

Contributions of Ethiopian Women in Farming and Its Allied Fields

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Women are active participants in almost every aspect of agricultural activity around the world. However, due to the deep-rooted gender division of labor in developing countries, their contribution is underestimated. Despite having the fastest growing economy in the world, Ethiopia is still one of the poorest nations. It is vulnerable to weather-related shocks and suffers from widespread food insecurity, particularly among rural populations and smallholder farmers. In Ethiopia, women farmers perform 75 percent of farm labor, which accounts for 70 percent of household food production, but they typically produce up to 35 percent less than male farmers because they have less access to extension services. Therefore, the study focused on reflecting on the role of women in Ethiopian agriculture. This study was conducted at Oda Dawt Kebele, Teyo District, Arsi Zone, and the Oromia Regional State in Ethiopia. The main objective of the study was to identify and examine the role of women in agriculture. Quantitative and qualitative techniques were used to collect data from primary and secondary sources. The researcher used a simple random sampling technique and chose 405 women as the sample size. The questionnaires were written in English for data collection and then translated into the local Afan Oromo language for easier comprehension by respondents. The data collected was also analyzed using a variety of statistical techniques. The main objectives of this evidence-based study were to identify and examine the role of women in agriculture and related sectors. The study results suggest that women play an important role in farming activities that are underestimated. In general, the study emphasizes the importance of the male and female workforce for the economic or agricultural sector. Recognition of the roles and

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contributions of women in social and economic development, particularly by planners and policymakers, to improve the status of women and increase food security at household and national levels. The purpose of this study is to highlight the important role of women in agricultural activities as the number of studies on the role of women in agriculture increases. In addition, the results of this research could be useful for planners, decision-makers, and practitioners as effective use of women's labor power are required. In general, the study discovers or emphasizes the importance of the female labor force, as opposed to the male labor force, in contributing to the economic activity of the agricultural sector.

Keywords: Agriculture; economic; food security; household; respondents; social; women.

1. INTRODUCTION

Agriculture is the lifeblood of many developing nations. Women account for more than half of the working force through participating in a range of activities, either directly or indirectly. The gender division of work varies from society to society and culture to culture, and external variables influence the quantity of activity inside each culture [1]. However, except for a handful of the most industrialized countries, society has failed to recognize women's contributions. Rural development in Africa cannot be conceived without the active engagement of women. Of course, women contribute significantly to farming families. They engage in more than half of agricultural activity in many developing countries, hold the majority of the responsibility for domestic food security, and contribute to family well-being through income-generating activities [2]. Women's contributions must be acknowledged for African nations to enhance their capability to satisfy food demand, and they should be provided fair access to and control over land, financial facilities, value addition, and better solutions, as well as membership in cooperatives and other rural benefits [3].

Ethiopia is the world's poorest country, with significant levels of illiteracy. Women are disproportionately affected by illiteracy as a result of heavy housework, cultural influences, and a lack of knowledge. However, it is tough to imagine the development without considering the female labor force, since women are the driving force behind rural developments, mostly as an untapped resource that may improve rural development and contribute to greater growth rates and improved food production [1]. Women constitute half of the total population in Ethiopia, and 84.91 % of that population lives in rural regions, where social services like education and health are inadequate. Rural women's engagement in various economic activities such as agricultural work in the community is low. Furthermore, relatively few women have

positions of leadership and decision-making in the country at all levels. Given this fact, development policies, programs, and initiatives fail to address women's issues. In many instances, there is a societal bias that favors men's roles while neglecting women in a particular society [4]. Rural women, particularly in developing countries, face difficulty since they must perform three responsibilities in their everyday life: productive, reproductive, and communal engagement. They also live in an environment with few or no social services, scarcity of infrastructure, and minimal exposure to knowledge and technology [5].

Rural women have fewer rights to the joint wealth they created with their spouses, as well as fewer roles and responsibilities in critical resource decision-making. According to research published in December 1999 by the National Association of Company Women (NABW), the Center for International Private Enterprise Evaluation is a multifaceted Non-Governmental Organization (NGO) dedicated to supporting and promoting women entrepreneurs through advocacy, business, and technical education, micro-credit loans and access to information. The objective of the group is to encourage female-led businesses and to assist many more women in pursuing entrepreneurship. Ethiopia, on the other hand, is the home of several nations, ethnicities, and ethnic groups, each of which has its own culture, traditions, values, and customs. Under these circumstances, women have to follow the norms and values of society regarding their position in political, economic, and sociocultural spheres. In addition to being marginalized, women are the victims of destructive cultural traditions; in general, women participate in a diverse variety of activities and enterprises. They are engaged in productive crop and livestock management activities. On the other hand, they bear a great deal of responsibility in domestic matters. Traditionally, the reproductive process has been linked to the division of labor between religion, culture, and sexes. As a consequence,

women were not allowed to do certain types of jobs. The function of childbearing or the social function of maternity need not deprive women of opportunities for engagement in economic development.

As more women enter the labor field, they face the challenge of balancing their roles as wage earners and mothers, leaving them exposed to prejudice and even dismissal from their jobs. Employers, in general, are unsympathetic to the special demands of women and will either terminate work during pregnancy or compel them to take-earned leave at the time of delivery or even leave without pay. It is critical to give material protection to working women to avoid unfair labor practices and exploitation of women in the labor market, as well as to preserve women's health and well-being. The women's role in social and economic activities has been authorized to safeguard and empower women as employees while also maintaining the dignity of motherhood (IGNO, 2019). For progress to take root in Ethiopia, women's roles must be recognized, and they must be granted a portion of all property. These days' government and non-government organizations are trying to help women get recognition from society & what surprises more is that most women themselves do not realize that they are prevented from owning what they deserve recognition and appreciation [6]. Other parts of Ethiopia have the same problem as it gives less attention to women's role in their everyday activities. Because women are typically expected to shoulder the majority of the burden, this study investigates the role of women in agriculture to highlight how women engage and contribute to agricultural production in Oda Dawt Kebele.

The gender division of work varies from society to society and culture to culture, and external conditions impact the amount of activity within each culture. Except for a handful of the most industrialized countries, society has yet to recognize the achievements of women. In policy and resource allocation, women's role in maintaining family food security remains generally unacknowledged, particularly in developing nations. At the national and global levels, rural women's perspectives and concerns are rarely heard. Increasing female labor-force participation has a beneficial influence on economic growth. Women's active engagement in rural development in Africa is unthinkable. Gender, as one of the sociological elements that determine social relations, has attracted

widespread interest nationally and internationally, and is a topic, in both academic and practical terms, that is undeniably gaining worldwide attention. Gender discussions have grown commonplace in Ethiopia, so hearing gender disputes is nothing new. Nonetheless, understanding the gender dynamics in the country at the grassroots level remains a challenge. In a larger sense, the purpose of this research is to contribute to a better understanding of gender relations and women's participation in agricultural operations in the context of Oda Dawt Kebele.

Women are poorer than males because they have fewer economic prospects and less autonomy. They have limited access to economic resources, education, training, and support services. They also have relatively little say in decision-making. Women's poverty exacerbates by the rigidity of socially defined roles for women and the inclination to cut back on social assistance. Women's roles and positions in solving the difficulties of agricultural production and development are highly powerful and conspicuous. As a result, their relevance and significance cannot be overstated. Similarly, Mondal [7] found that women had little decision-making authority, both within and outside the family. Women, on the other hand, undertake all nonmechanical agricultural activities and various chores, adding to their obligations. Women in agriculture have a high percentage of illiteracy and drop out. They have little understanding of the current agricultural system. Women earn fewer wages, especially in joint informal and private sectors. Women, as a result, are unaware of their legal rights. Women make up a large percentage of the labor force by participating in a variety of activities, either directly or indirectly. According to FAO 2019 and, women generate more than 44 percent of the world's food and 40 percent of food in Central Asia. They also generate 60 to 80 percent of the food in poorer countries, accounting for half of the world's food output. Their contribution to the agricultural labor force in developing countries is 36.7%, while it is about 43.6% in developing countries. However, their economic contribution has frequently been underestimated, and their labor in agriculture has remained mostly unseen for a long time. Women's contributions always frequently hampered by gender-specific barriers to full labor-force participation, which may necessitate policy measures other than those aimed at encouraging economic growth and improving rural labour market efficiency. Gender, that is,

the social, economic, and cultural dimensions of being male or female, does have a significant influence on people's activities, resources, and opportunities.

The aforementioned circumstances are also more difficult for Ethiopian female farmers. They face obstacles such as a shortage of farmland, restricted communication between men and women, and lack of control over agricultural goods, financial facilities, skill training, education, extension services, and information; their contribution is under appreciated. In this way, cultural patterns and earlier economic policies have a detrimental impact on women. The majority of them exist on the periphery of major development initiatives and programs. In the rural areas of Ethiopia, women engage in agricultural production, animal husbandry and cultivation. They work from dawn to dusk to feed the men who work in the fields, bring water, collect firewood, and rearng livestock. Previously, even if males control assets and inputs such as land, loans, seeds, cattle, technology, and infrastructure, such activities and programs would scarcely function without the complementary of women's labor.

The same situation applies to Oda Dawt Kebele, where, even though a variety of variables impact agricultural output, the lack of participation of women view as a single issue caused by male dominance, cultural influences, a lack of understanding, and societal attitudes toward women, particularly in agricultural operations like plowing, harvesting, and weeding, where women were thought to contribute less to agricultural tasks than men. Even though they confront many obstacles and problems, the contribution of the concerned Kebele's women to agricultural output, both in quantity and quality, is seen as positive. As a result, a comprehensive examination of women's engagement in agriculture will allow us to understand their actual contribution as well as the primary obstacles or limits encountered, allowing us to create a better and more sustainable solution. This research examined these issues from the perspective of a population-geographic analysis, as well as the necessary remedies. The domination of males in different income-generating occupations has a significant impact on women's economic emancipation.

2. OBJECTIVES OF THE STUDY

a. General objective: The overall goal of the study is to analyze women's agricultural

activities and to suggest realistic, effective women's initiatives, and raise awareness of the problem among district senior officials and decision-makers so that actions may be incorporated into rural development plans.

b. Specific objectives: The specific objectives of this study include:

- To assess the amount and level of women's engagement in agriculture.
- To investigate the elements that influence agricultural women.
- To identify the kind and level of support women get from the government.
- To ascertain the role of women in agricultural tasks during harvesting.
- To identify women's place in society.
- To examine the work cultures that limit women's participation in agricultural operations.
- To scrutinize women's positions of leadership at the grassroots level in agriculture and non-agricultural activities.

3. MATERIALS AND METHODS

3.1 Study Area

The study was conducted in Oda Dawt Kebele, Teyo district, Arsi zone in the Oromia regional state of Ethiopia (Fig. 1). Most of the Kebele's land is flat, but there are also hills and irrigated land. The Kebele occupied a total area of 1895 hectares, with 994 hectares (62.3 percent) being agricultural land, 535 hectares (33.52 percent) of irrigated land, and 42 hectares (2.6 percent) of forests, and 25 hectares of grassland (2, 56 percent). The local climate conditions of the Kebele are also considered suitable for agriculture and human settlements and receives most rainfall in summer (June, July and August). There is a moderate amount of rain during the spring season (March, April, and May). The autumn season (September, October, and November) has the least amount of precipitation and the winter season is almost dry (December, January, and February). The total population of Kebele is 1928, with males accounting for 48.7 percent (939) and females for 51.3 percent (989). Orthodox Christianity is the main religion in the Kebele, Islam comes second and Protestant Christians also live in the Kebele in question. Agriculture is the common economic activity of Kebele and includes both crop production and animal or livestock rearing.

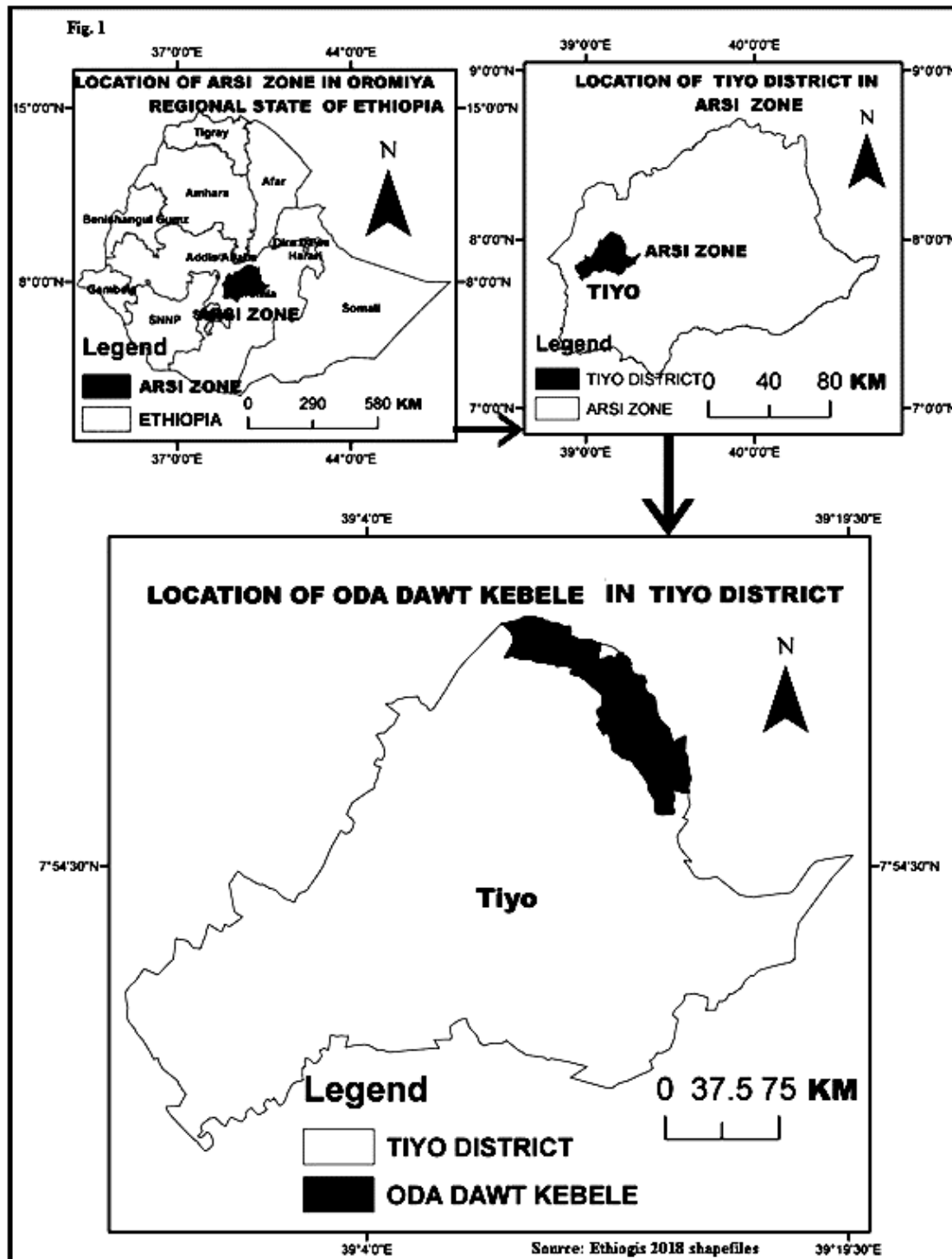


Fig. 1. Study area

3.2 Research Methodology

3.2.1 Design

A simple random sampling method was used to select the sample; a total of 405 households

were selected for the sample size in the Kebele. A mixed-methods research approach was used in the investigation and combinations of participatory, qualitative, and quantitative methods were used for primary and secondary data collection. Household surveys, structured

questionnaires, Key Informant Interviews (KII), and Focus Group Discussions (FGD) were used to collect primary data, while secondary data were collected from both published and unpublished documents. To facilitate respondents' understanding, the questionnaires were prepared in English and translated into the local Afan Oromo language. Pre-surveys were conducted with local enumerators and key informants before the start of the main survey, and the final questionnaire was revised and updated where necessary. The primary data collection tool at the base level was the interview plan of the respondents. The interview plans contained mostly closed-ended questions, although there were also some open-ended and planned questions. The interview questions were developed with study goals and hypotheses. As a result, the questions were constructed using personal information, family information, employment, qualifications, and the position of women in agriculture. In addition to the interview plan and the pre-coded questionnaire, case studies were also used as a data collection tool. The case studies were conducted on a single household and personal observation was also used, which was difficult to obtain through the interview. The answers to these questions have been meticulously compiled and summarized. To facilitate the analysis of the data, the results were broken down into several components corresponding to relevant factors and analyzed and interpreted using various statistical techniques. The use of the questionnaires and the interview helped to get details about the women farmers' experiences with farming activities. Video recordings were made during the interviews, which were transcribed immediately after the fieldwork. All interviews conducted using the mobile device were then transcribed for initial coding and topic identification. A total of 17 interviews were conducted with women identified during the questionnaire administration process as having excellence in agricultural issues.

3.3 Data Analysis

Descriptive statistics were used to analyze the quantitative data (percentages, frequencies, and rankings), while thematic analysis was used to analyze the qualitative data. For quantitative analysis, the raw data collected on the site was well sorted and fed into the IBM Statistical Package for Social Science (SPSS) version 26 for analysis, and ArcGIS version 10.8 software was used to develop the map of the study area.

3.4 Livelihood Component Framework

The livelihood component framework was constructed to measure the impact of production practices on the women farmers' asset possession, activities and strategies, wellbeing, and external policies and institutions [8].

3.5 Percentage Perception Index

The percentage perception index was used to quantify the perception of women farmers' experience of farming activities [9]. Each woman farmer in the research areas was asked to indicate her option regarding each level of change on selected opinions. During the pre-test of the questionnaire, the women farmers identified a large number of statements, but to simplify the calculation, the first ten of them were selected based on the highest frequencies. Women farmers had the option of reporting each statement as an increase, decrease, or no change. To see the percentage of each statement, the following simple percentage formula was used:

$$\text{Percentage perception index} = \frac{\text{Number of respondents' opinion about statements (an increase, decrease or constant)} \times 100}{\text{Total number of respondents}}$$

3.6 Agreement Index

The agreement index was used to quantify women farmers' perceptions of the impact of natural disasters on their daily lives [10]. The index was composed of two divisions: (1) positive impacts of natural calamities; and (2) negative impacts of natural calamities. Each division of the index included 10 statements based on the questionnaire pre-tests and secondary literature [11] (Alam et al. 2017; Zoundji et al. 2017). The authors found plenty of statements in this case also, but kept the first ten statements for each division based on the highest frequencies. Each division of the index included 10 statements. The agreement or disagreement of the statements by women farmers was quantified.

3.7 Logit Model

To identify the factors influencing the role of women farmers in agriculture, the logistic regression model was used. The model was constructed individually for each study area to get specific and meaningful estimates. The

independent variables included in the analysis were not the same in all the models as major determining factors varied in each study area based on the women farmers' socioeconomic characteristics, geographical state, and agricultural systems [12]. The major determining factors in each study area were identified through personal interviews, FGDs and KIIs.

3.8 Assessment of Woman Farmers' Livelihood

To analyze the livelihoods of the women farmers, a sustainable livelihood framework was approached [13]. The approach identified and assessed five types of assets or subsistence capital: human capital, social capital, financial capital, natural capital and physical capital.

3.9 Recommendation Matrix

Suggestions and policy recommendations present by researchers in the form of a recommendation matrix to improve the living

standards of women farmers by adopting the best decision [14].

4. RESULTS

4.1 Personal Background of Respondents

- **The age structure of the respondents:** The age structures of the respondents are categorized in the following Table 1.

Table 1 shows that the women who answered or gave answers were divided into separate age groups, starting with a minimum age of 15 years, as the study was deliberately limited to mature women. According to the table, respondents aged 15-24 make up 5.68%, 25-34 years 34.81%, 35-44 years 46.91%, and 45 years and older 12.84%. The overall sample size shows that the majority of respondents will be future power and the foundation of fertility performance [15-25].

Table 1. Respondents' level of age structure

Age group	Number of respondents	Percentage
15-24	23	5.68
25-34	140	34.81
35-44	190	46.91
45 & Above	52	12.84
Total	405	100

- **Education of the respondents:** As a result, their educational status is defined in the Table 2.

Table 2. Respondents' level of education

Educational status	Number of respondents	Percentage
Never attend (cannot read and write any language)	60	15
Grade 1-8	243	60
Grade 9-12	122	25
Total	405	100

Table 2 shows that 15% of respondents have never attended school and cannot read or write a language, while 60% have attended at least 1-8 grade, indicating that rural women marry before completing their secondary education and 25% of respondents were joining in secondary education.

- **Marital status of the respondent:** The marital status of respondents is specifically specified in the Table 3.

Table 3. Marital status of respondents

Marital status	Number of respondents	Percentage
Married	330	81.48
Widowed	35	8.64
Divorced	40	9.88
Total	405	100

Table 3 shows that 81.48% of the women were married, 8.64% were widowed and 9.88% were divorced. Although all widowed women are heads of the household, the position of women in socio-economic practices varies according to marital status. This is intended to give widowed women a dual role as head of household and mother [26-35].

- **Occupation:** Despite the reality that the respondents of the Kebele worked in a

variety of occupations, they were clustered into two main occupations.

Table 4 shows that 30% of the respondents were housewives, indicating that they have different roles such as mothers or other family activities. Approximately 70% of respondents were female farmers, indicating that agriculture is the economic practice dominated by Kebele and that women contribute to agricultural activities [36-45].

Table 4. Respondents' occupational status

Occupation	Number of respondents	Percentage
Housewife	120	30
Farmers	285	70
Total	405	100

- **The religion of the respondents:** The Kebele's respondents follow a different religion accordingly they are categorized under the following religion.

Table 5. Respondents' religious status

Religion	Number of respondents	Percentage
Orthodox	211	52
Protestant	144	35
Muslims	50	13
Total	405	100

According to Table 5, 52% of the respondents were adherents of the Orthodox Christian religion, showing that Kebeles were the main religion, 35% adherents of the Protestant Christian religion, and 13% adherents of the Islamic religion. From this it is very clear that the Kebele consisted of many religions. Although they practiced different religions, they had a better social life, which freed them from religious conflicts and other related problems [46-57].

- **Ethnicity:** About the fact that the Oromo people dominate the Kebele, there are other ethnic groups in the Kebele, as seen in the Table 6.

Table 6. Respondent ethnic groups

Ethnic groups	Number of respondents	Percentage
Oromo	367	90
Amhara	26	7
Wolayta	12	3
Total	405	100

As shown in Table 6, the Oromo ethnic group was the most important ethnic group with 90% of households, followed by the Amhara ethnic group with 7% and the Wolayta ethnic group with 3%. From this, we can easily conclude that the Kebele population is divided into numerous ethnic groups and the Oromo ethnic group dominates the Kebele. As a result, Afan Oromo is the most commonly spoken language of the Kebeles, followed by Amharic and Woliata.

- Agricultural production problem:** There are various problems with agricultural products such as work patterns, lack of full participation of women in the field, lack of knowledge about agriculture and male dominance are problems of agriculture poses while other factors remain constant. Working habits in different economic activities, there are different ways to carry out these activities and the same applies to the agricultural sector. These behaviors are considered work habits. There are different types of work habits. Among these, good work habits and bad work are the most important. Since good work habit plays an important role in agricultural production and productivity, bad work habit has different effects on the sector's production and productivity. This bad work

habit includes only a lack of intensive farming and a lack of awareness about fertilizers, depending on rainfed agriculture, and the division of labor between women and men, which means that women are considered homeworkers and men are considered field workers. The lack of proper use of time and celebration of different days of a holy day is a major bad working habit that hinders the production and productivity of agriculture in the Kebele in question.

Consequently, 43.70% of respondents agree that hunger and food insecurity are the most serious problems, 36.04% believe that malnutrition is the most serious problem, and 20.24% believe that food insecurity is the most serious problem.

Table 7. Problems of the agricultural production

Agricultural Production Problems	Number of respondents	Percentage
Hunger & Food Shortages	177	43.70
Malnutrition	146	36.04
Food Insecurity	82	20.24
Total	405	100

- The causes of agricultural production problems:** There are various causes of agricultural production problems in the Kebele, as seen in Table 8.

Table 8. The causes of agricultural production problems

Causes	Number of respondents	Percentage
Lack of women participation	167	41.23
Lack of knowledge about agriculture	144	35.56
Male domination	94	23.21
Total	405	100

As indicated in Table 8, many factors hamper the production of the sector. According to 41.23% of respondents, women's lack of commitment to an issue results from society's unfavorable attitude towards them, meaning that women are perceived as housewives who can work just as hard as men. While 35.56% of respondents believe the problem is due to a lack of agricultural expertise, the remaining 23.21% believe it is due to male dominance, which means women were forced to work agricultural & related fields.

- The consequences of agricultural production problems:** The following Table 9 respondents the consequences of agricultural production problems concerning Kebele.

Table 9. The consequences of agricultural production problems

Consequences	Number of respondents	Percentage
Health	42	10.37
Economic	63	15.56
Both health and economic	300	74.07
Total	405	100

Table 9 illustrates the various impacts of agricultural production problems. According to 10.37% of respondents, the most important impacts of agricultural development issues are health, 15.56% of respondents believe they have economic impacts, and the remaining 74.07% of respondents believe they have both economic and health impacts.

Health consequences refer to the health problems that result from malnutrition leading to deficiencies in vitamins and carbohydrates. This lack of vitamins made them susceptible to various diseases and they were less active in sectors that reduce their production because they need labor. The economic consequences are related to a lack of income from the sector since most products are intended for private consumers. This lack of income means that modern agricultural equipment cannot be used and, as a result, there is a lack of capacity to purchase it.

- **Women in agriculture: what role do they play?**

Agriculture is the main source of income for the majority of the Oromo. It is a system that

includes agriculture and animal husbandry. Each component requires a variety of activities to reach the final input; In those areas where agriculture is the subsistence level, human labor is the most important determinant of productivity. In Oda Dawt, Kebele labor is the main source of labor needed to carry out various activities required in the production process. There is a division of labor between men and women. This, in turn, enforces the societal norms in which girls and boys are treated differently and, based on this work tradition, expect to perform tasks assigned to them, for example, before actually beginning to participate in economic activities.

This division of labor is evident in the Kebele, and men and women are forced to take on tasks traditionally reserved for the independent sex marriage is the basis for starting a family. It's just another way of summarizing the conventional gender division of labor, as shown in the Table 10.

Table 10 shows that there is a tradition of the division of labor. There is a division of labor, but joint activities carry out equally by both men and women.

Table 10. The traditional gender division of labor

Tasks of women	Tasks of men	The task of both women and man
Manuring	Cleaning wood	Wooding
Milking	Plowing land	Animal husbandry
Child care	Sowing	Care of sick animals
Fetching water	Preparing farmland	Harvesting
Food processing & preparing	Selling livestock	Storing
House cleaning	Controlling	Crop cultivation
Grinding	Fatten oxen	-
Preparation of alcoholic daggers	Cutting crop	Collecting firewood
Daily products	Threshing	Washing clothes

- **Women's role in crop cultivation product:** Women in Oda Dawt Kebele, participate in agricultural activities in a variety of ways and are often an important component of the family labor force in farming.
- **Women's participation in pre-harvest:** The pre-harvesting involvement of women in agriculture is represented in the Table 11.

As shown in Table 11, 87.65 % of respondents are actively in manuring during the pre-harvest period, whereas 12.35 % are involved in preparing the land for agriculture. From this, we may conclude that their work starts with field crops.

Table 11. Women's participation in pre-harvest

Types of activity	Number of respondents	Percentage
Manuring the land Health	355	87.65
Preparing the land	50	12.35
Planning land	-	-
Total	405	100

Table 12. Women's participation during the harvest period

Types of activity	Number of respondents	Percentage
Harvesting maize, milk, and sorghum	380	93.83
No participation	25	6.17
Total	405	100

- **Women's participation during the harvest period:** The majority of women actively engage during the harvesting period.

Table 12 shows that women engage in a range of tasks throughout the year, but their participation in harvesting is very significant in collecting or gathering virtually all types of goods. As a consequence, 93.83 % of respondents are involved in harvesting activities, while only 6.17% are not. We may deduce from this that the vast majority of them were involved in harvesting activities.

- **Participation of women during the post-harvesting period:** The women of the concerned Kebele actively participate in post-harvest activities, as seen in the Table 13.

Table 13. Women's participation during the post-harvest period

Types of activity	Number of respondents	Percentage
Transporting	140	34.56
Monitoring	60	14.81
Marketing	75	18.51
Threshing	50	12.34
Storing	80	19.75
Total	405	100

As seen in Table 13, women from the Kebele engaged in agricultural activities during the post-harvest season. 34.56% of respondents personally contribute through transportation, 14.81% through surveillance, 18.51% through sale of goods, 12.34% through threshing of crops and 19.75% through storage of produce. From this, we can easily understand that the role of women during post-harvest is dominated by transportation and other activities.

- **The role of women in animal husbandry:** Despite their active involvement in agriculture, in Oda Dawt Kebele they still favor cattle as a commodity and raising cattle as a culturally variable activity. Cattle play an important role in farming activities in Oda Dawt Kebele. As a result, the ox is an important source of energy for plowing farmland and also for threshing, beasts of burden, particularly horses, are important modes of transport for bringing the threshed crop home and to market, and small herds such as sheep and goats are also an important source of food and cash. Women in Oda Dawt Kebele play an important role in animal husbandry. Your participation

includes, for example, feeding calves and cows. Females provide water, green grasses, and forage animals, usually calves and cows. When asked to comment on the distributional responsibility between men and women of different types of animals, most respondents indicated that women are responsible for calves, dairy cows, and small livestock rather than large animals that men normally deal with. According to all respondents, milking in animal husbandry is the responsibility of women. It is carried out twice a day, in the morning and the evening.

- **The role of women in domestic activities:** Women are busy with time-consuming and exhausting tasks. According to the majority of respondents, housekeeping is one of the most time-consuming tasks for women in this Kebele. These activities include cooking, childcare, fuel gathering, and fetching water. Women spend a lot of time cooking food, what comes forward in cooking is the nose of firewood and water, in other words, the whole cooking process cannot be done without water and firewood. Collecting

water and firewood is one of the most difficult tasks performed by them.

- **The responsible feeling of women in agricultural activities:** More women in the concerned Kebele have almost full responsibility regarding the activities. 45% of women who felt responsible felt they had enough responsibility. This is due, among other things, to an increase in female literacy, imitation of women themselves, government policies, and an increase in societal attitudes towards women. But most women do not have full responsibility for agricultural activities. These reasons include cultural practices, beliefs, religious harm, male dominance, lack of education and awareness, people's negative attitudes towards women, etc. as cited by respondents. Those who had enough responsibilities would help their husbands in various activities such as assisting husbands in activities by harvesting agricultural products, weeding, transporting, storing, and to some extent threshing the products.

5. CONCLUSION AND RECOMMENDATIONS

The main objectives of this study were to determine the role of women in agriculture, examine the factors that limit their participation and propose possible solutions. The results of this study can be useful for planners, policymakers, and practitioners as optimal use of women's labor power are required. Based on the current study results, Oda Dawt Kebele lives in agriculture. Women work side by side with men in crop production and animal husbandry, and their contribution to the labor force is needed to ensure the survival of their families and society.

Women are involved in all agricultural practices in Oda Dawt Kebele, and while they make a major contribution to the well-being of the villages, much of what they do is not considered important. They spend about half their time preparing food for their families. They perform agricultural activities such as clearing weeds, transport, storage, and marketing. They also play an important role in animal husbandry. Although they play an important role in the socio-economic life of the community, various problems also hinder their full participation in agricultural and developmental activities. These issues include cultural practices and religious beliefs. Lack of awareness, male dominance, and people's

negative attitudes toward women are the main issues they dealt with.

The results of the data, therefore, suggest that women are the main household workers in the study community. They engage in agricultural and non-agricultural activities. The extent varies greatly between the two sexes, so women need to be addressed and given due attention. The result of the study shows that women in most households work more productively, but often earn part-time wages. The study found that women's participation in the decision-making process related to household income was limited. Most of the income was used for private consumption. Although providing women with equal rights is economically necessary for the growth of households and agricultural activities, they have limited access to land rights and other property. Most women in the study area had access to land only through marriage. Widowed women were given the right to own land because of their deceased husbands.

From the above discussion, it is clear that women's contributions to agriculture and development have been, and are likely to remain, crucial. Therefore, the following recommendations are intended to support efforts to improve women's productivity and housekeeping responsibilities. Recognition of women's role and contribution to social and economic development, particularly by planners and decision-makers would help to enhance the status of women and increase food security at the household and national level.

- Women are empowered to change themselves, reform society, and motivate the next generation. Providing access to institutional credit, marketing and implementing policies that can meet the growing needs of micro-enterprises, providing adult and non-formal education and training in management and entrepreneurship, providing appropriate production and marketing spaces, organizing women's cooperatives for mutual Supporting, and exchanging business ideas and empowering women at the grassroots level are strategies that can contribute immensely to their development efforts.
- The secret of Kebeles' success lies in the education of women. When the whole family, society, or community is educated,

strong moral and social ideals become a reality.

- Women's agricultural production is highly dependent on their access to productive resources such as land, finance, fertilizers, and other agricultural technologies.
- According to the Constitution of the Democratic Republic of Ethiopia, women's rights must be protected by avoiding social bias (cultural impact) in economic empowerment. Leaders, politicians, planners and decision-makers, development partners, and donor organizations all need to be involved.
- Addressing the obstacles to the implementation of national women's policies and district development strategies to support grassroots women's organizations will strengthen women's self-organization abilities to effectively express their concerns and preferences related to their economic, social, and civil rights.
- There is a need to increase women's political participation to address gender equality issues. Such an improvement helps to narrow the gap between men and women in business, decision-making power, and job opportunities.
- There is a need to raise women's awareness through participation and self-organization. It can also be facilitated through education, capacity building, training, and other measures. Structures and legal frameworks must change so that the self-transformation process of empowerment is sustainable.
- Since women's contribution to the eradication of poverty and hunger is just as important as that of men, the responsible district authority generally promotes women's decision-making power in all economic and income-generating activities.
- The implications for NGOs and other development organizations working at the Kebele level have particularly focused on promoting a fundamental awareness of the role of women in different sectors and socio-economic contexts, as well as acknowledging the felt needs of women at the grassroots level, be it concerning domestic, productive or reproductive activities. In addition, non-governmental organizations (NGOs) try to find immediate and long-term ways to mitigate recognized limitations appropriately and effectively by

developing new initiatives that incorporate a gender perspective.

CONSENT

The consent of the women was obtained beforehand and the research team was given the green light to do so.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Nigist A. Towards Women's Equal Rights to land in eastern Africa. East Africa sub-regional support initiative for the advancement of women (EASSI), Kampala; 2019.
2. Eshetu. Farming as equals: how supporting women's rights and gender equality makes the difference. ActionAid (2018). Cited from Analytical Report II. 2000;111.
3. Winrock. International Ethiopia. The study of appropriate technologies developed to increase women's production and productivity Ethiopia, Addis Ababa; 2017.
4. John B. The condition of Agricultural Growth: the economics of agrarian change under population pressure. Limited Lond Cagatay N. - Gender and Poverty. 2018;1998.
5. Coontz. Women and property, Women as property. New York: St Martin's Press. 1984;2020.
6. Overholt. Gender roles in crop production and management practices: A case study of three rural communities in ambo district, Ethiopia. J Hum Ecol. 2017;27(1), (2019):1-20.
7. Mondal M. The role of rural women in the agriculture sector of Sagar Island, West Bengal, India. Int J Eng Sci. 2013;2(2):81-6.
8. Ashley C, Hussein K. "Developing methodologies for livelihood impact assessment: the African Wildlife Foundation's experience in East Africa". Working paper 129. UK: Overseas Development Institute; 2000.
9. Dhar AR, Uddin MT. Farmers' livelihood enhancement through conservation agriculture: A socioeconomic study.

- Düsseldorf: Lambert Academic Publishing; 2017.
10. Bernhardt HX, Haber MJ, Lin LI. An overview of the estimation of the agreement with continuous measurement; 2007 [cited Mar 12 2018]. Available:http://web1.sph.emory.edu/observagreement/review_manuscript.pdf.
 11. Bawayelaazaa Nyuor A, Donkor E, Aidoo R, Saaka Buah S, Naab J, Nutsugah S et al. Economic impacts of climate change on cereal production: implications for sustainable agriculture in Northern Ghana. *Sustainability*. 2016;8(8):724.
 12. Daskalakis C, Laird NM, Murphy JM. 'Regression analysis of multiple-source longitudinal outcomes: A Stirling County' depression study. *Am J Epidemiol*. 2002;155(1):88-94.
 13. DFID. 'Sustainable Livelihood Guidance Sheet London' Department for International Development. Government of the United Kingdom; 1999.
 14. Dhar AR, Islam MM, Jannat A, Ahmed JU. Adoption prospects and implication problems of practicing conservation agriculture in Bangladesh: A socioeconomic diagnosis. *Soil Till Res*. 2018;176:77-84. Available:<https://doi.org/10.1016/j.still.2017.11.003>
 15. Abdelali M Empowering women in the rural labor force with a focus on agricultural employment in the Middle East and North Africa (MENA). Enabling rural women's economic empowerment: institutions, opportunities, and participation. Accra, Ghana; 2011.
 16. Abu Ghaida D, Klassen S. The cost of missing the Millennium Development Goal on Gender Equity. *Gen Econ Empowerment Afr*; 2007.
 17. Amarech A. Research on gender and development. Hawassa University; 2004.
 18. Annabel R. Women and the environment, Newjerssy 1986. London: zed books Ltd; 1986.
 19. Ashford. Improving reproductive health in developing countries Washington Dc national academy press. 1997;1997.
 20. Benicia L 1996.unequal burden. New York, west view press; 1996.
 21. Boserups E. Women's roles in economic development. Earth Scan Publications; 1970.
 22. Boakye-Achampong S. The role of rural women in the attainment of household food security in Ghana: A case study of women farmers in Ejura-Sekyeredumasi District. *Int J Pure Appl Sci Technol*. 2012;12(1):29-38.
 23. Chayal K. Involvement of farm women in decision-making in agriculture. *Stud Home Community Sci*. 2019;7(1):35-7.
 24. Central Statistical Agency of Ethiopia. Annual statistical Report. Addis Ababa; 2007.
 25. Dawit DG. Assessment of biomass fuel resource potential and utilization in Ethiopia: sourcing strategies for renewable energies. *Int J Renew Energy Res*. 2012;2(1):131-9.
 26. Desalegan R. Land Tenure and Land Policy in Ethiopia, After the Dreg the Process of the Second workshop of the Land Tenure Project, Norway. AAU Inst Dev Res Land Tenure Proj. 1994; 1994.
 27. Duggan L. The woman Gender and Development Leaders. New York: Mcgraw-Hill; 1991.
 28. Devender D, Krishna RC. Socio-economic conditions of agricultural labor in Andhra Pradesh: A case study in Karimnagar District. *Int J Bus Econ Manag Res*. 2011;2(3):115-34.
 29. Ellison. Gender segregation and Social change. New York: Oxford University Press; 1989.
 30. FAO (Food and Agriculture Organization). Gender dimensions of agricultural and rural employment: differentiated pathways out of poverty. Status, trends, and gaps. Food and Agriculture Organization of the United Nations. International Fund for Agricultural Development and Rome, Italy: International Labor Office 2019.
 31. Gujarati DN. Basic econometrics. New York: McGraw-Hill; 2003.
 32. Tasfay H. Women and land rights in Ethiopia. East Afr Sub-Reg Support Initiat Adv Womens (EASSI). 2002;2002.
 33. FAO (Food and Agriculture Organization). Women in agriculture: closing the gender gap for development. *State Food Agric*. 2010-11:2011..
 34. IFAD (International Fund for Agricultural Development). Women and rural development: enabling poor rural people to overcome poverty. Rome, Italy; 2011.
 35. Linda M. Women's empowerment through sustainable microfinance: rethinking best. Practice. 2005. Available:<http://www.genfinance.Net>.

36. Mamo H. Land, local customs and state policies: Disputes and Disputes settlement among the Arsi Oromo of Southern Ethiopia. Kyoto University – Japan Nakanishi printing co. Japan: Ltd; 2006.
37. Mekonen D. Research on Gender and poverty, Hawassa, unpublished Nira, Remmachandra, , underfed, underpaid, and overburdened: women the key to food security in South Asia. Duplicated J. 1991;1991.
38. Tegegne M. An assessment on the role of women in agriculture in southern nation nationality People's region: the case of Halaba special woreda, Ethiopia" unpublished Master Thesis Indira Gandhi National Open University. New Delhi; 2012.
39. Mihiret M, Tadesse A. Women's role and their decision making in livestock and household management. J Agric Extension Rural Dev. 2014;6(11):347-53.
40. Nahusenay A, Kibebew K, Heluf G, Abayneh E. Characterization and classification of soils along the topo sequence at the Wadla Delanta Massif, Northcentral Highlands of Ethiopia. J Ecol Nat Environ. 2014;6(9):304-20.
41. Nahusenay N, Tesfaye T. Roles of rural women in livelihood and sustainable food security in Ethiopia: A case study from Delanta Dawunt District, North Wello Zone. Int J Nutr Food Sci. 2015;4(3):343-55.
42. Nahusenay A. The roles of rural women on agricultural labor conscriptions in Ethiopia: the case of Atlanta District, south Wello Zone. EC Nutr. 2017;6(4):144-55.
43. Nazir S. RURAL women's participation and constraints in agricultural activities: a case study of district Nankana Sahib, Punjab. Pak J Agric Sci. 2017;50(2):317-22.
44. Pankhurst R. State and land in Ethiopian history, institute of Ethiopian studies. Addis Ababa: Oxford University Press; 1966.
45. Pausewang. Gend Soc; 1990.
46. CSA. (Central Statistical Agency projection). Population and housing census of Ethiopia: the results for Amhara Region. Addis Ababa, Ethiopia; 2015.
47. Rahmeto D. 'Rural Woman in Ethiopia', paper presented for the seminar on Gender; 1989.
48. Razavi S, Staab S. Underpaid and overworked: a cross-national perspective on care workers. Int Lab. 2010;149(4):407-22.
49. Ruth D. Woman's work in the Third World agriculture. Concepts and Indicator, Geneva. International Labor Office; 1994.
50. Shafiwu AB. The role of Agricultural Development Bank in the development of rural women in agriculture: A case study of Wa- West District. Res J Fin Acc. 2013;4(12):168-80.
51. Sofa T, Doss C. "The role of women in agriculture". Agricultural Development Economics (ESA) Working Paper No. 11-02(2011); 2011.
52. Ethiopian Herald. 'Focus on Women' vol ILX No 227, Addis Ababa, Brianna Slam printing press; 2004.
53. UNDP. Economic Empowerment of women through small business Enterprise; 2006.
54. UN. Women (United Nations women). The World survey on the role of women in development.
55. WAOR. (Wereda agriculture office report) 2013. Delanta Wereda agriculture and natural resource development department office report. Wegeltena, Ethiopia; 2013.
56. World B. Women's economic empowerment for poverty reduction and economic growth in Ethiopia 2006; 2007. Available:HTTP://www.prb.org/datalind
57. Tadesse Z. Revisiting Rural Development through a gender lens. proceeding of the workshop of the FSS. Issues in Rural Development 18 September 1998. Addis Ababa; 2000.

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