

**The Role of Women Participation on Agricultural Extension Service:
The Case of Adiy Koro Kebelle, Ahferom Woreda
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Abstract

Ethiopia rural women make significant contribution to and are the ministry of the farm labor. The work in all aspects of agriculture, in addition to active engagement in agriculture, women are responsible for all household chores. The main objective of the study was to assess the role of women participation in agricultural extension service in the case of Ahferom Woreda. The study area was selected purposively to identify factors that influence farm women's agricultural output and to identify the constraints and opportunities of extension service in reaching out to rural women in Ahferom Woreda. A total of 30 respondents were selected using simple random sampling. The data was collected from both primary source using key informant interview, structured interview schedule and secondary source by reviewing reports and document used for collecting the essential quantitative data from the sampled respondents. The major output the study indicates the factors affecting participation of women farmers in agricultural extension. The collected data was analyzed by qualitative and quantitative method of data analysis. The quantitative data was expressed using simple descriptive statistics like percentage and frequency and the qualitative data was expressed by words and statements. The study result shows that women are significantly influenced by total annual income extension participation, lack of credit service training, and domestic work. The major constraints identified farmer women are low participation of women in extension programs, poor extension methods, lack of important information.

The level of women participation in agricultural extension was medium. The extension agents were more sensitive to give information to husbands whereas the women got secondary information from their husbands. As a result, extension agent should consider women designated roles in agricultural production effort. Agricultural information to farmers should be gender specific and sensitive.

Key Words: Agricultural Extension, Participation, Role, Women

1. Introduction

1.1 Back ground of the study

Men and women play distinct roles in agriculture. In developing countries, and particularly in rural areas of developing countries, women play a major role in household and community survival strategies and contribute significantly to the rural economy and agriculture in particular. Women constitute the backbone of food production system in the economy of Ethiopia (EARO, 2013).

Although the perceived tasks of women and men in agriculture may differ considerably from region to region, it can generally be stated that women's tasks include land preparation, weeding, harvesting, threshing and storing, production of subsistence crops in the home-garden, and small animal husbandry. Despite their essential contributions to the lives of their families and communities, women are deprived of equal access to productive resources, markets and services. Women, particularly those in male-headed households, tend to participate less than men in formal activities like training, cooperatives, and official meetings (EARO, 2013).

In the Tigray region, rural women make significant contribution to agriculture to ensure food security and are the main stories of the farm labor. The major chunk of women's labor force in production system is invested in weeding, harvesting, house hold, animal rare, marketing, post-harvest handling etc. Harrowing and weeding in particular are considered as women's as active in livestock production (Ranjan and Hedija, 2004).

There is lack of concern about multiple roles of female farmers while research on identifying the priority problems and developing agricultural extension that assist them to improve their productivity that are appropriate to the farm families life cycle stages. (EARO, 2013).

The study was based on the premise that recognizing the contribution of women to agricultural production is necessary for raising productivity and fostering development. This study was designed to investigate the effectiveness of agricultural extension services consisting of both production and nutrition related information in improving the production and nutrition of farmers and women farmers in Ahferom Woreda particularly in Adikoro

Kebelle. In order to address this general objective, household survey, focus group discussion, and in-depth interview have been administered.

1.2 Statement of the Problem

At the countrywide female participant in agricultural extension service is very significant when compared to men. The same is true in Ahferom Woreda particularly in Adikoro Kebelle, the women participation in agricultural extension is very low. The law attitude given by communities towards the contribution of women in economic activities is the male domination over the female. The agricultural extension in the kebele is male dominated and predominantly oriented towards advising and working with male farmer of households (Nigisti, 2016).

Policy makers and administrators typically still assume that men are the farmers and women play only the ‘supportive role’ as farmer’s wives. This attitude by both planners and implementers has significant adverse effect on women’s access to agricultural extension service (Habtemariam 2016).

Women are typically and wrongly still characterized as economically inactive. Agricultural extension services still do not attach equal importance to reaching women farmers. Therefore, this study gives the information on the factors which affected women’s participation in agricultural extension and the analysis on constraints and opportunities of extension service in reaching out to women in case of Ahferom Woreda particularly in Adikoro Kebelle.

1.3 Objective Of the study

1.3.1 General Objectives

The general objectives of this study was to assess the role of women’s participation in Agricultural Extension Service in the case of Ahferom Woreda particularly in Adikoro Kebelle

1.3.2 Specific Objective

- To identify the factors that affect women’s participation in agricultural extension service in the case of Ahferom Woreda particularly in Adikoro Kebelle.
- To identify the level of women participation in the agricultural extension service in the case of Ahferom Woreda particularly in Adikoro Kebelle.

- To identify opportunities of extension service in reaching rural women in the case of Ahferom Woreda particularly in Adikoro Kebelle.

1.4 Research Question

- 1, what are the factors that affect women participation in agricultural extension service?
- 2, what is the level of women participation in agricultural extension service?
- 3, what are the opportunities of extension service in reaching out rural women?

1.5 Scope of the Study

The scope of the study was confined to the role of women`s participation in agricultural extension practice in the case of Ahferom Woreda particularly in Adikoro Kebelle. In this study the researchers tried to identify and the analyze the real status of major constraint facing women`s participation of societies and the level of women participation in agricultural extension services.

1.6 Limitation of the Study

- The study was limited on the level of participation of women and factor affecting women participation in agricultural extension service. It was limited to one area due to time and financial limitation
- The finding of this research can serve only the study area.
- The study was done once it was not replicated.
- The study has small sample size due to time and financial shortage.

1.7 Significance of the Study

This study could generate very essential information on the factors affecting women participation on agricultural extension that can help policy makers and development practitioners to correct the problems in the extension program. The study hoped that this study initiates other researchers to generate and add information on the existing knowledge on the role of women participation on agricultural extension. Furthermore, the findings of the research provide multipurpose information to different users, including practitioners in development agents.

2. Methodology.

2.1 Description of Study Area

2.1.1 Geographical Location, Climate, Population and Agricultural Characteristics

The study was conducted in Adikoro Kebelle, Ahferom Woreda central zone of Tigray region. The area is found 4 km east of Adwa town. The area is located at longitude of 390 east and latitude 140 north at an average altitude of 2105 m. Based on the 2007 census, the Kebelle has about 4520 population. From these 51% were female and 49% were male. Out of these, 93% live in rural area and the remaining 7% person live in town. The total number household heads is estimated to be 370 from which 50 were females. This area receives an average rainfall of 700-800mm per year and with the temperature of 15-20 Degree Celsius. Moreover, the area contains 60% silt, 30%, sand and 10% clay soils. The farmers in the area were practicing mixed farming system. They depended on crop and livestock production. According to the survey data major crops in the area include: wheat, teff, sorghum, barely, bean and maize. The major type of livestock includes: cattle, sheep, goat and poultry (FTC, 2016).

2.2 Data Type and Source of Data

The data is both qualitative and quantitative type. The quantitative data was expressed by simple descriptive statistics. The qualitative data was expressed by words and statements.

2.2 .1 Data Sources

The study collected the information from both primary and secondary sources. The primary sources were interview, respondents, questionnaire and field observation. Secondary data were collected from agricultural office, farming training center and development agents, books and journals.

2.3 Method of Data Collection

To get the relevant data the study used both primary and secondary method of data collection.

2.3.1 Primary Method of Data Collection

The primary data were collected through interview. To get necessary information in- depth interview were conducted with elder rural women who could give their past and present experience of developments. The study also

used field observation and questionnaire and focus group discussions. The questionnaire included open ended and close ended questions. In addition to questionnaire, focus group discussion was conducted with women.

2.3.2 Secondary Method of Data Collection

The secondary data were collected from development agents, farming training centers, agricultural offices, internets and Kebele administrations.

2.4 Sampling Technique and Sampling Size

There are about 25 Kebeles in the area. One Kebele namely Adikoro was selected purposively. Because the participation of women in agricultural extension activities in the Kebele was very low as compared to other Kebeles. The Kebele has 787 total household heads from those 389 were male headed and 398 were female headed. Among these 30 women respondents were selected using simple random sampling technique to give equal chance to all women..

2.5 Method of Data Analysis

The collected data were analyzed using quantitative and qualitative method of data analysis. The quantitative data was analyzed using table, frequency, mean and percentage. The qualitative data was analyzed using narration and interpretation.

3. Results and Discussion

This section presents the results of the study by giving due emphasis on the purpose of the research objectives. Under this section, specifically: demography characteristics of respondents; factors that affect women's participation in agricultural extension service; and constraints and opportunity of extension service in reaching out women were discussed.

3.1 Demographic Characteristics of Respondent

Table 1: Marital Status of the Women and its Association with Participation

Marital status of the women	Respondents category (number =30)	
	No	%
Single	7	23.3
Married	10	33.3
Divorced	6	20
Widowed	7	23.3
Total	30	100%

Source: field survey 2016

The study indicated that being married or not had no relation with rural women's access to agricultural extension service. It is expected that single households contribute to the least production while married households contribute the highest.

3.1.2 Age Status of Respondent

Table 2: Age Status of the Respondent

No	Age group	No	%
1	20-30	3	10
2	31-40	11	37
3	41-50	9	30
4	>50	7	23.3
5	Total	30	100

Source field survey, 2016

This findings revealed that the majority of the respondents were middle aged, belonging to 31-40 years of age. People lose their work energy as they grow old. But in the study the percent participants who were greater than >50 is lowness. This means as the age increased people's participation in agricultural extension service also increased.

3.2 Level of Women Participation in Agricultural Extension Services

Agricultural extension service decreases services. The women respondents were participating in different extension activity such as demonstration, field day, discussion with agents, trainings.

Table 3: Level of Women Participation in Agricultural Extension Service

Agricultural extension activities	Level of women participation of agricultural extension service (no =30)							
	Low		Medium		High		Total	
	No	%	No	%	No	%	No	%
Discussion with extension agent	8	26.6	12	40	10	33.3	30	100
Participation in group discussion	7	23.3	13	43.3	10	33.3	30	100
On field day	10	33.3	14	46.6	6	20	30	100
Demonstration program	6	20	13	43.3	12	40	30	100
Participation in planning of agricultural extension program	9	30	11	36.6	10	33.3	30	100
Participation in training given by extension agent	6	20	12	40	12	40	30	100

Source; field survey 2016

The above table indicates that most of the women respondents were high (40%) participant in demonstration while 46.6 of the total participant were medium in field day. In short, the level of women in participation in agricultural extension service was medium

4.3 Opportunities of Extension Service in Reaching out to Rural Women

There are many possibilities for women farmers to participate in different agricultural development activities. Some of these were discussed here. Development agents who were living with farmers understood farmers' problems and provided them new technologies and had close supervision with the farmers. They are essential partners to the farmers for bringing agricultural development. In the Kebele, there were three diploma holders DAs. One in each area: in crop production, in livestock production, in natural resource management and most of them were TVET graduates. Out of three DAs one was female.. The main aim of extension services is to reach out rural women. There are many possibilities to reach women farmers to involve them in development activities: Some of the opportunities are:

- ▶ **All provisions for women have been included in the constitution of the country and policies of respective ministries**, including Ministry of Agriculture. Every institution is expected to design its own implementation strategies to ensure gender equality and women benefits in every development initiative. Therefore, supportive gender policy is a favorable condition to design workable strategies

- ▶ **Establishment of Gender promoting structures**, such as Directorate of Women and Youth Affairs at national and regional levels, and Gender Units at district levels of GOs is a good opportunity to enhance gender mainstreaming and sharing of experiences and best practices. Gender Units are also established in several public institutions and NGOs.
- ▶ **Resource materials, literatures and documented reports are available on electronic and print media which** deal with mechanisms of gender mainstreaming and women empowerment. All these can be taken as a favorable opportunities for women farmers' development. These resources can be reviewed and best practices can be identified for possible consideration during designing of women centered development programs and gender mainstreaming strategies.
- ▶ **Laid Down from Top to Bottom Levels** FTCs, development groups and 1 to 5 networks being established at grassroots levels can be taken as good opportunities to use as platforms of promoting extension services
- ▶ **Establishment of community based institutions**, cooperatives, such as saving and credit associations are also a favorable opportunity since they can be used as platforms to enhance extension service provision in the study area.
- ▶ **Availability of best practices and success stories on women empowerment** in several GOs and NGOs can also be taken as a favorable opportunity.
- ▶ These best practices would need to be packaged and documented to be used during designing of similar initiatives and also for scaling up and dissemination to more other parts of the country.

3.4 Factors that Affect women's Participation in Agricultural Extension Educational Level

Education is one of the most important variables, which increases farmer's ability to acquire process and use agricultural related practices. Low level of education and high illiteracy rate can affect the level of women participation while a higher level of education of women is assumed to increase the ability to use agriculture related practices in a better way. The low level of literacy, among female headed households, may negatively influence their participation

and utilization of agricultural extension service that may improve agricultural production and nutrition than male headed households with relatively higher literacy rate.

Table 4: Educational Level of Respondent

No	Educational level	Frequency	%
1	Illiterate	12	40
2	Informal Read and write	8	26.7
3	Elementary level	7	23.3
4	Secondary level	3	10
	Total	30	100

Source, field survey, 2016

The above table indicates that most of the respondent (66.7%) of the women did not access to formal education, while 33.3% of the respondent accessed formal education. Therefore, it can be concluded that most of the women respondent had no knowledge about the extension service and adoption of the technology. As a result, education level of the respondents could affect women to participate in extension service.

Domestic Work

The main challenge of the women to participate is domestic work load. As the table below indicated that 90% of the women were affected by this factor and most of the time they spent many time in domestic work like: family care, cooking, looking after livestock.

Lack of Information

Lack of information about the benefit of the extension service is also another factor. As the table indicated that 78% of respondent didn't have access to extension information.

Cultural Practice

Cultural norms, values, custom of the rural society hindered women from participating in agricultural extension service. Especially women are not allowed to plough the land and harvest crop. In the study area, the community believed that women have less power than men to make decision. Due to this reason, women cannot adopt new agricultural technology.

Lack of Tanning

Training is one factor that affected the extension activity. As the study observed, extension workers had contact with male farmers rather than female farmers. Husbands directly got information from experts. However, most of the women were able to get secondary information from their husbands.

Lack of Credit and Capital

Credit programs may enable farmers to purchase inputs or acquire physical capital, needed for technology implementation. In other words, the availability of credit facilitates and technology adoption are more essential for farm technologies, which farmers perceive the technology to be costly to engage in the activity because of fear of the interest rate and risk of the loan repayment. And the interest rate of microfinance was very high (15%) and lack of collateral. Table 5 indicates that 53.13% of the women didn't have accesses to credit service.

Table 5: Main Factors Affecting Women Participation in Agricultural Extension Service

Constraints for participation	Respondent category (no=30)	
	Frequency	Percentage/%
Domestic work	29	90.63
Lack of information	25	78.13
Cultural practice	23	71.88
Lack of training	22	68.75
Lack of credit	17	53.13

Source; field survey 2016

These constraints affected participation of women farmers and hindered extension workers from reaching out women farmers. According to the survey (Adikoro Kebelle) the full women participation in agricultural extension service was halted by factors such as domestic work, cultural practice, lack information, lack of credit, and lack of training. As the data analyses indicated from the total respondents (30) or 90.63% said 'domestic work' 71.88% said 'cultural practice' 53.3% said 'lack of credit' and 68.75% mentioned 'training' affected their participation in the extension program. And as the data analyzed from non-participant indicted, 57.5% said 'domestic work' 50% said 'cultural practice' , 75% said 'lack of information', 37.5% said 'lack of credit', and 62.5 said 'lack of training' affected their participation of extension program.

4 Conclusions and Recommendation

4.1 Conclusions

The study revealed the level of women farmers' participation in agricultural extension service. They can be expressed in three ways as low, medium, and high. As the result indicated, the participation of women in agricultural extension service was generally medium level. The main opportunities to reach out to rural women includes: conducting additional gender-sensitizing programs, collecting gender-disaggregated, data on rural and agricultural activities, encouraging a more participatory approach, particularly involving more rural women, ensuring equitable access to productive resources, Adapting programs to women's needs and skills. The result indicates the major constraints that prohibit women from participating in agricultural extension are: education, age, income and credit, lack of training, domestic work load, and cultural barriers.

4.2 Recommendations:

- Government should encourage and assist women farmers by giving them special attention such as farm inputs and/or incentives.
- Women adult literacy education should be programmed by government in order to increase women's participation in agricultural extension. This will help women farmers acquire basic skills and abilities. This will make them participate in reading extension leaflets, bulletin, and newsletter etc.
- The Kebele administration should provide trainings to women farmers to improve their participation in agricultural extension services.
- Credit facilities should be provided by the government either through various women group and co-operative so as to enable them to participate fully in agricultural activities.
- The extension agent should reconsider women's roles in agricultural production.
- Agricultural information to farmers should be gender specific.

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