation of respondents in the household's activities was as follows; food preparation, taking care of children, washing clothes, washing dishes, and sweeping the house. Results indicate that respondents' participation in meetings and training was high. A high level of ownership of agricultural assets by the respondents was also revealed.

A significant positive correlation between the respondents' regular activities in the household, such as washing clothes, washing dishes, buying clothes, cleaning the house, fetching water, food preparation, collecting firewood, maintenance, and repair and agricultural land ownership was established. Findings show that there is a significant positive correlation between the respondent's frequent household duties such as washing dishes, washing clothes, fetching water, maintenance, and repair, and the small livestock possession.

There is a significant positive correlation between respondents' ordinary household activities such as washing dishes, fetching water, cleaning the house, maintenance, and repair, washing clothes, and minor livestock ownership. Findings show that there is low access and ownership of women to the assets. While the majority of respondents had a high decision contribution to control and transfer of their products and assets.

Household maintenance and repair leads to affect the dependent variable. This means that respondents had only 7.1`% of their households' maintenance and repair activity that affect their participation in farmer organization's meetings. Data also show that, regardless of the household activities of respondents, at 92.9 %, they were still attending organization meetings. The household activity of buying clothes affects women's participation level, Crop production, harvesting, and household buying food.

Keywords:1. Woman participation 2.Farming organizations 3.Agricultural produce and livestock 4. Household organization 5.LOFEPACO 6.Beni-Lubero

Introduction

The gender inequality issue has been one of the critical challenges of sustainable development around the world. In 2005, the former United Nations Secretary-General Kofi Annan pointed out that there is no successful instrument for development than women's Participation (Porter, 2013). In the same view, Bayeh (2016) stated that sustainable development is impossible without women's involvement in prone gender equality. Women's commitment to all areas of development initiatives is essential to attain sustainable development; yet, gender inequalities across economic, social, and environmental dimensions remain widespread and persistent.

Collective action has been recognized as an effective way to enable women to participate and act as development agents for farming organizations in rural areas. According to Geleta, et al. (2017), one important way for women to involve in development is to enable them to be organized in the form of associations and groups. Establishing women's associations or cooperatives can create opportunities for them to mobilize their resources and work together to expand their economic capital.

In the 1980s and 1990s, there was a global consensus that liberalization and global trade would pull development and create wealth for the vast majority. As a result, governments, encouraged by the international community, reduced their investments in agriculture and withdrew from many rural areas, leaving the private sector and producer organizations to provide agricultural services. Since then, a wide variety of producer organizations have emerged worldwide, including in D.R Congo. They have played an important role in providing input, finance, and extension and marketing services to farmers, including small-scale producers (Elerhri and Lee, 2011).

In joining female organizations, members expect gender inequalities to be reduced in the agricultural sector. Yet, while female farmer organizations promote female participation and modernize women's roles, unresolved human imbalance status quo in the society remains the driving factor of social injustice and gender discrimination, limiting the active involvement of women in organizational development. Therefore, despite the emergence of women's farmers' organizations, gender-based inequalities remain a problem in the country, especially in the farming sector. Therefore, this study sought to answer the following research questions: What are the determinants of women's membership in the rural organization in the Beni-Lubero region? How do LOFEPACO's farming organizations enhance women's participation in agricultural production in the Beni-Lubero region? And what are the major organizational factors that affect women's participation in agricultural production in Beni-Lubero?

In terms of research, very few studies about women's participation in agriculture activities through farming organizational have been carried out in DR. CONGO, especially in Beni-Lubero. Keeping in view, the dearth of information concerning the plurality of agricultural organizations in the local area and the daily practices of women who struggle to fully participate in agricultural production activities, the study at hand is initiated to fill these gaps.

The study would enable policymakers to prepare plans that would address women's concerns and develop projects/schemes where the hidden potential could be utilized thoroughly for the development of the economy. The place given to farmers' organizations by both public authorities and scientific opinion seems not to produce a satisfactory result about the expectations related to women's participation. The result of this study was to contribute to the body of knowledge by demonstrating that women's participation in farming organizations will be a useful development factor when they tackle first the core

obstacle related to gender issues, the cultural and social norms that impeded organizations.

The study was guided by the following objectives:

1. Describe Lofepaco's women farmers in terms of Socio-demographic profiles
2. Determine the level of women's participation in the farming organization in terms of Crop production; Livestock production; Access to and control over assets.
3. To find out if there is a significant relationship between women's participation in farming organizations and the following variables: Socio-demographic profile and the level of women's Participation in LOFEPACO farming organization; Household activities and the level of women's participation in the LOFEPACO farming organization; Organizational activities and Production activities as well the productive resources and the level of women's participation in the farming organization.

Review of Related Literature

There is a broad-ranging range of literature regarding women's participation in the agricultural sector. Authors have shown worldwide that women in rural areas have played indispensable roles and have made a remarkable contribution to crop farming. Huyer (2016) revealed that agriculture is the largest employment sector for 60% of women in Oceania, Southern Asia, and sub-Saharan Africa. Women make up 2/3 of the world's 600 million small livestock managers. Despite this, women's agriculture activities are characterized by a global gender gap in vulnerabilities, access to resources, and productivity. As a result of these differences, women, and men farmers in developing countries have different abilities to participate in agricultural activities.

In their research, (Aggarwal et al. 2013; Geleta et al. 2017) Women's contribution to the farm sector has been ignored and inadequately understood. Rural women have been intensively involved in agriculture and its allied fields. They perform numerous labor-intensive jobs such as weeding, hoeing, grass cutting, picking, and cotton stick collections. However, although women provide the majority of agricultural activity, agriculture is considered the men's domain; while women provide the labor, men dominate the management and decision-making regarding agriculture activity.

Women play a significant role in shaping agricultural and food practices. However, as mentioned by Huyer, (2016), women also tend to have much lower access to formal information channels of training and agricultural extension, partly because extension services do not always consider women to be farmers. Ochago, (2017), found out that, equitable participation in producer groups by women and men is of great benefit to members and their families. Thus, for equity to be achieved, then both men and women are authorized to participate in meetings, activities, and decision-making. However, women's ability to more move to the group meeting site during stipulated meeting days influenced participation because of restrictions associated with their mobility and other household gender obligations.

Elbehri and Maria Lee (2011) revealed that organizing women at the individual and household levels into groups helps them to identify and address their needs, access productive assets, and build their capacity to own and manage their organizations and become self-reliant. Similarly, Huyer, (2016) mentioned that substantial gender gaps in access and control continue to exist regarding six key resources and inputs for agriculture: land, labor, credit, information, extension, and technology. In many

developing countries, statutory and customary laws continue to restrict women's access to the property and other assets. And are excluded from many aspects of decision-making in economic activities generally.

In their studies, Ajadi et al. (2015) show that access to productive resources is a crucial factor in rural development all over the world. Rural households negotiate their livelihoods by obtaining access to productive resources, which leads to enhanced family well-being. Moreover, concerning the level of production in agriculture, women are less privileged than men. Woldu et al. (2013) revealed that women generally have control over less lucrative crops, livestock, and men over more profitable cash crops and more extensive cattle. Women tend to self-organize around domains under direct supervision, such as small vegetable production and marketing, which tend to be less profitable than men's products. On the other hand, Johnson et al. (2016) show that the ownership of assets is important for poverty reduction and that women's control of assets is associated with positive development outcomes at the household and individual levels. Therefore, full ownership often includes the right to dispose of an asset (the house or the cow), whether through sale, lease, gift, or inheritance transfers.

Sell and Minot (2018) stated that owning productive resources has been found to strengthen a woman's bargaining position in the household. In addition to bringing potential productivity improvements, increasing women's access to and control over assets has been shown to have positive effects on important human development outcomes, including household food security, child nutrition and education, and women's wellbeing and status within the home and community (Ajadi et al. 2015).

Materials and Methods

The study was conducted in the province of North Kivu, specifically in the BeniLubero region (Figure1). Located in the eastern part of D. R. Congo, the Beni-Lubero region constitutes the largest part of the province. The purposive sampling techniques were used to select participants among members of farmer' organizations.

The total estimated respondents interviewed were 10 staff members and 367 women farms. A survey questionnaire was prepared as an instrument in gathering the required information.

Both primary and secondary data were collected using different techniques. Primary data was collected using a structured questionnaire and interview, while secondary data was gathered through various reliable sources such as local reports, documents, and publications.

Results and Discussion

Socio-Demographic Profiles (Table 1)

Age: The results indicate that a large proportion of respondents (34.5%) were aged between 31-40 years old, (26.6%) were aged 41-50 years old. Besides, the result shows that (28%) were between 51 years old and above, and (10.9% were aged between 18 and 30 years old. The mean age of the respondents was 27 years old, with a standard deviation of 0.99. Age may influence an individual's level of participation in agriculture. It could be that older women have more experience in farming or have access to information and

technologies through extension services or development projects that work in the region. It could also be indicated that, with age, the individual may have accumulated more financial capital, which could be spent on hired labor. However, it may also be possible for younger individuals to participate in food production since they have more energy to spend on farm labor.

Marital status: The results on marital status show that the majority of the respondents (64.9%) were married, (16.0%) of them were widows, (9%) were single, (5.2%) of them were separated, 2.7% didn't disclose about their marital status, and only 1.9 % of them were divorced. This may be explained by the fact that once married, women are already joint heads of households, and they, therefore, have to be able to meet their needs through agricultural activity, which is the main source of survival in rural areas. Concerning the educational attainment, the result shows that 23.6% reached primary school level, 27.4% of the respondent graduated from primary school, 16% attained higher school, 13% graduated from higher school, 0.5% graduated from college, 9.8% achieved college level and 9.2% of respondents did not attaint school.

Household size: the result shows that more than half (54.8%) have 6 to 10 people in the household, 28.4% have 1 to 5 people in the household and (11.4% of respondents have 11 and more people in their household; (4.3%) or 16 respondents did not indicate the size of their household. The finding shows that the mean household size was of 7people per household; the minimum was 10 people and a maximum of 16 people per family; the mean is seven people per household, with a standard deviation of 2.8.

Length of membership: In terms of membership duration in the organization, 43.3%) of respondents have 1 to 5 years in the farming organization, (16.9%) have 6 to 10 years, (12.0%) have 16 to 20 years in the farming organization, (10.9%) have 11 to 16 years and (10.1%) have 21 and above years in the farming organization. The mean average of years spent in the farming organization is 10, with a standard deviation of 8.7. It should be noted that the length of membership in the organization constitutes a measure and a sign of satisfaction for members. Staying in an organization for a long time means that the member finds comfort in his interests and comes to identify himself with this organization. Consequently, this strengthens the participation of the members in the organization's activities to preserve their interests and benefits. Moreover, the length of membership in an organization reinforces members' socialization and provides them with socio-emotional security.

Correlation between Socio-demographic Profiles and participation in crop production

Results in Table2, show that there is a significant positive correlation between age and sale of harvest (r=.116*). As age increases, their participation in marketing increases. This can be explained by the fact that for the majority of women farmers, agriculture is the primary source of income. Thus, to the extent that their age advances, their family responsibilities also increase. They have more children to feed, wear, and provide medical care and schooling. Therefore, they have to produce more to fulfill their duties as mothers and contribute to household survival.

Table 1 shows that there is a significant positive correlation between marital status and land preparation (r=.186**), crops planting (r=.193**), weeding (r=.165**), threshing (r=.276**), storage (r=.199**), sales of harvest (r=.251**). This indicates that

respondents' marital status influences their level of participation in crop production. That means all the respondents were participating in most of the crop production activities regardless of their marital status.

There is a negative relationship between education and crop planting (r=-.172**) and harvesting(r=-.129*). This means that, as the level of education increase, the level of participation in crop planting and harvesting decreases as well. This implies that the more the respondents were educated, the less they contributed to the crop planting and harvesting. This is revealed from the frequency analysis that few of the respondents were highly educated. This may be explained by the fact that the high level of education constitutes an opening of opportunities for women to take care of themselves and find paid jobs in other sectors than remaining farmers.

The results show a negative correlation between household size and land preparation (r=-.110*). This implies that as the number of people increases in the household, the level of participation in land preparation decreases. This means that when the size of a household is higher, there is not enough cultivated land for everyone. More explicitly, the research area, Beni-Lubero, is one of the most populated places in DR Congo, the other relatively less populated places are insecure, which has led to a population movements displacement towards relatively secure regions. One of the consequences in the agricultural sector is, therefore, the scarcity of agricultural land due to the demographic increase within households.

Findings show that there is a significant positive correlation between the length of membership in the organization and crop planting (r=.127*), weeding (r=.132*), storage (r=.140**), and selling of harvest (r=.257**). This signifies that, as the length of membership in farm organization increases, the participation in planting, weeding, storage, and selling of harvest increases. This may be explained by the new knowledge gained by the respondents from the training attained in their organization.

Degree of Women Participating in the Household Activities

Regarding the household level, results show the mean range of respondents' participation in the household's activities with a mean of 2.50- 3.49, which means that the respondents have a high level of participation. The high participation of women in household activities may be explained by the local cultural considerations, according to which chores are exclusively women's duty. These activities are considered to be simple and, therefore, without too much physical energy demand. Thus, men cannot interfere with them because they are supposed to involve in the hard work and are more demanding in terms of physical energy.

The finding reveals the highly ranked participation of respondents in the household's activities was as follows; food preparation (mean=2.59), taking care of children (mean=2.64), washing clothes (mean=2.56), washing dishes (mean=2.56), and sweeping the house (mean=2.55). This can be explained by the fact that either some women have no one to assist them (such as mature girls), or that young girls cannot properly assume these tasks (Table 3).

This is the case, for example, taking care of children or preparing meals. At a certain age, very young girls cannot correctly complete this household activity. That is why the results indicate very high participation of women concerning all other household chores, although all household activities belong to them.

The results show that the mean between 1.51 and 2.49 indicates low participation of respondents in households' activities. The activities showing low participation of respondents in households are fetching water (mean=2.38), cleaning the house

(mean=2.44), collecting firewood (mean=2.18), buying clothes (mean=2.45), buying food (mean=2.31), and maintenance and repair of the house (mean=2.15). Household activities where the woman has low participation can be explained by the participation of mature children or other members of the household and not that of the man. Thus, for example, tasks such as sweeping, drawing water, etc., most often belong to young girls while their mothers are otherwise occupied. Also, young girls regularly intervene in activities where their mothers are more concerned because they learn from them and imitate them. It is an opportunity for them to prepare themselves to assume the same tasks correctly when they get married fully.

Women Participation in Organization Activities

Results in Table 4 indicate that respondents' participation in meetings was high (mean=3.120 and participation in seminars/pieces of training was high (mean=3.49). This shows that respondents had shown high levels of participation in organized activities. In other words, it means that organizations have succeeded in bringing women together in meetings and for training.

Women Participation in Crop Production

Findings in Table 5 indicate that items 2, 3, 6, and 7 show high (mean=2.5and above) for crop production by planting crops (mean=2.58), weeding (mean=2.58), for storage of the harvest (mean=2.60), and selling harvest (mean=2.66). The report supported the results stated that rural women have been intensively involved in agriculture and its allied fields.

There is an average (mean=1.51-2.49) on participation for items 1, 4,5,8,9 and 10; respectively, for land preparation (mean=2.34), harvesting (mean=2.44), threshing (mean=2.15), raising small livestock (mean=1.98), minor livestock (mean=2.47) and animal produce marketing (mean=2.34). This means that women are involved in all crop production and livestock activities. In support of the results,

Women Agricultural Assets Ownership

Results revealed a high level (mean=1 and above) of ownership of agricultural assets by the respondents (Table 6). This means that women have any possession in their household, agricultural land, even minor livestock, and poultry.

Correlation Between Household Level and Agricultural Assets Possession

Findings in Table 7, there is a significant positive correlation between the respondents' regular activities in the household, such as washing clothes (r=.273**), washing dishes (r=.226**), buying clothes (r=.208**), cleaning the house (r=.191**), fetching water (r=.191**), food preparation (r=.168**), collecting firewood (r=.162**), maintenance, and repair (r=.156**) and agricultural land ownership. This implies that the more women farmers are involved in household chores, the more they contribute to agricultural production activities to feed their families.

There is a significant positive correlation between the regular respondent's activities at the household level, such as maintenance and repair (r=.301**), washing dishes

(r=.179**), children care (r=.140**), buying clothes (r=.121*), washing clothes (r=.112*) and house or plot ownership. This indicates that the more women farmers are devoted to the permanent household charge, the more they need houses or plot possession for their stability.

Findings show that there is a significant positive correlation between the respondent's frequent household duties such as washing dishes (r=.177**), washing clothes (r=.137**), fetching water (r=.135**), maintenance, and repair (r=.r.131*), and the small livestock possession. This implies that the more women farmers are coping with their usual household charges, the more they need small livestock ownership to support their families.

There is a significant positive correlation between respondent's ordinary household activities such as washing dishes (r=.333**), fetching water (r=.282**), cleaning the house (r=.264**), maintenance, and repair (r=.225**), washing clothes (r=.222**), and the minor livestock ownership. This means that as women farmers are devoted to their daily responsibilities at the household level, possession of small livestock possessions is important.

Women's Ownership Assets Procedure

Findings show that there is low (mean=1.51-2.49) access and ownership of women to the assets (Table 8). This means that respondents could not proceed by themselves in negotiating or bargaining an agricultural asset, especially with regards to agricultural land access.

Control, Transfer, and Revenue for Production

Findings show (Table 9) that the majority (mean=2.01-2.76) of respondents had high decision contribution to control and transfer of their products and assets; that means the majority of women were making decisions jointly with their husbands; only respondents had a low contribution on the decision of assets (mean=1.26-2.01). This means that for the agricultural input and seed, the husband had more to contribute than the wife.

Multiple Regression Analysis for Household, Production and the Level of Women Participation in Farming Agricultural Organization

The findings in Table 10 indicate the level of the predictors on women attending training for agricultural organizations. The results show that determined predictors have only 12.3% of the effect on women's participation. Among the twenty-one factors put in the regression model, only four were found significant for the impact of predictors on the dependent variable.

Household maintenance and repair (HS11) leads with R2=7.1% to affect the dependent variable. This means that respondents had only 7.1`% of their households' maintenance and repair activity that affect their participation in farmer organization's meetings. The results in Table 19 show that, regardless of the household activities of respondents, at 92.9 %, they were still attending organization meetings.

The household activity of buying clothes (HS9) affects women's participation level at R2=2.9%, Crop production, harvesting (CP6) with R2=2.4%, and household buying food (HS10) with R2=1.2%. This indicates that women more handle household activities. This means that women put more effort not to miss their organizational participation although busy at home.

Conclusion

Beni-Lubero region is one of the places in the Democratic Republic of Congo, where women's agricultural organizations have emerged, notably LOFEPACO and many others, with a positive socio-economic outcome, but the gender gap is still common, including in the farming sector. The high level of women's participation in household activities, their very high commitment to organizational activities, and a high level of women's farmers' participation in agricultural production activities also show a step ahead in farming organization achievement on women's participation in agricultural production through their training. It implies also the interests that have women farmers in those producer organizations.

The analysis of variances between agricultural production and women's participation, using the ANOVA test revealed that there is significant mutual participation in decision making about ownership and agricultural asset transfer and on their income, as well. This means that the majority of women were making decisions jointly with their husbands; however, they have low participation in agricultural assets access and ownership procedure.

A joint decision with the husband is an improvement, but still not enough because the root cause of gender-gap in agriculture is local social norms, never been touched or addressed. Women's awareness is still inclusive; there is a need to spread it to local structures that conserve local social norms that discriminated against women.The study has shown a significant contribution to women's participation in agricultural organization literature. It comes up with evidence that women's participation in agriculture production through producer organizations can close the gender gap in agricultural production by providing new skills, and more women's bargaining at the household level. The results also offer encouragement concerning the effectiveness of policies and strategic interventions aimed at stimulating increased women's participation in agricultural production in DR. Congo through women's farming organizations.

Recommendations

From the findings of this study, the following recommendations are formulated:

- Women's farmers' organizations should have to break this barrier by intensifying lobbying with local authorities, especially Landlords, to ease cultural and customary restrictions, which limit women's farmers' freedom to have sole access to productive agricultural resources, in particular agricultural land.
- Organizations to advocate for the awareness they have instilled in women farmers to be supported by laws; integrate into their program strategies of the firm and lasting collaboration with the local authorities.
- More research is needed to assess women's participation in agriculture through farming organization and agricultural productivity improvement; comparative study on the success of mixed and non-mixed agricultural organizations; Peri-urban agriculture and rural women farmers integration; Challenges of agricultural land reform in the Democratic Republic of Congo.

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Disclosure statement

The authors declare that they have no competing interests.

References

1. Acosta, M., Wessel, M.V., Bommel, S.V., Ampaire, E.J., Twyman, J., Jassogne, L., &Feindt, P.H., (2019) What does it Mean to Make a 'Joint' Decision? Unpacking Intrahousehold Decision Making in Agriculture: Implications for Policy and Practice, The Journal of Development Studies,
2. Akter, S., Rutsaert, P., Luis, J., Htwe, N.M., San, S.S., Raharjo , B., &, Pustika, A., (2017). Women's empowerment and gender equity in agriculture: A different perspective from Southeast Asia. Food Policy 69 (2017) 270–279,
3. Bayeh, E. (2016). The role of empowering women and achieving gender equality to the sustainable development of Ethiopia. *Pacific Science Review B: Humanities and Social Sciences 2 (2016) 37-42*
4. Carreira, V., Machado, J.R., & Vasconcelos, L., (2016). Engaging Citizen Participation— A Result of Trusting Governmental Institutions and Politicians in the Portuguese Democracy.Soc. Sci. 2016, 5, 40;
5. Cerrato, J., &Cifre, E., (2018). Gender Inequality in Household Chores and Work-Family Conflict. Front Psychol.
6. Elbehri, A., & Lee, M., (2011). The role of women producer organizations in agricultural value chains practical lessons from Africa and India. Food and Agriculture Organization of the United Nations Rome 2011.
7. Geleta, E. B., Elabor-Idemudia, P., Henry, C., and Reggassa, N., 2017. The Challenges of Empowering Women: The Experience of Pulse Innovation Project in Southern Ethiopia. SAGE Open October-December 2017: 1–13.
8. Huyer, S., (2016). Closing the Gender Gap in Agriculture. Gender, Technology and Development 20(2) 105–116. Asian Institute of Technology SAGE Publications.
9. Rao, N., (2012). Male 'Providers' and Female 'Housewives': A Gendered Co-performance in Rural North India. International Institute of Social Studies. Development and Change43 (5): 1025–1048.
10. Sell, M. & Minot, N. (2018).What factors explain women's empowerment? Decisionmaking among small-scale farmers in Uganda. Women's Studies International Forum 71 (2018) 46–55
11. Sykes, L.L., (2005). A home of her own: an analysis of asset ownership for non-married black and white women. The Social Science Journal 42 (2005) 273–284.
12. Teddlie, C. & Yu, F., (2007), Mixed Methods Sampling: A Typology With Examples. Journal of Mixed Methods Research; 1; 77.
13. Vutsopire, R.K., (2015). La condition juridique de la femme, et en particulier de la femme mariée, en droit Congolais. Application à la femme Nande du Nord – Kivu (R.D. Congo). Universiteit Gent, Faculteit Rechtsgeleerdheid

Tables 1 to 10

Table 1. Socio-demographic profile of respondents.

		Frequency	%
Age			
	18-30	40	10.9
	31-40	127	34.6
	41-50	98	26.7
	51 and above	102	27.8
Marital Status			
	Single	33	9.0
	Married	239	65.1
	Window	59	16.1
	Separated	19	5.2
	Divorced	7	1.9
Education attainment for respondents			
	Never attained school	34	9.2
	Primary School level	87	23.7
	Primary Scholl graduate	101	27.5
	High school level	59	16.1
	High school graduate	48	13.1
	College level	36	9.8
	College graduate	2	0.5
The year when respondent joined the organization			
	1 to 5	159	43.3
	6 to 10	87	23.7
	11 to 15	40	10.9
	16 to 20	44	12.0
	21 and above	37	10.1
	Mean 7		
Number of people in the household			
	1 to 5	108	29.4
	6 to 10	201	54.8
	11 and above	42	11.4
Mean 10			

Table 2. Correlation between Socio-demographic Profiles and participation in crop production

	Age of respondent	Marital Status	Education attainment	Household size	Length of membership
Land preparation	-0.074	0.186**	-0.034	-.110*	0.041
Crops planting	-0.010	0.193**	-.172**	-0.021	0.127*
Weeding	-0.085	0.165**	-0.101	0.008	0.132*
Harvesting	-0.040	0.090	-.129*	-0.080	0.047
Threshing	-0.051	0.276**	-0.046	-0.045	-0.037
Storage of harvest	0.087	0.199**	0.088	0.085	0.140**
Sales of harvest	0.116*	0.251**	-0.039	0.056	0.257**

Table 3. Degree of women participating in the household activities.

Statement	Mean	SD	Decision
Food preparation	2.59	0.534	High
Children care	2.64	0.525	High
Fetching water	2.38	0.755	Low
Washing clothes	2.56	0.671	High
Cleaning the house	2.44	0.717	Low
Collecting Firewood	2.18	0.62	Low
Washing dishes	2.56	0.726	High
Sweeping	2.55	0.74	High
Buying clothes	2.45	0.57	Low
Buying food	2.31	0.779	Low
House maintenance and repair	2.15	0.862	Low

Mean significance: 0.67- 1.34= low 1.34-2.01= Average. 2.01-2.68= High

Table 4. Women participation in organization activities.

Statements	Mean	SD
How many meetings did you attend?	3.12	1.115
How many trainings did you attend in your organization	3.49	0.963

Mean significance: 0.75- 1.50= Very low 1.50-2.25=Low 2.25-3.00=High. 3.00-3.75=Very High

Table 5. Participation in crop production and livestock.

Statement	Mean	SD	Decision
Participation in crop production by land preparation	2.34	0.56	Average
Participation in crop production by planting crops	2.58	0.494	High
Participation in crop production by weeding	2.58	0.527	High
Participation in crop production by harvesting	2.44	0.57	Average
Participation in crop production by Threshing	2.15	0.694	Average
Participation in crop production by storage of harvest	2.6	0.563	High
Participation in crop production by sale of harvest/ Marketing	2.66	0.529	High
Participation in raising small livestock	1.98	0.807	Average
Participation in raising poultry and minor livestock	2.47	0.715	Average
Participation in the marketing of animal and produce	2.34	0.84	Average

Mean significance: 0.67- 1.34= low 1.34-2.01= Average. 2.01-2.68= High

Table 6. Women agricultural assets possession.

Statements	Mean	SD	Decision
Possession of agricultural land	1.53	0.5	High
Possession of house or a plot	1.54	0.499	High
Possession of small livestock	1.33	0.47	High
Possession of minor livestock	1.31	0.463	High
Possession a livestock farm	1.95	0.216	High

Mean significance: 0.5-1.0= No 1.0-1.5above= Yes

Table 7. Correlation between household level andagricultural assets possession.

Household Level /Possession	Food preparation	Children care	Fetching water	Washing clothes	Cleaning the house	Collecting Firewood	Washing dishes	Buying clothes	Maintenance and repair
Agricultural land	0.168**	0.000	0.191**	0.273**	0.191**	0.162**	0.226**	0.208**	0.156**
House/plot	0.044	0.140**	0.088	0.112*	-0.041	-0.032	0.179**	0.121*	0.301**
Small livestock	0.042	-0.033	0.135**	0.137**	0.101	-0.048	0.177**	-0.050	0.131*
Minor livestock	0.085	0.064	0.282**	0.222**	0.264**	0.096	0.333**	-0.020	0.225**

Table 8. Assets ownership and access procedure.

Statement	Mean	SD	Decision
Access and ownership of agricultural land	2.16	1.038	Low
Access and ownership on Plot	2.17	1.006	Low
Access and ownership on cash crop	1.92	0.837	Low
Access and ownership on house, etc.	2.2	0.889	Low
Access and possession of small livestock	2.31	0.989	Low
Access and possession of minor livestock	2.19	0.943	Low

Mean significance: 0.8-1.60= Very low 1.61-2.40=Low 2.4-3.20=Average. 3.20-4.00= High 4.00-above=Very High

Table 9. Control agricultural assets and transfer.

Statement	Mean	SD	Decision
Control on the crop to produce or grow	2.11	0.87	Low
Control on agricultural Input/ seed	1.91	0.875	Low
Control and or decision making on cash crop	2.27	0.993	High
Income control from food crop produce	2.46	1.759	High
Income control from cash crop produce	2.3	0.888	Low
Income control from non-agriculture activities	2.2	0.915	Low
Decision-making on income from small livestock	2.3	0.999	High
Decision-making on income from minor livestock	2.16	0.946	Low
Decision-making for non-farm economic activities	2.25	1.001	High
Decision-making for major household expenditures	2.26	0.976	High

Decision-making for minor household expenditures	2.23	0.967	Low
Agricultural land Transfer	2.21	0.943	High
Plot Transfer	2.19	0.793	High
Cash crop Transfer	2.22	0.943	High

Mean significance: 0.75- 1.50= Very low 1.50-2.25=Low 2.25-3.00=High. 3.00-3.75=Very High

Table 10. Multiple regression analysis for women's level of participation.

1	0.266[a]0.071	0.068	0.927	0.071	22.141	1	291	0.000	
2	0.315[b]	0.099	0.093	0.914	0.029	9.183	1	290	0.003
3	0.351[c]0.123	0.114	0.904	0.024	7.914	1	289	0.005	
4	0.368[d]	0.135	0.123	0.899	0.012	3.937	1	288	0.048