

# Assessment of Gender Role in Agricultural Production in West Hararghe Zone, Oromia National Regional State, Ethiopia

By

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**Abstract** The study was conducted to identify gender role and responsibility in agricultural production and assess constraints that influence gender division of labor in agricultural production in Gemechis, Oda Bultum and Daro Lebu districts of West Hararghe Zone. The study used a multi-stage sampling method. Primary data were collected from a total of 142 household-heads (54 from Gemechis, 50 from Oda Bultum and 38 from Daro Lebu Ddistricts) using semi-structured questionnaires. Descriptive statistics was used to describe the collected data. Garrett ranking techniques was also used to rank constraints of gender participation in agricultural activities. The result of the study indicated that both men and women were participating in agricultural activities including land preparation, sowing seed, fertilizer application, weeding, harvesting, threshing, transporting grain to market, storing, poultry production, milking, poultry production, barn cleaning, herding, supplying water and fodder to livestock. Most of these activities were performed jointly except ploughing which was done by men and milking of cow which was mostly done by women. In all livestock species the roles of women were high than men in feeding, milking, barn cleaning, management and marketing. Workload at home, social factor (restricting women on reproductive and men on productive work) and shortage of land were some major constraints of both men and women in fully participating in agricultural activities. Women's double burdens in the household chores limited their participation in decision making pertaining to farming related issues, meeting and attending training program on agriculture. Therefore, it could be safe to conclude that working with all rural farmers in the study area in making men aware about the benefit of women's empowerment in agricultural production is imperative.

**Keywords:** Activities, Agriculture, Gender, Men, Role, Women.

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## 1. INTRODUCTION

Gender is something that being produced with a given social and historical context consisting of potential for change. It is a social construction created with specific

social and historical locations that could be changed through time. Thus, every community has its own peculiar and specific gender issues so that it is appropriate to see

them in its own context (Lorber and Susan, 1991 cited in Dereje 2013). The different norms, values and rules dictate women and men to be had act and enjoy in certain ways in their day to day life. These are strong powers that exhibit division of labor and differential access to and control over resources between women and men (Workwoha, *et al.*, 2004).

Agriculture is the back bone of the Ethiopia economy. In these men and women play distinct roles in the development of its production. From the total women 87% are engaged in agriculture, contributing about 48% agricultural labor forces that driven from family members (Teshale, 2014). Since there is multi-ethnic and multi-cultural groups have different gender roles in agriculture (Dereje, 2013). Thus, the perceived tasks of women and men in may differ considerably from region to region (Huria, 2014).

Agriculture production in rural areas is often undermined by gender-related constraints and unequal access to productive resources. In order to achieve substantial growth and poverty reduction through agriculture, there is need to effectively address the constraints that women face in both production and market participation (Ragasa, 2012). If women had the same access to productive resources and services as men, they could increase productions on their farms by 20-30% (FAO, 2011). Therefore, It is time to take into account the role of women in agricultural production and to increase concerted efforts to enable women to move beyond production for subsistence, into higher-value, and market-oriented (World Bank, 2009).

Female farmers are not considered regarding agricultural activities and/or issues concerning them through giving last priorities in agricultural research agenda, and so lacked improved extension packages and services that improve their productivity level (Deribe, 2007). However, their substantial contribution continues which systematically marginalized and undervalued in conventional agricultural and economic analysis (Jiggins, *et al.*, 2000).

Women in the country are engaged in various economic activities. Rural women are engaged in laborious tasks for not less than 15-18 hours a day, often without any cash remuneration, recognition or appreciation. Their role in agriculture activities has been ignored by major emphasis was given to men's (Deribe, 2007). In West Hararghe zone, men, women, children and youth are participating in agricultural production directly or indirect. But, no study has been identified and documented their role in agricultural production. Therefore, the study was aimed to address the gap with the following objectives.

The specific objectives of this study were as follows:

- To identify gender role and responsibility in agricultural production
- To assess constraints that influence gender division of labor in agricultural production in the study area

## 2. RESEARCH METHODOLOGY

### 2.1. Description of the Study Area

The study was conducted in Gemechis, Oda Bultum and Daro Lebu districts of West Hararghe Zone. Gemechis is located about 343 km South-east of Addis Ababa and 17 km from Chiro town, the capital town of West Hararghe Zone. Kuni town is the administrative set of the district. It shares a border with Chiro district in the West and North, OdaBultum district in the South and Mesala district in the East directions (GDOANR, 2016). It is located at 9° 0' 44.992" latitude in the North and 6° 39' 50.42" longitude in the East. The district covers an area of 77,785 ha. The district found within 1300 to 3400 m.a.s.l. and obtained an average annual rainfall 850 mm. The number of agricultural households in the district is 42,869 with 38,057 males headed and 4,812 females headed. Of the land use pattern of the district, 32,994.5 ha is cultivable, 6185 ha is grazing land forest, bushes, and shrubs cover 1385 ha; 6603.62ha is not arable and 17,949.34 ha is used for other purposes such as encampments and infrastructure facilities.

Daro Lebu is located at 114 km to South-west direction from Chiro, the capital town of West Hararghe Zone. It is bordered by Boke district in East, Gololcha district in West, Hawi Gudina in South and Habro district in North. Average temperature and rainfall of the district were 20°C and 1094mm, respectively. Agro-ecology of the district by percent was 44% midland and 56% lowland. The economic activities of the district have been dependent on production of cash crops (groundnut & khat) and fattening animals. The major crops produced in the district were maize, sorghum, *teff* and haricot bean.

Oda Bultum is located 37 Km at South from Chiro, the capital town of the zone. It shares a border with Habro and Guba Koricha in the West, Burka Dimtu and Boke and in South, Gemechis and Chiro in North, and Gemechis district in East. Total population of the district was 159,067 of which male was 81,414 and female was 77,653. There were 22,930 male household and 4670 female household. Total area of the district in hectares was 25,969 ha of which 32,875 ha was cultivated land, 22,757 ha was forest land, 10,015 ha was mountain land and 6,755 ha was grazing land. The minimum and the maximum temperature of the district in was 22 and 28 °C, respectively. Its rainfall ranges 900 – 1200 mm. Soil type of the district is 30% black, 25% sandy and 45% loam soil. Agro-ecology of the district is 4% highland, 31% midland and 65% lowland. Major crops produced in the district were Maize, Sorghum, *Teff* and Haricot bean.

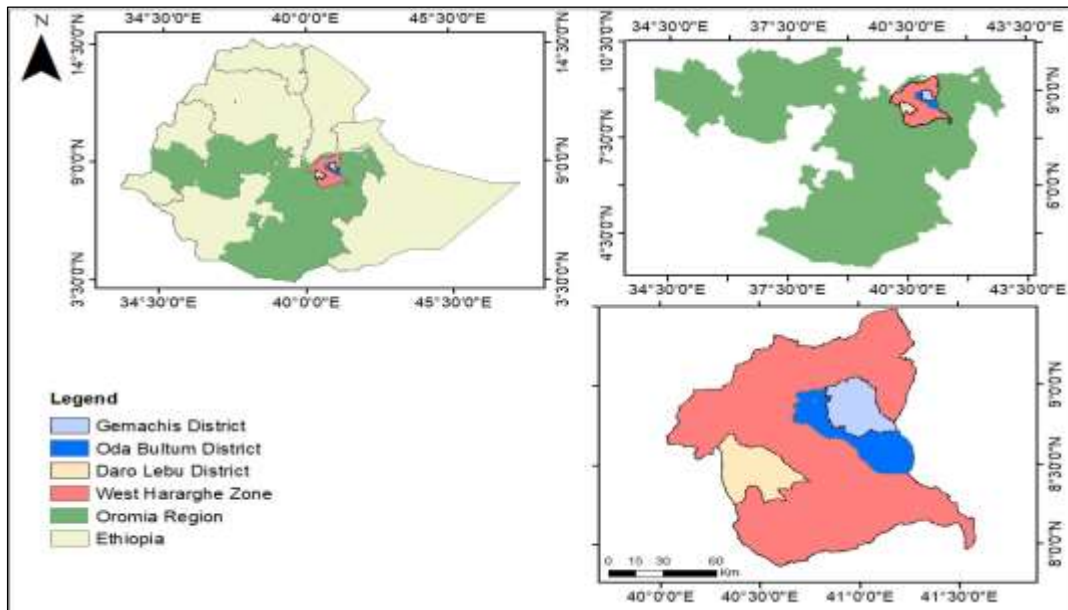


Figure 1: Map of the study area

Source: Own sketch from GIS, 2019

**2.2. Data types, Sources and Methods of Data Collection**

Both quantitative and qualitative data were collected from primary and secondary data sources to fulfill the research objectives of the study. Primary data sources were the 142 sampled households drawn from six PA through interview. Secondary data sources were collected from reports, socio-economic survey documents of the area of the district and regional agricultural office. Qualitative data was collected through Focus Group Discussion (FGD) and respondent’s interview. Quantitative data was collected through administering an interview schedule from the selected respondents.

**2.3. Sample Size, Sampling Technique, and Sampling procedures**

The study used a multi-stage sampling method. In the first stage, districts in the zone were stratified based on agro-ecology. Then, one district was selected randomly from each: highland, midland and lowland. In the second stage, two kebeles from each district; Bedesa Guda and Bekenisa from Oda Bultum, Sekina and Kortu from Daro Lebu, and Welenso Defo and Sororo from Gemechis district were selected randomly. Finally, a total of 142 respondents were selected randomly out of the three districts by considering probability proportional to population size. The simplified formula provided by Yamane, (1967) was employed to determine the required sample size with degree of variability = 0.5 and level of precision (e) = 8.35%.

$$n = \frac{N}{1 + N(e^2)} = \frac{39,491}{1 + 39,491(0.0835)^2} \approx 142 \tag{1}$$

Where, N is numbers of agricultural households of the district.

**2.4. Method of Data Analysis**

The collected data was coded and entered into SPSS version 20 to managed and facilitate for analysis. Quantitative data was analyzed by using descriptive statistics such as mean, frequency, standard deviation and percentages. On the other hand, qualitative data was analyzed through narration and description. The constraints of gender that hinder to participate in agricultural activities were ranked through Garret ranking method.

Garret ranking techniques can be specified as;

$$\text{Percent position} = \frac{100(R_{ij} - 0.5)}{N_{ij}} \tag{2}$$

Where;  $R_{ij}$  = is the rank given by  $i^{th}$  item by  $j^{th}$  individual.

$N_{ij}$  = is the number of items ranked by  $j^{th}$  individual.

Percent position was converted into scores by referring the table given. Then for each factor the scores of the individual respondents was added together and divided by the total number of respondents for whom

scores was added. These mean scores for all the factors was arranged in descending order and the most influencing factors was identified through the ranks was assigned. Therefore, attribute with highest mean score was considered as most influencing factor.

### 3. RESULTS AND DISCUSSION

#### 3.1. Demographic and Socio-economic Characteristics of the Respondents

The result showed that majority of respondents followed formal education (58.45%) while the remained was illiterate (Table 1). It is also portrayed in sex category; 32.35% of men were illiterate while 65% of women were illiterate. According to CSA (2017), nearly half of women (48%) and 28% of men age 15 up to 49 in Ethiopia have no education. This implies that illiteracy rate was below national average for male households but, above national average for female household heads in the study area. The test statistics indicated that education level was statistically significant at 5% significance level.

More than half (52.11%) of the respondent had participated in off/non-farm activities such as Khat trading and fattening. Similarly, Fekede *et al.* (2016) identified majority of the communities in West Hararghe zone responded to the effect of climate change through participating on non-farming activities. Dary and Kuunibe (2012) also found that rural non-farm economic activities are gaining prominence in most developing economies due to the increasing inability of the farm sector to support rural livelihoods. The finding also showed that more of women were had participated in off/non-farm activities than men.

The study result indicated that 83.33% and 75% of men and women had participated on training regarding agricultural production, respectively. Access to training in between men and women was statistically insignificant. But, as the finding of the study indicated women (47.5%) had access to credit. The value of chi-square test indicated that the difference in access to credit between men and women was statistically significant at 5% level of significance. In other words, women household heads were more likelihood in getting credit than men household heads.

**Table 1:** Demographic and socio-economic characteristics of respondents

Variable	Response	Men N=102		Women N=40		Total N=142		X <sup>2</sup> value
		N	%	N	%	N	%	
Educational status	Illiterate	33	32.35	26	65	59	41.55	13.13**
	Read and write	19	18.63	3	7.5	22	15.49	
	Grade 1-8	38	37.25	9	22.5	47	33.10	
	Grade 9-12	10	9.80	2	5	12	8.45	
	Above grade 12	2	1.96	0	0	2	1.41	
Participation in off/non-farm activities	Participated	49	48.04	25	62.5	74	52.11	2.41
	Did not participate	53	51.96	15	37.5	68	47.89	
Access to training	Had access	85	83.33	30	75	115	80.99	1.3
	Had no access	17	16.67	10	25	27	19.01	
Access to credit	Had access	30	29.41	19	47.5	49	34.51	4.16**
	Had no access	72	70.59	21	52.5	93	65.49	

**Note:** \*\* indicates significance level at 5%.

**Source:** Own survey, 2021

#### 3.2. Resource Endowment

The mean land holding of men was 0.57 hectare while that of women was 0.41 hectare. This implies that

mean land holding size of men exceeds the mean land holding size of women by 39.02%. In line with the study

result of Mulema and Damtew (2016) who reported that female-headed household farm sizes are smaller compared to those of male-headed households in Ethiopia. According to Table (2) below depicted male household heads possessed more livestock than female

household heads. The mean livestock holding in tropical livestock unit of men was 3.75 while that of women was 2.47. The t-test result showed that there was statistically significant mean difference in total livestock owned between men and women at 1% significance level

**Table 2:** Resource endowment and institutional service of the respondents

Variable	Men		Women		Combined		t-value
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Land size (Ha)	0.57	0.42	0.41	0.25	0.52	0.39	2.11**
Experience (years)	16.99	12.47	18.23	10.79	17.34	12.00	0.55
Total livestock owned (TLU)	3.75	2.68	2.47	1.96	3.39	2.56	2.76***
Distance in hours	20.96	18.15	15.05	16.16	19.28	17.74	1.72*

**Note:** \*\*\*, \*\* and \* indicate significance level at 1%, 5% and 10%, respectively.

**Source:** Own survey, 2021

### 3.3. Gender Role in Crop Production

In the study area, on average men and women spend 6.24 and 4.32 hours in agricultural production activities (Table 3), respectively. Women devoted more of

their time on domestic activities per day. The study result is consistent with the study of USAID (2015). These their time spent vary with the season, with less time to rest, sleep or engage in income generating activities or important community development activities.

**Table 3:** Time taken in agricultural production activities by men and women in the study area

Variable	Category	Mean	Std. Dev.
Time taken in agricultural production activities (hours)	Men	6.24	1.44
	Women	4.32	2.20

**Source:** Survey result, 2021

The gender division of labor in crop production by tasks is common in the study area. Almost all activities were conducted jointly except ploughing which is conducted by men. In the same way, Takele (2017) reported that demarcations of tasks among men and

women are not absolute. Men and women participated in almost all crop production activities with different degrees of participation (Table 4). In addition to field working, women brought food for men while they are on the field.

**Table 4:** Gender role in crop production

Activities	By whom it conducted	Gemmechis	OdaBultum	DaroLebu	Total
		Frequency and percentage	Frequency and percentage	Frequency and percentage	Frequency and percentage
Ploughing	Only men	45(36)	45(36)	35(28)	125(100)
Land preparation	Only Men	29(26)	21(19)	28(25)	78(69.03)
	Both men and women	13(12)	16(14)	6(5)	35(30.97)
Sowing seed	Only Men	34(27)	33(26)	28(22)	95(76)
	Both men and women	11(9)	12(10)	7(6)	30(24)
Fertilizer application	Only Men	18(15)	13(10)	15(12)	46(37.71)
	Only Women	1(1)	2(2)	1(1)	4(3.23)
	Both men and women	26(21)	30(24)	18(15)	74(59.68)
Weeding	Only Men	19(16)	16(14)	17(15)	52(44.44)
	Both men and women	25(21)	22(19)	18(15)	65(55.56)
Harvesting	Only Men	33(27)	27(22)	26(21)	86(69.35)
	Both men and women	11(9)	18(15)	9(7)	38(30.65)
Threshing	Only Men	42(34)	39(31)	30(24)	111(89.52)
	Both men and women	3(2)	6(5)	4(3)	13(10.48)
Transporting	Only Men	26(21)	21(17)	14(11)	61(50)
	Both men and women	19(16)	24(20)	18(15)	61(50)
Store in grain	Only Men	17(16)	11(10)	17(16)	45(42.86)
	Only Women	3(3)	4(4)	3(3)	10(9.52)
	Both men and women	18(17)	21(20)	11(10)	50(47.62)

Source: Own survey, 2021

### 3.4. Gender Role in Livestock Production

In all livestock species the roles of women were high than men in poultry production, milking and barn cleaning. All activities were conducted jointly except milking which was

mostly undertaken by female. The involvement of women in livestock production was high than crop production in the study area.

**Table 5:** Gender role in livestock production

Activities	By whom it conducted	Gemmechis	OdaBultum	DaroLebu	Total
		Frequency and percentage	Frequency and percentage	Frequency and percentage	Frequency and percentage
Poultry production	Only women	31(26)	34(29)	25(28)	90(76.27)
	Both women and men	12(10)	9(8)	7(25)	28(23.73)
Milking	Only men	0(0)	0(0)	0(0)	0(0)
	Only women	34(29)	37(31)	29(24)	100(84.03)
	Both men and women	9(8)	6(5)	3(3)	18(15.13)
Barn cleaning	Only men	0(0)	0(0)	2(2)	2(1.74)
	Women	28(24)	30(26)	24(21)	82(71.3)
	Both	14(12)	11(10)	6(5)	31(26.96)
Supplying water	Only men	7(6)	7(6)	4(3)	18(14.75)
	Only women	7(6)	4(3)	6(5)	17(13.93)
	Both men and women	29(24)	34(28)	24(20)	87(71.31)
Supplying fodder	Only men	7(6)	7(6)	8(7)	22(18.8)
	Only women	5(5)	2(2)	1(1)	8(6.84)
	Both men and women	29(25)	34(29)	24(21)	87(74.36)
Herding	Only men	6(5)	5(4)	2(2)	13(10.66)
	Only women	5(4)	2(2)	2(2)	9(7.38)
	Both men and women	32(26)	38(31)	30(25)	100(81.97)

Source: Own survey, 2021

### 3.5. Constraints of Gender Participation in Agricultural Activities

The result of the study indicated that workload at home and social factor were the main challenges of women to participate in all agricultural activities. Women were responsible for reproductive work such as food preparation, child care and house guarding. In addition to reproductive work at home, women assisted their husband on the field. But, because of cultural influence, most of men did not support women reproductive activities at home. It was only small number of men who supported some of reproductive activities such as fetching water and firewood collection. Men were fetch water in early morning before community was wake up from

sleeping. The action was made to protect themselves from the influence of community attitudes. Especially, those influence highly acted by women themselves when coming together. Men were also collected firewood for consumption purpose. The activity was conducted by men if firewood found around the farm, unless they were not collect firewood from communal lands. Women sample respondents revealed that men were not taken prepared food for eating.

Another that that influence gender participation in agricultural activities were shortage of land. According to the study result portrayed on Table (6) below, the average land holding of the household heads in the area was 0.52 hectare. Therefore, it did not require more labor and men could do all activities conducted on the farm.

**Table 6:** Constraints of gender participation in agricultural activities

Factors	Average score	Garett rank
Workload at home	62.67	1
Social factor	56.33	2
Shortage of land	31	3

**Source:** Own survey, 2021

## 5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

### 5.1. Summary and Conclusions

Analysis of gender division of labor in agricultural activities has indicated that women and men were participating in different farming activities. Both men and women participate in agricultural activities including land preparation, sowing seed, fertilizer application, weeding, harvesting, threshing, transporting grain to market, storing, poultry production, milking, poultry production, barn cleaning, herding, supplying water and fodder to livestock. Most of these activities were performed jointly except ploughing which was done by men and milking of cow which was mostly done by women. In all livestock species the roles of women were high than men in feeding, milking, barn cleaning, management and marketing except oxen due to pink women especially in marketing. The involvement of women in livestock production was high than crop production in the study area.

On the other hand, regarding reproductive activities such as gathering firewood and fetching water, supplying of food to men while they are on the field, guarding child and house women were responsible tremendously. Women's double burdens in the household chores limited their participation in decision making pertaining to farming related issues, meeting and attending training program on agriculture. Therefore, it

could be safe to conclude that working with all rural farmers in the study area in making men aware about the benefit of women's empowerment in agricultural production is imperative.

Workload at home, social factor (restricting women on reproductive and men on productive work) and shortage of land were some major constraints of both men and women in fully participation in agricultural activities.

### 5.2. Recommendations

Based on the findings, the following recommendations have been given.

- ✓ To encourage males to share in domestic tasks, effective gender sensitization programs are required.
- ✓ Strengthening and encouraging women through improvement and generation of women-time saving
- ✓ Credit facilities should have to be provided by the government either through various women group and co-operatives so as to enable them participate fully in agricultural activities.
- ✓ Women adult literacy education program is required to help women farmers acquire basic skills and abilities to seek and receive agricultural information through extension agents. This will make them to participate more in reading extension leaflets, bulletin, newsletter etc.

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